

Public Disclosure Authorized

RESILIENT KERALA Program for Results [PforR]

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Final Environmental and Social Systems Assessment [ESSA]

15 March 2021



THE WORLD BANK
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Part A: Final ESSA Summary Report

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List of abbreviations and acronyms

AEU	Agroecological Units
AEZ	Agroecological Zones
BMW	Bio-Medical Waste
BOD	Biological Oxygen Demand
CAPEX	Capital Expenditure
CC	Climate Change
COD	Chemical Oxygen Demand
CPCB	Central Pollution Control Board
CPF	Country Partnership Framework
CRN	Core Road Network
CSO	Civil Society Organization
DCAT	Disaster and Climate Action Tracking
DDMA	District Disaster Management Authority
DEA	Department of Economic Affairs, Ministry of Finance, GoI
DLI	Disbursement-Linked Indicator
DPO/L	Development Policy Operation / Lending
DoA	Department of Agriculture, Government of Kerala
DoE	Department of Environment, Government of Kerala
DoF	Department of Finance, Government of Kerala
DoECC	Directorate of Environment and Climate Change
DoR	Department of Revenue, Government of Kerala
DRF	Disaster Risk Financing
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
E & S	Environmental & Social
EHS	Environmental, Health & Safety
EIA	Environmental Impact Assessment
ESHS	Environmental, Social, Health and Safety
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
ESSA	Environmental and Social Systems Assessment
FGD	Focus Group Discussion
FPO	Farmer Producer Organizations
GHG	Green House Gas
GIS	Geographic Information Systems
G(R)M	Grievance Redressal Mechanism
GoK	Government of Kerala
GoI	Government of India
GP	Gram Panchayat
GSDP	Gross State Domestic Product
IDSP	Integrated Disease Surveillance Program
IEC	Information, Education and Communication
IT	Information Technology
JJM	Jal Jeevan Mission

KII	Key Informant Interviews
KILA	Kerala Institute of Local Administration
KSDMA	Kerala State Disaster Management Authority
LG	Local Government
LSGD	Local Self Government Department
LSGI	Local Self Government Institutions (Gram Panchayat or Municipality or Corporation)
M & E	Monitoring & Evaluation
MoEFCC	Ministry of Environment, Forests and Climate Change
MoHUA	Ministry of Housing & Urban Affairs
O & M	Operations & Maintenance
OH	One Health
OPBRC	Output and Performance-Based Road Contracts
OPEX	OPERational EXpenditure
PDO	Program Development Objective
PDNA	Post Disaster Needs Assessment
PforR	Program for Results
PHLs	Public Health Laboratories
PMSS	Project Management Support Services
PMT	Project Management Team
PMU	Project Management Unit
PWD	Public Works Department
RA	Results Area
RM(A)MS	Road Maintenance (Asset) Management Systems
RBCMA	River Basin Conservation and Management Authority
RF	Results Framework
RKDP	Rebuild Kerala Development Programme
RKI	Rebuild Kerala Initiative
RoW	Right of Way
RTI	Right To Information
SDRF	State Disaster Risk Financing
SEIAA	State Environmental Impact Assessment Authority
SOP	Standard Operating Procedures
SPCB	State Pollution Control Board
TCP	Town and Country Planning
ULB	Urban Local Body
WB	World Bank
WRD	Water Resource Department
WRM	Water Resource Management

I. Background

1. State of Kerala is highly vulnerable to natural disasters such as cyclone, monsoon storm surge, coastal erosion, sea level rise, tsunami, flood, drought, landslides/ land subsidence and earthquakes and changing climatic dynamics given its location between the western coast and steep slopes of the Western Ghats. In last 3 years the state has seen several such adverse events one after the other, starting with Cyclone Ockhi in 2017, floods and landslides in 2018, 2019 and 2020, Nipah virus in 2019 and present COVID-19 pandemic. The 2018 floods led to widespread loss of life, property, and habitats, affecting several millions and leading to economic losses of nearly US\$3.74 billion (Rs. 26,720 crores). These events and their impacts highlighted the level of under-preparedness of the State to deal with these natural disasters and climate change shocks.
2. In order to support Government of Kerala (GoK), World Bank initiated a strategic engagement to build multidimensional resilience in Kerala through First Resilient Kerala Development Policy Operation (DPO 1, US\$250 million- June 2019) by extending support to Rebuild Kerala Development Programme (RKDP) — the state’s strategic roadmap for recovery, rebuilding and resilience. It supported key policy and institutional reforms for a) improved irrigation-agriculture nexus, b) engendering river basin management, c) shifting to sustainable and climate-resilient agriculture, d) risk-informed land use planning and updating disaster management plans, e) apart from fiscal reforms to ensure greater investments for preparedness and rehabilitation. Under this DPO, a dedicated institution - the Rebuild Kerala Initiative (RKI) - was set up to coordinate, manage and monitor the roll out of RKDP and DPO 1 across various government departments and agencies. As part of the DPO, GoK has already initiated reforms laid out in the Rebuild Kerala Development Program (RKDP) such as local disaster risk mapping, performance-based road contracting, shifting agricultural and river basin management practices to align with agroecological conditions and introducing risk-informed master planning for cities and towns.
3. This partnership has improved state’s capacity to respond to disasters and improved resilience of the community and treat resilience and disaster risk management as cross-cutting and important concerns in policy formulation and implementation. It has also led the way towards deepening and broad-basing this partnership by looking at additional sectors crucial for building resilience of the state and citizens to shocks of climate change, natural disasters and disease outbreaks. *This PforR is part of a series of engagements between Government of Kerala and the World Bank that started after the 2018 floods.*

II. Program Description

4. **The Resilient Kerala PforR** builds on the foundations of policy and institutional reforms initiated under Resilient Kerala DPO 1. The new PforR aims at two key Results Areas (RAs): (1) building institutional capacities and systems for managing shocks from climate change, natural disasters and disease outbreaks; and (2) demonstrating integrated approaches to multidimensional resilience at the local level. The former aims at working to strengthen the state-level institutions and systems for greater resilience, the latter aims at addressing the underlying drivers of floods and landslides by building state capacities and simultaneously working on integrated water resources and reservoir management; improved land use planning and management; and ecologically sound agriculture practices.
5. **The Program Development Objective** ‘is to enhance the State of Kerala’s resilience against the impacts of climate change, natural disasters and disease outbreaks.’ The Program will support the two Results Areas (RAs) that contribute to the outcomes of RKDP - first through support for state-wide systems and institutions development, and second for piloting sectoral investments in four districts along the Pamba river basin- Alappuzha, Idukki, Kottayam, and Pathanamthitta.

RA 1: Strengthening transversal systems for resilience

6. Building on RKDP and the policy and institutional reforms achieved through RKP DPO 1 and 2 prior actions, this RA aims to enhance the sustainability of GoK's fiscal and debt management framework to cope with large scale exogenous shocks, and institutionalize climate and disaster risk-informed urban and disaster risk planning at the State level for enhanced preparedness and response.

Objective 1.1: Enhancing the sustainability of the GOK's public finances to cope with exogenous shocks

7. The Program aims at strengthening public debt management capacity and fiscal sustainability of the GoK to manage its contingent liability to natural disasters and disease outbreaks, and to ensure that these events do not negatively impact the debt profile and budget objectives for the State's sustainable development. This will be complemented by parallel Technical Assistance (TA) and capacity building support to enhance revenues, and to improve expenditure efficiency and performance orientation in select spending departments.
8. The Program will support the development and implementation of a comprehensive state disaster risk financing & insurance plan and social protection system. This will enable the GoK to identify and develop potential public and private sources (e.g. bonds, (re)insurance) of disaster risk financing to safeguard the state finances, provide transparent and timely assistance to the vulnerable households, and to protect the economy and livelihoods against natural disasters and pandemics. The system provides cost-benefit trade-offs to investments in climate and disaster risk reduction, risk retention, and risk transfer and ensures that the GoK is financially prepared to enact effective preparation, response and reconstruction actions. Relief payments made to fisherfolk families will be made to the bank accounts of female head of the family, which is expected to empower women further and ensure better usage of funds.

Objective 1.2: Mainstreaming climate and disaster risk informed development and investment planning

9. This Program intends to establish norms, systems and capacities for risk-informed master planning and implementation across the State, and pilot risk-informed Urban Master Plans and Priority Action Plans in a sample of urban local bodies (ULBs) in the Pamba river basin. This intends to support better disaster preparedness for planning, service delivery and emergency response.
10. LSGD has initiated development of local body DRM plans. These plans are a part of local development plans, which are updated on an annual basis by LSGs based on extensive public consultations. LSGD is currently pursuing aligning the investment planning of local governments (LGs) with DRM plans. Specifically, the LSGD provided the LGs with vulnerability and disaster risk profiles for each local body with draft state-level hazard and vulnerability grid maps prepared by the KSDMA. One of the key bottlenecks for improving and mainstreaming climate-informed local body DRM plans is the lack of down-scaled climate data and information, which can be utilized to better evaluate localized climate and disaster risks as well as associated sectoral impacts.
11. The Program will support mainstreaming climate and disaster risk considerations into the development and implementation of local DRM plans. These risk-informed local DRM plans and target-based grant incentives (measured and tracked by climate co-benefits through Disaster and Climate Action Tracking (DCAT)) will motivate LGs to invest in disaster risk reduction, to enhance disaster preparedness, and to 'Build Back Better' in recovery, rehabilitation, and reconstruction phases. Over time, these changes will mainstream climate change and DRM considerations into local planning and development processes.

RA 2: Embedding resilience in key economic sectors

12. Building on the policy and institutional reforms achieved so far in key economic and climate-sensitive sectors, this RA will test an integrated approach basin-based multidimensional resilience at local level among key climate-sensitive sectors: health, water resources management, agriculture and road.

Objective 2.1: Strengthening the resilience of public health systems for disease outbreaks

13. The Program intends to strengthen the public health systems of the GOK for disease outbreak preparedness and prevention. This includes strengthening diagnostics systems at the district level through empowered State PHLs with facilities for molecular diagnostics and rare zoonotic intra-parasite detection to support timely identification of diseases with potential for outbreaks; and strengthening Integrated Disease Surveillance Program (IDSP) with enhanced capacity and institutionalizing One Health (OH) approach to identify and respond to zoonotic disease outbreaks.

Objective 2.2: Strengthening the resilience of water resources systems

14. Declining ground water levels and high variation of rainfall over the years exacerbated by climate change have increased vulnerability, with many dried wells getting inundated during the floods. There is need for integrated water resources management to unlock the development potential of water resources. There is a lack of detailed information on water resources conditions to properly manage water resources and plan measures to make more productive use of water in various water-dependent sectors and mitigate water-related risks. The DPO1 supported drafting a River Basin Conservation and Management Authority (RBCMA) Act, which is currently awaiting legislative approval. The Act will empower RBCMA to conserve and regulate water resources within the State; facilitate its sustainable management, allocation and utilization; and fix rates for use of water for agriculture, industrial, drinking, inland transport, commercial purposes.
15. The Program will enable the operationalization of RBCMA, which will play a critical role in building climate resilience through improved integrated water resources management. This includes tooling and upskilling the RBCMA to operationalize integrated reservoir operations, water monitoring, data collection and management, flood management (including flood forecasting), evaluation of environmental flows, and more efficient water allocation to agriculture, irrigation, domestic purposes, industrial, and other uses to improve productive and sustainable water use. Climate-proofed local level district management plans will ensure climate resilience is mainstreamed into water resources planning and management.

Objective 2.3: Strengthening resilience of agricultural productivity through AEZ-based practices

16. Agroecological approaches offer a paradigm shift to more sustainable and resilient food systems while restoring ecosystem services and biodiversity in the context of climate change. Through DPO 1, the State has been divided into five AEZs of unique agroecological characteristics and suitability for specific crops and extension needs. A restructuring of the Department of Agriculture (DoA) was facilitated to ensure that planning, resource allocation, and deployment of human resources are aligned with agroecological classification of blocks and districts. During the preparation of DPO 2, reallocation of funds to agroecological units (AEUs), sub-administrative units under the AEZs, was also initiated.
17. The Program will support the further implementation of the AEZ-based practices initiated under DPO 1, strengthening farmer access to finance, seeds, technology, the market and strengthening their bargaining power. The Program will also integrate the management information systems and strengthen agroecologically relevant farming systems across the

State. Program support will be rolled out in 16 agroecological management units (AEUs) covered by 264 Krishi Bhavans in the four Pamba River Basin districts.

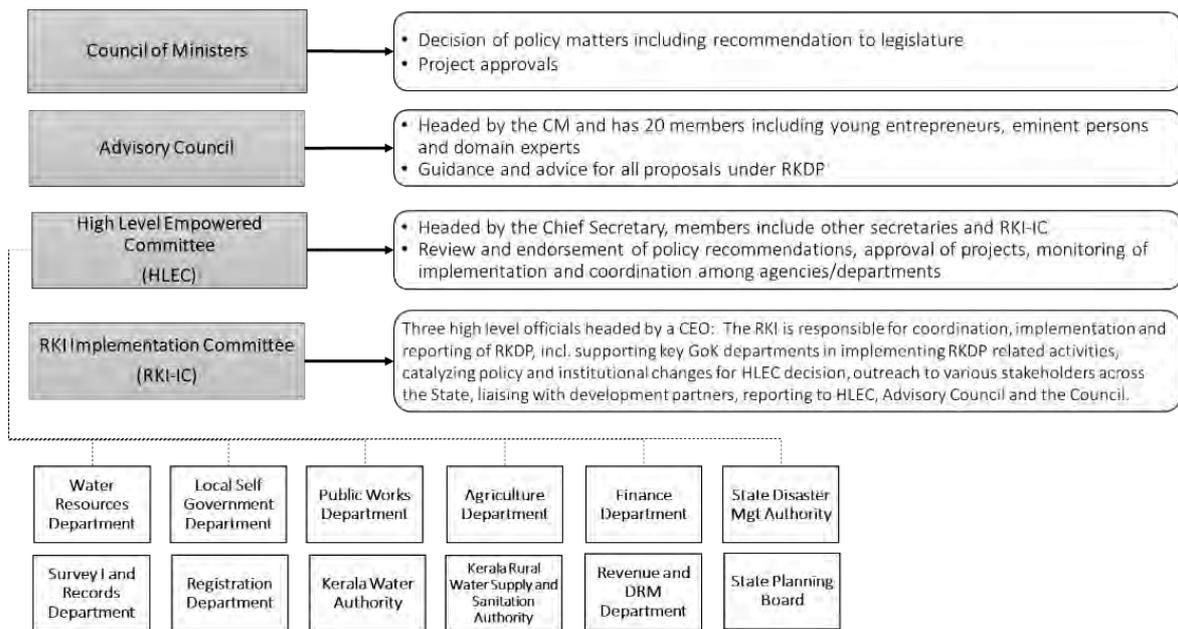
Objective 2.4: Strengthening the resilience of core road networks

18. Post 2018 floods, PWD commissioned a study to prioritize 1,600 km of select flood and landslide impacted road network for rehabilitation using resilient standards and identified 800 km of road network requiring climate resilient reconstruction. Out of the central and southern cluster about 173 km were located in Pamba River Basin area which was impacted most. Other than the resilient infrastructure program, 7000 km of Core Road Network (CRN) was identified and updated through a scientific assessment by PWD Maintenance Wing and was notified in early 2020. Currently, a web and GIS based Road Maintenance Management System (RMMS) with a climate module is being established which is expected to be operational in 2021. Going forward, RMMS shall guide sector planning and budgeting of CRN. A new contracting model for long term maintenance of CRN to resilient standards has also been developed and sanctioned in 2020. The initial plan is to roll out these 7-year Output and Performance based Road Contracts (OPBRC) for around 380 km of CRN.
19. The Program aimed to address the climate change risks, by building resilience to the CRN which included interventions on drainage systems, landslide risk mitigation to maintain enhanced resilient standards and strengthening institutional capacity and systems in finance, climate resilience, and performance-based management of contracts. The development of institutions and systems shall have a statewide coverage, and the districts along Pamba basin shall pilot integrated resilience building of the road assets.

III. Institutional/ Implementation Arrangement

20. The key institution to coordinate implementation across departments will be the **Resilient Kerala Initiative**, a special purpose vehicle (SPV) established following 2018 floods to accelerate long-pending policy and institutional reforms to address the risks of natural disaster and climate change and improve the State's resilience to future shocks/ disasters. RKI is mandated to identify the state's agenda for change by selecting key reforms and investments across sectors that can help the state move towards greater resilience, while partnering with various multilateral institutions, civil society entities and the community. RKI, through a consultative and participatory process, aims to create synergies across sectors, departments, and agencies for a comprehensive and resilient recovery and reconstruction.

RKI Institutional Framework - Roles and Responsibilities



21. **A High-Level Empowered Committee (HLEC)** will act as the Steering Committee for the Program and report directly to the Council of Ministers, while an Advisory Council headed by the Chief Minister will provide guidance and advice to the program. A Project Management team within Rebuild Kerala Initiative (RKI) - **Project Management Support Services (PMSS)** will be responsible for implementation, coordination, monitoring and evaluation. PMSS will provide technical and management support to the RKI and participating line departments and will include their directorates, executing agencies, training institutions, partner institutions. PMSS will support them in investment planning, technical studies, policy formulation, capacity building, monitoring and evaluation, communication, setting up grievance redress, etc. on projects funded under RKDP, including Bank supported PforR.

IV. ESSA Methodology

22. The proposed 'Resilient Kerala Program' will focus on improving the Government of Kerala's resilience against the impacts of climate change, natural disasters and disease outbreaks using the Program for Results (PforR) modality. Therefore, a detailed Environmental and Social Systems Assessment (ESSA) to identify the key environmental and social risks (E&S) that may impact the achievement of the Program Development Outcomes has been undertaken. Given that this program builds on the strategic engagement that began in 2019 between the Bank and the GoK, this ESSA is informed by, and is in continuation with, the previous borrower level studies and vulnerability assessments that have been commissioned by the Bank to assess the system performance of different sectors in the state.
23. The ESSA has been carried out by a team of environmental and social specialists from the World Bank. It primarily relied on a detailed review of secondary literature including applicable policies, Acts, Rules, Government Orders, Circulars, notifications and guidelines as well as evaluations (on institutional or scheme performance) websites, internal assessments, reports, studies. Apart from a desk review of available information, personal interviews and consultations were also held with the community and institutional stakeholders of the program. The desk review focuses on understanding the existing policy, operational procedures, institutional capacity and implementation effectiveness relevant to the activities under the Program. This also included a review of the borrowers systems for engaging with citizens, especially the most marginalized and excluded as well as their grievance redress.

24. Owing to COVID-19 related mobility restrictions, majority of personal interviews and group consultations are being done by a team of experts and faculty members from Kerala Institute of Local Administration (KILA), an autonomous capacity building institution of the state that was commissioned by the Bank to facilitate virtual and physical consultations with state level stakeholders and those in 4 districts within the Pamba river basin (where most implementation/ investment are planned). These consultations aim to examine the roles, responsibilities and capacity of key institutional stakeholders – including nodal and statutory authorities, local bodies and community institutions.
25. A total of 11 State Consultations were conducted with departmental/ agency representatives and their teams and another 32 Community Consultations at 16 different locations (3 ULBs and 13 Gram Panchayats) in the 4 Pamba Basin districts covering more than 328 community members cutting across social and economic groups. These also included 8 dedicated consultations with women and 8 exclusive consultations with poor and socially vulnerable.
26. The draft ESSA reports were disclosed seeking feedback from interested citizens and stakeholders on February 8, 2021 (English version) and February 13, 2021 (Malayalam version). Two state-level disclosure workshops were organized on February 18 and 22, 2021 where the findings of the ESSA were shared with the state level stakeholders to seek their comments and feedback before appraisal. The final ESSA, after incorporating stakeholder comments, will be disclosed on the website of Rebuild Kerala Initiative, GoK as well as World Bank external website.

V. Risk Screening

Environment

27. Each of the sector Programs was screened to determine the environmental risks. This was first done at the PCN stage and subsequently updated / revised as the Program preparation advanced. The summary of the environmental risk screening is as follows:
 - a) **Agriculture:** No negative environmental impacts and risks are perceived in the institutional development activities planned. The supporting of the paradigm shift of reorganization of the Agriculture Department into agroecological zones with a focus on the Pamba river basin will bring positive environmental effects as the crop selection will be the one most suitable for the agroecological conditions. Hence the use of fertilisers and pesticides is expected to reduce.
 - b) **Disaster Risk Financing / Social Protection:** There are no environmental risks as all of these pertain to cash / financial transfers.
 - c) **Disaster Risk Management:** The aim in this sector is to bring about a climate and disaster considerations in the annual LSGI budget planning. The climate-responsible, resilience-building actions in the local DRM and LSGI planning will not have any negative environmental impacts and hence no risks.
 - d) **Fiscal:** Being purely financial in nature, there are no environmental risks.
 - e) **Health:** No environmental risks are envisaged in enhancing the One Health Surveillance Platform at the local level to track and respond to zoonotic disease outbreaks. It provides an opportunity to reduce environmental risks by establishing the link between sanitation / waste management practices and disease. Construction-related EHS impacts are minor in improving district-level Integrated Public Health Laboratories (IPHLs) and will not pose risks.
 - f) **Roads:** The environmental impacts will be limited to those related to the construction phase of the Core Road Network (CRN) and / or maintenance to resilient standards in the Pamba basin. This will include air, dust and noise pollution; limited tree cutting / trimming; water pollution; worker and public safety; waste, scrap and debris disposal. These physical impacts could result in environmental risks in the construction phase.

- g) **Urban:** In the risk-informed master planning, the focus will be on incorporating risk information in the Urban Master Plans and the Priority Action Plans. The environmental risks - apart from disaster and climate risks - will be considered in the upfront planning. This will result in lesser residual environmental risks when the investments are implemented.
- h) **Water Resource Management:** The proposed investments when initiating the implementation of the Integrated River Basin Management Plan for the Pamba river will have construction-related impacts that will be localized, limited and reversible. From the typology of the investments, it is determined that these risks will be limited. Further, there are contextual risks due to environmental concerns that need to be considered at the time of investment planning in order to ensure compliance to the regulations and prevailing NGT orders pertaining to the Pamba river basin.

Social

28. A comprehensive social risk screening, an important part of ESSA, of the proposed program investments and activities shows that most activities have low to moderate social risks. With strong engagement of local government institutions by all key departments, the overall risk of poor participation and exclusion of intended beneficiaries/communities is minimized. However, given the technical focus of many participating departments, there is limited awareness and capacity on managing social risks and inadequate social accountability mechanisms to ensure inclusive outreach of key activities. Moreover, many sectoral planning activities have the risk of exclusion of vulnerable communities such as SCs, STs and women, if interventions are not accompanied by greater information dissemination, inclusion and use of community based organizations and LSGs during the planning process. Following are the sector-wise interim risk assessments:

- a) **Social Protection:** The social risk rating is low as there are strong social benefits of a unified disaster-resilient adaptive safety net system for the vulnerable households, who are most at risk of disasters. However, mechanisms to ensure that there is no exclusion of women and other vulnerable groups such as tribal households / landless households, especially during consolidation of the database will need to be evolved.
- b) **Health:** The investments under health are assessed as potentially leading to moderate to low social risks. While the expansion of laboratory network is likely to lead to improved coverage and outreach for local communities, especially women and ensure greater health and safety of technicians, it may have land requirements or may lead to displacement of non- titleholders. Moreover, through the emphasis on engaging cadres of health volunteers, there is possibility of exclusion of members from marginalized communities. Switching to untested/ new health approaches may have reputational risks, cause hesitation among communities, unless backed by strong IEC & community orientation.
- c) **Agriculture:** With a strong focus to ensure Farmer Producer Organizations have access to new information, market and technology there are potential benefits for small and marginal farmers. However, low current institutional capacities and coordination to ensure inclusion/ participation and outreach; overstretched extension staff and low off-take of services due to low awareness amongst women and small and marginal farmers, and limited representation of women and S&M farmers in FPO leadership are potential social risks. The risks are moderate to low for most of the activities envisaged.
- d) **Water-Resource Management:** The investment includes development of an Integrated River Basin Management Plan developed for Pamba Basin and largely has moderate to low social risks. Some of the specific social risks are exclusion of women & vulnerable from the river basin planning process; risk of lack of equity in principles of water allocation, distribution and even on decision around tariff or pricing for water users given that staff have limited capacities around social development to ensure equity based allocations.

- e) **Urban:** The focus on strengthening capacities of ULBs with sanctioned risk-informed Master Plans and Priority Action Plans are to face the potential risk a lack of recognition of peculiar vulnerabilities/ needs of women and poor may exclude them from master plans and its preparation process. The social risks range from low to moderate.
- f) **DRM:** The investment envisages the creation and integration of Climate risk Information system into local DRM plans. The social risk is moderate as there is possibility of exclusion of women & vulnerable, especially tribal communities, from DRM planning process.
- g) **Road:** The social risks for investments under road are substantial. Presence of squatters or encroachers on PWD land, lack of community involvement in identification & prioritization of alignments and the risk of exclusion of tribal habitations situated in remote/ hilly areas during alignment selection, labour influx are potential social risks and poor institutional capacities to manage non-titleholders.

VI. Assessment of Legal Policy Framework

Environment

29. The applicable legislations – both national and state - include Environment (Protection) Act 1986, Air (Prevention and Control of Pollution) Act 1981, Water (Prevention and Control of Pollution) Act 1974, Noise Pollution (Regulation and Control) Rules 2000, Construction and Demolition Waste Management Rules 2016, Solid Waste Management Rules 2016 (and various references in the state legislations such as the Kerala State Policy on SWM 2018, Kerala SWM Operational Guidelines, 2017, Kerala Municipalities Act 1994 and The Kerala Panchayat Raj Act 1994), Plastic Waste Management Rules 2016 and state order, national Forest legislation (Indian Forest Act 1927, Forest Conservation Act 1980 and Forest Rights Act 2006) and associated state legislation (Kerala Preservation of Trees Act 1986), Wildlife (Protection) Act 1972, Ancient Monuments and Archaeological Sites and Remains Act 1958 and associated rules, and Building And Other Construction Workers (Regulation Of Employment And Conditions Of Service) Act 1996 and Kerala Rules 1998. These are applicable across all sectors that are in the Program.
30. There are other legislations that are relevant to particular sectors. In the health sector, Bio-medical Waste Management Rules 2016 is applicable. In the agriculture sector, the Kerala Conservation of Paddy Land and Wetland Act 2008 is applicable. And, in the WRM Sector, the National Green Tribunal Act 2010 and orders are applicable. The assessment revealed that all of these legislations – cross-sector and those relevant to particular sectors - are well-developed and are a part of the overall legal enforcement in the state. The appropriate legislations will be sufficient to address any of the environmental impacts in these sectors. The borrower's regulatory agencies such as the Department of Environment (Directorate and the different authorities), State Forest Department and the State Pollution Control Board are well-established and their functions were found to be streamlined.
31. Further, the Program activities have only limited environmental impacts and therefore do not entail any upfront environmental clearances. There are only certain procedural requirements such as obtaining consents prior to the commencement of civil works. These are contractor responsibilities that will have to be supervised by the respective departments that are engaged in civil works. If there are specific situations during implementation, e.g. the NGT orders, then additional procedural requirements may be applicable. The standards included in the various legislations will have to be adhered. There is sufficient capacity within the different implementing agencies, their consultants and their contractors to meet these legal requirements.

Social

32. ESSA analysed all the relevant legal policies that impact the program's scope and finds that Kerala has one of the most progressive legal policy environments among Indian states. Along with national laws and policies, state laws and policies create adequate legal safeguards for women, socially and economically vulnerable, including the poor, scheduled castes and tribes/ indigenous communities in the implementation of schemes across sectors, in preferential selection of beneficiaries for schemes. The reforms to empower local self-government institutions by bringing most subjects under local bodies (along with their functionaries and funds), strong history of land reforms to secure rights of land tillers/ share croppers and a women-oriented policy focus, including the comprehensive approach to gender-budgeting bear testimony to people-centred policy environment of the State. GoK has mainstreamed gender considerations into local-level planning by, *inter alia*, earmarking a minimum of 10 percent of LSGI budgets to the Women Component Plan, ensuring women's representation in LSGI's sectoral Working Groups, and requiring gender impact statements to be presented as part of budget cost-benefit analysis. There are special programs to assist the elderly, SC and ST population, migrant workers, and fisher women. The proposed operation will enhance the capacity for managing disaster risks, which will contribute to building robustness of such social programs in times of disaster.
33. The legal policy framework also provides for social sustainability of marginalised and vulnerable population including the SC and ST, by providing for citizen engagement/ stakeholder participation across interest groups and a rights-based framework to demand accountability in the functioning of various public offices, including central and state agencies. Apart from this, the framework proactively offers legal assistance, safety nets/ entitlements, security against resource or land alienation, protection against discrimination and proactive state support for constituencies with poor voice and agency including women, old-aged and transgenders.
34. In assessing the sector-specific policies that impact urban, health, agriculture, water resource management, disaster risk mitigation and roads and infrastructure investments, the ESSA finds that overall, there is an adequate focus on engagement of local governments in planning and outreach of most programs. For instance, the state agriculture sector policies focus on the interests of small, marginal and tribal farmers and in some cases even agricultural labourers and tenants. Agriculture and other land related policies secure the tenancy rights of tillers and land leasers and secure them from sudden eviction without following due process of law. The policies are positively inclined towards the tenants in compassionately looking at their investments in land and asset improvements, physical and financial investments in multi-year / plantations crops. They emphasize the need for efficient delivery of inputs, advisories and credit to the cultivators and acknowledge the need for capacitating institutions and extension services to deliver on this mandate. State policy also encourages farmers collectives at various levels and calls for creating an inclusive governance structure for Farmer Producer Organization's (FPOs).
35. However, this ESSA also highlights specific areas where further state policy attention will be needed to enhance inclusion and impact of vulnerable groups, such as SC/STs and women. For instance, the agriculture interventions envisaged under the program will benefit from additional policy measures to incentivize and promote women's participation in agriculture by targeting specific schemes/ benefits towards women farmers.

VII. Assessment of Risks and Benefits

Environment Benefits

36. The institutional development and investment planning proposed in the different sectors offer an opportunity to render positive benefits through mainstreaming environmental management. For instance, in both DRM and urban sector, introducing risk informed planning is bound to result in upfront consideration of environmental risks among others. The investments in the agriculture sector are bound to be environmentally positive as the agroecological zone approach will result in crop selection that will be appropriate to the respective ecosystems. That will also lead to reducing the negative environmental impacts of agriculture such as fertilizer use, pesticide use and soil erosion.

Environment Risks

37. The Program’s investment activities in the Pamba river basin (Agriculture, Health, Roads and WRM) could have physical impacts that could result in environment risks. In Agriculture, there are no civil works and hence no such impacts. In the other three sectors, these are largely construction-related impacts, e.g. air, dust and noise pollution; worker and public safety; waste and debris disposal related to the civil works. All of these investment-related impacts will be minor, localized, generic and reversible, and can be mitigated effectively through management measures. At the time of contracting civil works to implement activities, adequate provisions in the bid / contract documents - that are commensurate with the extent of impacts – will need to be ensured. For instance, in the roads sector, as a part of the pre-investment studies, environmental management plans have been prepared and integrated with the bid / contract documents to ensure proper management of the limited environmental impacts.

Sector	Benefits	Risks
Agriculture	<ul style="list-style-type: none"> Supporting the shift to the AEU approach in the Pamba basin has positive implications for environment and natural resource conservation. Selecting the crop using the agro-climatic conditions and topography will result in reduced chemical use, restore soil health and result in effective water use. The integrated agricultural information systems will progressively assist the farmer in all aspects that will include chemical use as well. 	<ul style="list-style-type: none"> No negative environmental impacts and risks are perceived in the activities planned
Disaster Risk Financing / Social Protection	<ul style="list-style-type: none"> No environmental benefits as these pertain to cash / financial transfers. 	<ul style="list-style-type: none"> No negative environmental impacts and risks are perceived in the activities planned
Disaster Risk Management	<ul style="list-style-type: none"> The more widespread implementation of local plans that include climate and DRM considerations could lead to environmental benefits as these are likely to protect ecosystems such as wetlands, lakes and ponds. 	<ul style="list-style-type: none"> The climate-responsible, resilience-building actions will not have major negative environmental impacts and hence no risks. Civil work activities arising out of these plans will have minor, localized construction-related EHS impacts and hence associated risks.
Fiscal	<ul style="list-style-type: none"> No environmental benefits as these are purely financial in nature. 	<ul style="list-style-type: none"> No negative environmental impacts and risks are perceived in the activities planned
Health	<ul style="list-style-type: none"> improved health surveillance will establish the link between disease (diarrhoea and leptospirosis) and environmental sanitation; 	<ul style="list-style-type: none"> Better capacity strengthening will contribute towards reducing the environmental risks arising from

Sector	Benefits	Risks
	<p>and this will drive improvements in environmental performance</p> <ul style="list-style-type: none"> • Tightened controls to avoid spread of infections such as Covid-19 is resulting in better bio-medical waste management and infection control • Improving PHLs offer an opportunity to strengthen bio-medical waste management in health diagnostics and hence better environmental management 	<p>bio-medical waste management in the selected IPHLs and that will can be addressed through improved health surveillance.</p>
Roads	<ul style="list-style-type: none"> • Long-term performance-based maintenance contracts will bring environmental benefits such as reduced debris generation / disposal and reduced road accidents. 	<ul style="list-style-type: none"> • Construction-related EHS impacts such as air, dust and noise pollution; limited tree cutting / trimming; water pollution; worker and public safety; waste, scrap and debris disposal will result in minor physical environmental risks.
Urban	<ul style="list-style-type: none"> • Risk-informed master plans will consider all risks that will bring about positive environmental benefits particularly during and post-event in case of disasters. 	<ul style="list-style-type: none"> • No negative environmental impacts and risks due to this investment planning activities.
WRM	<ul style="list-style-type: none"> • The institutional development and investment planning activities will, will contribute towards positive environmental benefits through the integrated river basin management plan. 	<ul style="list-style-type: none"> • The proposed investments will have only construction-related impacts that will be localized, limited and reversible. There will be limited environmental risks due to these impacts. • Contextual risks due to environmental concerns in the Pamba river basin after the 2018 floods. These risks have to be considered at the time of investment planning in order to ensure compliance to the regulations and prevailing orders.

Social Benefits

38. Through a robust and comprehensive sector specific social screening, the ESSA finds specific and key social benefits and social risks under each of the program investments that cover multiple sectors. Some of the key social benefits and risks that are common across the investments are highlighted below.
39. **Strong focus on last mile service delivery and assistance.** Most of the sectoral investments, through partnership with local self government institutions, focus on deeper engagement with communities to enhance last mile service delivery of key schemes and programs under participating departments. The unified, resilient safety net, the strengthening of FPOs to be able to access improved markets, established of health laboratories for improved disease surveillance and improved access to testing facilities for remote communities and the engagement of the LSGs in disaster risk management planning process are important design elements for the program to reach the most marginalised with efficient set of services and benefits.
40. **Special attention to the vulnerable groups:** ESSA finds that the sectoral investments include adequate focus on vulnerable groups. The shift to agroecological farming is expected to

improve agricultural productivity, thereby directly improving the livelihood of small and vulnerable farmers, especially women. The work with ULBs for Master planning will seek to address vulnerabilities of marginalised communities and settlements. Through regulated land use, spatial planning of settlement it also seeks to prevent development in hazard prone areas that directly affect vulnerable groups, such as tribals. The investment also identifies the need for improved HR capacities and sensitivity of ULB staff to the needs of urban poor and women. Through the creation of a single, unified system of social protection with a payments platform that releases disaster payments to eligible beneficiaries in a transparent and timely manner, into the bank accounts of female head of eligible families, which is expected to increase women's autonomy and their position within family.

41. **Systems for citizen's engagement to improve social benefits.** The investments also include, in varying focus, mechanisms of citizen engagement. For instance, the health investments envisage citizen engagement in surveillance to improve awareness on disease outbreaks and access to testing facilities. Similarly, the integration of disaster risk mitigation planning through LSGs will ensure improved local capacities & preparedness for climate and disaster related risks/events.

Social Risks

The potential benefits envisaged through the programme investments can be undermined, if the social risks are not identified and mitigation measures evolved to address these. Across the investments, some of the key social risks that are likely are:

42. **Exclusion of vulnerable groups such as scheduled tribe/ caste groups and women.** A key social risk across the investments is that of exclusion of vulnerable groups such as SC, STs, small and marginal (S&M) farmers and women. Some sectors, such as roads and water resource management are likely to lead to exclusion of vulnerable groups during the planning process. Under roads sector, a potential risk is lack of community participation during prioritisation / selection of road packages, or lack of selection of roads in hilly, difficult terrains connecting tribal settlements. Likewise, crop insurance schemes are skewed against those with unclear land ownership/ titles, like women and tribal farmers. Similarly, investments under agriculture can end up perpetuating low participation of women, S&M farmers during planning of AEU; there is risk of capture of FPO leadership by dominant interest groups, with very few positional roles left for women or the marginal farmers. The unified system for safety-nets and the payments can also lead to risk of exclusion of households during the database consolidation and de-duplication process.
43. **Low awareness on services and entitlements among vulnerable groups.** For most investments, a likely potential risk is low uptake of key schemes and programmes by the poor and vulnerable communities. The lack of awareness on beneficial schemes and entitlements such as social safety-net programs, as also the schemes being envisaged under water, agriculture and disaster management planning are a critical barrier to access. Institutional mechanisms are as critical as mechanisms for strong information dissemination, especially targeted at the marginalized groups, who rely on these entitlements for basic survival.
44. **Limited institutional capacities for community engagement and management of social issues.** Other than the LSGs and LSGD, most participating departments have low social capacities primarily owing to their technical focus and limited community interface. Investments under water resource to work on issues of equity in water distribution, ensure outreach of WRIS to the community for their increased preparedness and resilience; investments under agriculture that seek to ensure information access to FPOs, technology and improved markets, improved spatial planning and risk informed DRM plans- all these require

additional capacities within participating departments around social risk management, use of inclusive approaches and community engagement in different aspects of planning and implementation. **These agencies also have limited mechanisms around social accountability, grievance redress or tracking of social inclusion in their respective sectoral schemes and programmes.**

Sector	Benefits	Risks
Agriculture	<ul style="list-style-type: none"> • Focused on last mile service and assistance • Improvement in farm incomes of smallholders • Strengthened institutional /individual capacities of service vulnerable cultivators • Expanded IAMIS to offer farmer friendly ICT services • Robust farmer database to help deliver benefits to smallholders, women and tribal farmers • FPO also likely to improve access to input, credit, services for marginal farmers 	<ul style="list-style-type: none"> • Multiple agencies with low capacities operating in silos • Institutions at cutting edge understaffed and overburdened • Low participation of women, S&M farmers during planning of AEU PoPs/IAMIS content • Exclusion of women collectives leasing land like Krishi Sanghs • Low offtake of AEU and IAMIS based services among smallholder • Elite capture of FPO leadership with few positional roles for women & vulnerable • Lack of active departmental GRM to track grievances • Improved information sharing, disaster preparedness and community resilience • Localised information to help in panchayat level water security planning / budgeting
Water Resources Management	<ul style="list-style-type: none"> • RBMPs offer social and economic benefits through greater availability and resource sustenance • Prevents resource conflict around water scarcity • Plans allow for equitable allocation to meet different needs /demands • RBMCA to help regulate water use and conservation • Allocate water resources based on principles of equity 	<ul style="list-style-type: none"> • Exclusion of vulnerable communities from the process of planning or decision making • Risk of priorities and needs of women and landless getting excluded from river basin plans or water allocation principles • Inability to pay water tariffs/ charges for water access/ consumption decided by the river basin plans • Untested institutional capacities for basin or aquifer level planning- reputational risks • Multiple agencies with low capacities operating in silos, with fragmented mandates- irrigation, groundwater • No functional department level GRM to track and redress sector specific grievance • Low representation of landless/ vulnerable in Basin level management committees
Health	<ul style="list-style-type: none"> • Improved physical and economic access to public testing facilities for the community • Reduced health expenditure, time saving and lower transaction cost • Citizens engagement in surveillance will improve awareness on disease outbreaks • Better collaboration among LSGs and departments for surveillance • Improved health outcomes for poor and vulnerable in Basin districts 	<ul style="list-style-type: none"> • Reputational risk of shifting to a new health surveillance system • Exclusion of marginalised members from being appointed in IPHLs • Worker safety of the lab technicians involved in testing and handling samples • Safety of community surveillance volunteers unless adequately trained and practising precautions • Setting up new IPHLs may lead to small scale physical displacement

Sector	Benefits	Risks
Roads	<ul style="list-style-type: none"> • More resilient road infrastructure • Time saving, road safety for commuters/ citizens • RMMS to improve institutional capacities, citizens engagement • Greater accountability of vendors due to improved monitoring • Digital platforms providing greater transparency and information • Creation of systems for sharing feedback and seeking redress • Improved road network and accountability in road maintenance 	<ul style="list-style-type: none"> • Physical Displacement of encroachers and squatters during improvement works • Temporary or permanent economic displacement of roadside vendors • Exclusion of tribal habitations due to hilly/ difficult terrain • Lack of community participation during prioritisation / selection of road packages • Labour influx during repair, resilience, maintenance works • Risk of gender based violence & sexual exploitation
Social Protection	<ul style="list-style-type: none"> • Improved efficiency in the delivery of public benefits and entitlements • Enhanced and timely access for poor & vulnerable- especially those critically dependent • Improved awareness among farmers about crop insurance as a risk mitigation mechanism • Lowers risks of income loss due to crop failure or productivity losses 	<ul style="list-style-type: none"> • Risk of exclusion of households during the database consolidation and de-duplication • Low awareness among vulnerable about their eligibility & process of establishing it for schemes • Exclusion of tenants & those not accessing formal credit from crop insurance schemes • Denial for those with unclear land ownership/ titles like women and tribal farmers
Disaster Risk Management	<ul style="list-style-type: none"> • Better understanding & preparedness for climate risks • Improved local preparedness for climate disaster events • Inclusive Resilience - marginalised have dependence on climate sensitive sectors • Preparedness based approach to minimize adverse impacts esp. on poor & vulnerable 	<ul style="list-style-type: none"> • Lack of participation by poor & vulnerable during preparation of climate informed DRM plans • Limited capacities of LSG staff & ERs to understand CC risks and impacts • Exclusion of tribal habitations due to hilly/ difficult terrain • Plans not backed by adequate human and financial resources to ensure effective implementation
Urban	<ul style="list-style-type: none"> • Master planning to address vulnerabilities of marginalised communities and settlements • Regulated land use, spatial planning of settlement to prevent development in hazard prone areas • Improved HR capacities to reflect in guidelines sensitised to needs of urban poor and women • Community participation in plan development to lead to greater awareness - Improved accountability • Master Plans to help communities develop greater resilience aimed at future disasters/ risks 	<ul style="list-style-type: none"> • Non-recognition of the spatial needs of women, vulnerable groups while drafting Master Planning guidelines • Exclusion of vulnerable during the Master plan preparation process in the ULBs • Limited capacities of city planners and ULBs staff to facilitate Master Planning • Overstretched, low human resources in ULBs to implement Master Plans • Lack of complete autonomy within ULBs to regulate land use as per plan or to deter plan violations

VIII. Institutional Capacity Assessment

Environment

45. The various GoK implementing agencies have adequate capacity to address the environmental risks and also to enhance their environmental performance where such opportunities exist.

The highlights of the institutional capacity assessment of the sector institutions / agencies are as follows:

- (a) **Agriculture-Department of Agriculture:** Given that the nature of environmental effects are positive and intrinsically embedded in the Program, there is no need for a separate environmental cell or independent stream of environmental management activities. Though there are no environmental risks, there are opportunities to integrate the environmental management in the capacity building - developing suitable training modules / content within the context of promoting the AEU approach, building FPO's environmental awareness and progressively including environmental concerns in the Agriculture Information Management Systems. In terms of environmental performance, the Department of Agriculture is clearly committed to promote environmentally responsible practices, e.g. the Department is supporting organic farming and similar initiatives to reduce the use of chemicals in agriculture. The assessment concluded that their capacity is adequate and can be further strengthened as outlined.
- (b) **DRM-KSDMA:** In this investment planning initiative, environmental concerns have been identified in the template for DRM plans at the LSG levels. These will suffice in terms of addressing environmental concerns of the DRM plans. With KSDMA's technical capacity to develop these plans using relevant information from various sectors, no separate environmental cell or division is required. However, in the capacity building that KSDMA will undertake, it is necessary to cover the management of environmental effects as one of the modules in the overall training to be administered during implementation. The assessment concluded that their capacity is adequate.
- (c) **Health – Department of Health:** In terms of organizational systems dealing with civil works for enhancing diagnostic laboratories, the inclusion of EHS provisions in the bid / contract documents is required to be done. As these environmental effects are localized and minor, this would suffice. For the streamlining BMW in these new laboratories, there is capacity within the Department to ensure that these are done in compliance with the BMW rules, i.e. obtaining the authorizations and streamlining its management in the laboratory facilities. Related to the disease surveillance and its linkages to environmental issues, though the organizational systems are in place, this can be strengthened in a manner that more follow-up action by the LSGs is done to improve the waste management and sanitation practices.
- (d) **Roads – PWD:** As the road investments have been so chosen that the environmental impacts are minimal, the proposed arrangements of having Technical Audit consultants (for maintenance roads) and Supervision Consultants (for CRN rehabilitation) were planned to augment the PWD's capacity. The assessment concluded that these were found to be satisfactory. However, Gok's ongoing effort to build in-house capacity in the PWD requires to be continued, and modules of environmental management training should be integrated with all capacity building initiatives through the Program period.
- (e) **Urban - LSGD:** Under the Program, risk-informed planning will include environmental risks among other risks in its upfront consideration. Though LSGD does not have an organizational set-up related to environmental management, this may not be necessary given the activities proposed under this Program. Integrating environmental considerations in LSGD's organizational systems can be accomplished through the external agency support that will be required to streamline risk information in planning. The assessment concluded that would be adequate for LSGD to address issues under this Program.
- (f) **Water Resources - WRD:** For institutional development and investment planning activities, the environmental capacity needs to be mainstreamed and this is best achieved through training and capacity building of all the WRD staff involved with operationalizing RCBMA. Establishing a separate environmental cell or division will not be necessary. The training and guidelines that will be a part of their organizational systems require to be adequate environmental management content. Given the focus of the State Pollution Control Board and the National

Green Tribunal on the Pamba river basin, it is required to integrate good environmental practices in their organizational systems. For the proposed investments that will be identified, WRD’s capacity to address environmental safeguards in large projects will suffice to ensure that these are suitably addressed during implementation. The assessment concluded that WRD’s existing capacity would be adequate to address issues under this Program.

Social

46. Kerala has a strong history of integration of pro-people and participatory planning mechanisms in its administrative, policy and legal set-up. This required assessing the overall system and institutional framework against key elements of citizen’s engagement, grievance redressal, social inclusion and gender. Capacities of the following state institutions are assessed as part of this ESSA:

S No	Sector	Partnering Sector Institutions
1	Agriculture	Directorate of Agriculture, Kerala Small Farmers Agri-business Consortium (SFAC), Krishi Vikas Kendras (KVK), Krishi Bhawans, Farmer Producer Organizations / Companies (SPOs/FPCs)
2	Water Resource	Irrigation Department, IDR, Groundwater Department, RBCMA
3	Roads	Public Works Department- PWD, Kerala Highway Research Institute-KHRI
4	Social Protection & DRFI	Department of Revenue (DoR), Food and Civil Supplies (F&CS), Information Kerala Mission, Department of Agriculture (DoA)
5	Fiscal Reform	Department of Finance
6	Health	State Health Directorate- Integrated Disease Surveillance Project (IDSP)- State Surveillance Unit (SSU), District Surveillance Unit (DSU)/ Public Health Laboratories (IPHL)
7	Urban	Local Self Government Department (LSGD), Department of Town and Country Planning (T&CP), Urban local Bodies (ULB)
8	Disaster Risk Management	Kerala State Disaster Management Authority-KSDMA, Local Self Government Department (LSGD), Local Self Governments (LSGs)

Adequate Social Capacities of State-wide Institutions to Manage Social Risks

(i) Citizen Engagement: A supportive policy environment for decentralisation through empowerment of LSGs by transfer of most subjects under their domain, activating the village assemblies (Gram Sabhas) to articulate development needs of the community, sectoral priorities and prioritizing them during the annual plan preparation, a regular system of community monitoring (social audit) wherein the annual performance is reviewed and scrutinized by citizens shows adequate attention to citizen engagement and social accountability. ESSA finds that the state has a few centralized GRMs, including the Chief Minister’s Public Grievance Redressal Cell, which keeps department and category wise records of grievances, the state-wide helpline Citizen’s Call Centre (CCC), and Local Self Government Departments GRM- all these provide access for citizens to submit online or telephone based complaints. Another slightly less structured system of ‘file adalats’ or file courts exists in some departments wherein all pendencies in resolution of grievances and works need to be explained by bureaucrats to elected representatives twice a year. The state also has an effective but informal system of redress given the strong organic linkage between the LSGs and the community, wherein citizens directly register their grievances (orally or through petitions) with their elected representatives (ERs).

(ii) Gender and Women’s Empowerment: The Kudumbashree campaign for social and economic empowerment of women by nurturing local leadership through village institutions and women’s collectives has today emerged as a pivotal agency for implementation of all key programmes for women and vulnerable groups. State also implements gender budgeting across all departments and undertakes an annual review of performance of five year plans and tracking gender outcomes

identified in the gender sub-plans and providing reservation for women in government positions. GoK has a Women's Cell to look into grievances of women, particularly, harassment against women, neglect, desertion, not recognizing her rights, and even family discords apart from a separate Domestic Violence Cell headed by a protection officer, Kerala also has multiple helplines and support systems including a dedicated Women helpline, and a Snehitha helpdesk- a 24-hour gender help desk that works to offer support to shelter-less and abandoned women through immediate help, shelter, counselling, motivation and legal assistance.

(iii) Social Inclusion - The state has been promoting the interests of Scheduled Caste and Scheduled Tribe communities by specifically earmarking funds under the Tribal Sub-Plan (TSP) and Scheduled Castes Sub-Plan (SCSP) for them in districts/areas predominated by these social groups. These include specific schemes in the agriculture and livelihoods sector. Even under the RKVY since 2017-18 the states have been allocating funds under the Scheduled Caste Sub Plan (SCSP) and Tribal Sub Plan (TSP) to ensure that benefits of the scheme go directly to their intended beneficiaries- SC and STs, respectively. All development departments of GoK have to ensure that approximately 20 percent of their annual budgets are spent directly or indirectly on the welfare of these vulnerable constituencies.

Limited Social Capacities of Participating Sector Institutions

47. **Need for stronger sector-specific institutional mechanisms and capacities for social management.** The borrowers /RKDPs own internal assessments have alluded to the overlap and duplication of functions of multiple sectoral agencies that leads to sub-optimal efficiency and poor accountability on social management/inclusion. It recognizes the need to reorganizing these institutions to create better synergies and clearer accountability for social management. Most programme investments therefore envisage the creation of stronger institutional mechanisms to increase outreach to communities, engagement with LSGs and other community based organizations (CBOs). Under the agriculture sector, the need for revamped agriculture extension, which capacitates women extension workers, to work more closely with women farmers and other vulnerable farmers in creating awareness, ensuring their participation in planning and selection of AEU-wise packages. Similarly, ensuring representation from vulnerable sections and women in FPO leadership (including organizing women only or tribal only FPOs) - to ensure that benefits are equitably distributed across gender, social and economic groups.
48. **Limited capacities of participating departments on social risk management.** ESSA finds that specific interventions for managing exclusion risks need to be augmented through greater sensitization and capacity building of field staff and extension workers. For instance, this is more critical in sectors such as roads and water resources management, where capacities are more technical than social, largely because these departments are traditionally 'engineering' departments with no public dealing of an 'accountable' nature. This also holds relevance for social protection, where there are no established institutional structures for the proposed unified social protection database and is likely to be created within the department of revenue, which has limited experience around social safety. Social protection schemes are mainly accessed by those who are most vulnerable to disaster events and shocks in the society- including elderly, PwD, single women, children, patients, victims of violence and abuse and transgender. Any transition to a new and unified system of benefit/ entitlement delivery is likely to lead to increase the susceptibility of the eligible beneficiaries unless the intervention is accompanied by strengthening of capacities of participating institutions. This will require specific capacities in the area of citizen's engagement (for making the scheme participation more inclusive and norms simplified), awareness generation (to create awareness about schemes, their eligibilities and process for accessing them) and accountability.

IX. Assessment Against Core Principles

Environment

Principle#1	Principle #2	Principle#3
<p>The Gol / GoK's framework (laws and regulations) - environmental, forests and pollution control acts and rules - were assessed and found to be adequate to manage the environmental effects of the Program activities. As these activities have only low and moderate impacts, these are not a major focus of the framework. The applicability of the framework is limited and only to the investment activities / civil works proposed in the PWD, Health Department and WRD. The capacity to ensure regulatory compliances requirements exists in the regulatory and implementing departments.</p> <p>At the Program level, the implementing department's in-house capacity will be strengthened through use of external consultants and EHS provisions in the bid / contract documents on EHS management in the sectors where civil works have been planned.</p> <p>In the institutional development and investment planning activities, there is sufficient awareness, competence and guidelines with the department systems to ensure that environmental issues are appropriately considered.</p> <p>The consistency to this core principle was confirmed.</p>	<p>The Gol / GoK's regulatory systems pertaining to natural habitats, particularly forests and eco-sensitive areas were assessed and found to be adequate to manage the adverse environmental effects if these arise during implementation.</p> <p>The Program activities do not include environmental effects on natural habitats or cultural heritage sites. No significant conversion or degradation of critical natural habitats or physical cultural heritage is envisaged.</p> <p>The consistency to this core principle was confirmed.</p>	<p>The regulatory systems include the Building And Other Construction Workers (Regulation Of Employment And Conditions Of Service) Act 1996 and Kerala Rules, 1998. The Act and Rules mandate health and safety compliance for all civil works, and is regulated by the Labour Commissionerate.</p> <p>While the systems are in place, the enforcement needs to be strengthened. Worker and public safety are generally managed through provisions in the bid / contract documents that the implementing departments – having civil works - will be using to procure its contractors. The provisions will be made part of agreements with contractors and will be monitored.</p> <p>Given the prevailing Covid-19 pandemic situation, this should also include additional requirements of the use of PPEs (face masks), physical distancing and handwashing practices that may be required of the contractor and sub-contractor personnel.¹ All of these have been included as PAP recommendations.</p> <p>With this further strengthening, consistency to this core principle was also ensured in the Program design.</p>

¹ World Bank ESF / Safeguards Interim Note: Covid-19 Considerations in Construction / Civil Works Projects, April 2020

Social

Sector	Principle#1	Principle #2	Principle#3	Principle #4	Principle#5	Principle#6
Agriculture	<p>The program will operate within adequate legal framework; project screening shows no substantial risks; institutions and systems are competent to manage impacts; state has mature systems to promote citizens engagement, gender, inclusion & transparency.</p> <p>LSGs have a system of social audit wherein performance across sectors (including agriculture) is collectively reviewed by Gram Sabha (village assembly). GoK deploys competent human and financial resources, although last mile delivery is affected as organizations are overburdened; capacities need to be augmented, as the program intends to change basic approach to agriculture planning in the Pamba Basin.</p> <p>State level GRMs are responsive, although more robust department specific GRMs are needed to make the system accountable.</p>	NA	<p>Proposed investments involve government employees who are protected by national /state laws, service rules from exploitation, & abuse. Majority functionaries in Kerala are women, including agri extension workers therefore burden of expanded mandate will fall on them for which safe and reasonable working hours will need to be enforced.</p> <p>Kerala has highest no. of S&M & women farmers (Kudumbshree) due to which there is strong enabling ecosystem for women safety and inclusion. Laws provide security to agricultural workers and allowances during temporary unemployment.</p>	<p>No investments are planned that may lead to physical or economic displacement of communities or individuals - whether temporary or permanent in nature.</p>	<p>Activities are aimed at increasing income of S&M, women & tribal farmers; the operation seeks shift to a new approach for which existing institutions need to ensure adequate consultations & awareness; investments aim at creating farmers collectives so that exclusion & economic risks are minimised.</p> <p>State systems, established norms will need to ensure equity in benefit distribution, especially to women, who despite land reforms don't have land ownership in proportion to their participation in agricultural sector and get excluded from receiving farm benefits.</p> <p>Potential lack of affordability to new PoPs for marginalised, tribal and women farmers as well as risk of exclusion of vulnerable from decision making roles in FPOs.</p>	<p>The nature of program investments is such that they are not likely to lead to or exacerbate social or resource conflicts.</p>
Water Resource	<p>The sector institutions/ departments have low social capacities primarily owing to technical focus and limited community interface; social capacities</p>	<p>The operations in this sector do not</p>	<p>The project workers in this sector involve public servants of irrigation department, IDRB and</p>	<p>No investments are planned that may lead</p>	<p>Proposed activities are aimed at improved information generation and analysis for equity in water allocation, timely information for</p>	<p>While water resources of Pamba Basin are contested</p>

Sector	Principle#1	Principle #2	Principle#3	Principle #4	Principle#5	Principle#6
	<p>need bolstering as they have to work on equity in water distribution, making usable WRIS for increased community resilience and preparedness. Considering the potential risks which are low to moderate, state systems are mature and with added capacities sector institutions can handle these risks and impacts, ensure citizen's engagement, participatory river basin planning and greater transparency through disclosures and information sharing. The department needs a dedicated and comprehensive GRM to ensure efficient redress of complaints</p>	<p>support activities that may have an impact on the religious or cultural resources of communities</p>	<p>some contracted staff in RBCMA and its PMU. The public servants are protected by national / states laws, service rules from abuse and exploitation. The operation will need to ensure fair working conditions for contracted workers that are deployed in the RBCMA.</p>	<p>to physical or economic displacement of communities or individuals - whether temporary or permanent in nature.</p>	<p>better flood preparedness and hence resilience. If prepared through a participatory process, basin plans could better respond to community needs, esp. of women & landless. Sector institutions will need to bolster social capacities by partnering with NGOs, CBOs and LSGs to assess people's needs and articulate them in plans. There is, however, risk of exclusion of vulnerable & women from the planning process, which may lead to inequity in <i>inter se</i> allocation of water or in fixing tariff/ cess.</p>	<p>between Govt of Kerala and Tamil Nadu, operations are aimed at efficient utilisation, not creating additional demands on water; hence not likely to exacerbate conflicts.</p>
Roads	<p>Sector institutions have low social capacities although continued engagements with Bank under KSTP I & II, Resilient Kerala Program Development Policy Loan have led to a more accountable and responsive working. This is notwithstanding that departmental decisions are still driven purely by technical considerations- selection of roads for maintenance or repair is based on estimated volume of future traffic and present road conditions rather than need to reach remote, inaccessible, tribal habitations. Likely social risks relate to land management esp. treatment of</p>	<p>Operations don't support activities that have an impact on religious or cultural resources. Any road modification adversely infringing on community conserved areas/ sacred</p>	<p>Safety of workers/ labour management will be secured through effective contractor management. Large scale mobilization of non-local labourers is expected for maintenance, repair contracts. This will need developing Covid-compliant Labour Management Procedures for worker & community safety. Labour mobilization can pose influx related risks, especially considering that</p>	<p>Although state systems for land management are closely aligned with bank policies, there is divergence in treatment of encroachers. PWD calls for legal action and eviction of occupants, while bank</p>	<p>Roads planned for expansion and improving connectivity to tribal habitations are likely to be socially beneficial- improved access, better rescue-relief to tribal settlements during adverse events and better resilience. Usually such habitations get excluded as tribal / indigenous communities live on hilly terrains / uplands, which are the least preferred landscapes owing to difficulty of construction (costs and forest clearances) and convenience. There is risk of exclusion of tribal communities & women from</p>	<p>The nature of program investments is such that they are not likely to lead to or exacerbate social or resource conflicts.</p>

Sector	Principle#1	Principle #2	Principle#3	Principle #4	Principle#5	Principle#6
	encroachments and squatters, will need to be aligned to Bank policies. Although PWD has a dedicated GRM and a new digital platform based GRM (proposed under RMMS), it needs to be accessible and transparent in order to build the trust of citizens/ users to access them.	groves will be excluded from program investment	state has dispersed, low population settlements, which further reduces the absorptive capacity of communities. Adequate measures will be needed, including orientation of workers and community awareness on labour influx.	policy calls for resettlement. Works requiring large scale displacement to be excluded.	prioritization of roads needing urgent expansion or maintenance as departmental systems look at it from technical perspective rather than adding an inclusion lens to the decision making.	
Social Protection & DRFI	Investments are aimed at creating better disaster preparedness by improving efficiency in delivery of public entitlements and benefits under different social security schemes and also supporting risk financing in agriculture as a measure to increased resilience of farmers. However, the exclusion of marginal, women and tribal farmers from accessing crop insurance and lack of enabling local ecosystems, including limited human resources and institutional capacities remain a concern and reason for low off-take.	The operations in this sector do not support activities that may have an impact on religious or cultural resources.	Proposed investments involve working with government staff governed by national/ state laws and protected by service rules from abuse, exploitation. Majority of functionaries in agriculture extension are women; legal framework offers safeguard to women, but work of social protection /crop insurance will fall on women frontline staff for which safe and reasonable working hours need to be enforced.	No investments are planned that may lead to physical or economic displacement of communities or individuals - whether temporary or permanent in nature	Unified state database of 'eligible' is likely to greatly benefit poor and vulnerable. Since reconfiguration of social security entitlements is aimed at improved efficiency and timeliness, which is crucial for elderly, PwD, single women, who depend on these benefits for food security and survival. Crop insurance may, however, lead to exclusion of smallholders and those with unclear land titles (women and tribal producers), sharecroppers if eco-system around it is not improved to make it inclusive- in terms of eligibility or transaction costs .	The nature of program investments is likely to reduce vulnerability and create systems to improve their resilience.
Fiscal Reform	NA	NA	NA	NA	NA	NA
Health	Sector investments are likely to operate within a strong sectoral and state legal framework that ensures equity and	The operations in this sector	IDSP has detailed & functional protocols on worker safety - bio-safety	Dept will use space within existing health	State systems are geared to provide free/ affordable inclusive health services. District health	The nature of program investments is

Sector	Principle#1	Principle #2	Principle#3	Principle #4	Principle#5	Principle#6
	<p>inclusiveness in delivery of health services.</p> <p>Relevant health institutions and local governments are competent to assess and manage likely social risks. There is, however, risk of new IPHLs being understaffed to deliver on their larger mandate of conducting more tests for effective disease surveillance. An assessment of reasons for high vacancies at IIPHLs will need to be done to ensure competent staff that enjoy favourable work conditions Likewise, capacities of community health volunteers also need to be enhanced before they are engaged in disease surveillance.</p> <p>The program (IDSP) does not have a dedicated functional GRM to handle program specific grievances and feedback and needs to be created.</p>	do not support activities that may have an impact on the religious or cultural resources of communities	and biomedical waste management procedures, which are regularly reviewed and reported. Most IDSP positions in SSU, DSU and IPHLs are contractual whose employment conditions are not clearly defined. Key positions in DSUs/IPHLs are vacant impacting scheme & lab performance. Engagement of Kudumbshree members as health volunteers is also likely to impose safety risks unless they are made well aware of risks & , precautions.	institutions- for IPHL Although 150 sq meters per lab is needed at district level, it's possible that these sites may not be free of encumbrances. Considering divergence in treatment of non- titleholder Bank policy will need to be adhered.	planning processes ensure consultation with different constituencies and representation of their needs in Health Plans. Based on realisation of vulnerabilities and specific health related needs of social groups, state operates several social security schemes providing health benefits and healthcare to elderly, PwD, orphans, single women, children of female headed households. Understanding the need to bring these services closer to the community, department is expanding the IPHL network. State strategy of mobilizing health volunteers is aimed at improving outreach and responding to vulnerable.	such that they are not likely to lead to or exacerbate social or resource conflicts.
Urban	Proposed investments operate within adequate legal and regulatory framework. LSGD has strong systems and institutions to ensure social sustainability, equity and inclusiveness. LSGIs are strongest institutions in the state with a rich history of associating with citizens for development planning, although experience of associating for master planning is rather limited. ULBs lack adequate human resource and are	The operations in this sector do not support activities that may have an impact on the religious or cultural	The project workers here are public servants- staff of line department and municipal bodies. These public servants are protected by service rules, national/ state laws from exploitation & abuse. The operation will need to ensure fair working conditions and working	No investments are planned that may lead to physical or economic displacement of communities or individuals	Sector activities are aimed at enhanced institutional capacities to respond to future disaster events, better planning of urban settlements to create urban resilience. Improved land-use planning, better community awareness and regulated development in hazard prone areas will reduce vulnerability. ULBs will need institutional	The nature of program investments is such that they are not likely to lead to or exacerbate social or resource conflicts.

Sector	Principle#1	Principle #2	Principle#3	Principle #4	Principle#5	Principle#6
	overburdened to support effective and participatory Master Planning. Being largely dependent on state, ULBs lack financial resources to implement these plans. They lack sufficient regulatory powers to ensure adherence to land use, prevent plan violations or timebound preparation and notification of plans.	resources of communities	hours for staff deployed in preparation of Master Plans, especially female staff, who will be facilitating participation in plan preparation.	- whether temporary or permanent in nature.	strengthening so that they can enforce stronger regulation around land-use/ town planning and be made accountable for these Master Plans. If tribal settlements or common property regimes fall near or within municipal limits, such ULBs will be excluded from the pilot.	
Disaster Risk Management	Kerala has most enabling legal environment for DRM. Recent spate of floods & landslides forced the state to ensure a comprehensive and inclusive DRM framework. LSGD and LSGs that anchor DRM activities address issues of equity and inclusion in public services and have competent systems to ensure inclusion of vulnerable groups during preparation of climate risk informed DRM plans. In recent years LSGs have developed capacities to undertake DRR planning. Nearly 850 GPs have prepared DRM plans, but await implementation for want of resources and mandate. LSG functionaries are overburdened and lack human resource to support participatory DRM planning.	The operations in this sector do not support activities that may have an impact on the religious or cultural resources of communities	The project workers in case of this sector are public servants- staff of KSDMA, local bodies. These public servants are protected by the service rules, national /state laws on protection from abuse and exploitation. Since most disaster related frontline workforce in the state comprises women- Kudumbshree members and ASHA or Anganwadi Workers, additionality of mandate will impact their working conditions and working hours, which needs to be addressed to ensure fair working conditions and safety.	No investments are planned that may lead to physical or economic displacement of communities or individuals- whether temporary or permanent in nature.	Climate and disaster events adversely impact the marginalised, and inter-sectionally vulnerable. Better hazard & vulnerability risk assessment & its use to make climate informed DRM plans will improve community awareness and capacities for preparedness. Decentralised, planning adopted and refined over last 25 years, has led GoK to pay significant attention to identifying needs, (through dedicated gram / ward sabhas or women sabhas) and ensuring place for them in final plans. Such plans explicitly identify investments directed at the welfare of vulnerable groups- women, elderly, children, SC, ST and transgender.	The nature of program investments is such that they are not likely to lead to or exacerbate social or resource conflicts.

X. Key Inputs from Stakeholder Consultations

Environment

49. State-level consultations feedback: These consultations were carried out both the Bank's ESSA team and by local institution, KILA. The highlights relevant to environmental systems were as follows:

No.	Sector	Feedback - Highlights
1	Agriculture	<ul style="list-style-type: none"> Agroecological Zone (AEZ) approach with agroecological management units will lead to selecting the most suitable crop for particular ecosystems. This will lead to less environmental damage, i.e. less fertilizer use, less pesticide use and less erosion. It is expected to be beneficial for the environment. Building the relevant environmental capacity in the Farmer Producer Organization as part of the overall capacity strengthening will be required. In the Integrated Agricultural MIS, the first is to focus on information of economic and financial relevance to the farmer. Subsequently, this will be extended to include relevant environmental information as well.
2	Disaster Risk Financing	<ul style="list-style-type: none"> There are no environmental effects and hence environmental systems are not relevant.
3	DRM	<ul style="list-style-type: none"> In the template for disaster management plans for the LSGIs, there is inclusion of environmental considerations such as environment-friendly roads, water & soil conservation, green buildings and adoption of the green protocol Flood, land use changes, watershed management and appropriate capacity building of LSGIs should be done in an integrated manner.
4	Fiscal / Debt	<ul style="list-style-type: none"> There are no environmental effects and hence environmental systems are not relevant.
5	Health	<ul style="list-style-type: none"> There is only one bio-medical waste disposal facility in the state and is overburdened. This is a constraint and disposal facilities need to be expanded. For liquid waste, the treatment systems are not adequate. Further there are no municipal sewer network except for Thiruvananthapuram. Therefore, there are liquid waste disposal constraints. ISDP data for 2019 revealed that (i) there is the highest occurrence of deaths due to Leptospirosis; and (ii) there is the highest number of cases of diarrhoea. Both these are due to poor solid waste and sanitation practices.
6	Roads	<ul style="list-style-type: none"> None of the roads in the Program pass through ecosensitive areas such as forests and wildlife areas. To manage the construction-related impacts during the road rehabilitation, the contractor requires to have environmental capacity. Further, there will be environmental capacity within the supervision consultants to support the PWD. For the long-term performance-based maintenance, there will be supervision consultants to support the PWD in overseeing the contract. These supervision consultants will interface between the PWD and the contractors; and provide the necessary support on environmental issues as well. Including environmental capacity strengthening as a part of road asset management systems is a good idea. There will be no widening in any of the roads rehabilitation that are being planned under the Program. There may be some incidental tree-cutting that will be done after taking the required permissions.
7	Urban	<ul style="list-style-type: none"> Risk informed plans will be beneficial. This should necessarily include environmental risks. One of the main urban problems is the conversion of land use (paddy lands, wetlands and hilly lands), which results in

No.	Sector	Feedback - Highlights
		<p>environmental problems indirectly. Town and Country Planning Department will need the capacity to develop these risk informed plans and facilitate the adoption by the LSGs.</p> <ul style="list-style-type: none"> Finding land for waste disposal, preventing the conversion of paddy land and adopting proper scientific approaches to planning are the main issues.
8	WRM	<ul style="list-style-type: none"> In the river basin approach, environmental management has to be integrated. Capacity building of the WRD institutions will be required in order to achieve effective environmental performance. WRD has done a number of externally aided projects (e.g. dams) and is familiar with the environmental studies such as ESIA and ESMPs, which are used to manage environmental impacts. The Pamba River Basin is particularly important from an environmental point of view as it has been a focus of the State Pollution Control Board in terms of polluted stretches and also the National Green Tribunal in the aftermath of the floods. In finalizing the river basin plan, the environmental concerns should be duly considered and suitably integrated. River pollution due to drainage outfalls, pesticide run-off and lack of a scientific approach are the primary problems that needs to be addressed in an integrated manner.

50. Community consultations feedback: The highlights relevant to environmental systems from the consultations with the gram panchayats and municipalities (covering 328 community members) in the four districts done by KILA were as follows:

No.	Sector	Feedback - Highlights
1	Alappuzha (Mannar, Pandanad and Kainakari Panchayat; and Alappuzha Municipality)	<ul style="list-style-type: none"> Agriculture: AEU-based planning will help protect the environment. Roads: These assets are inhibitors of natural flow and there is a lack of proper scientific approaches in road design & construction. Urban: Capacity strengthening of LSGIs to manage the main problems – floods, water contamination and solid waste pollution – is required. WRM: Depth of the Pamba river is decreasing, river mining should be regulated an integrated approach is necessary.
2	Idukki (Peermade, Peruvanthanam, Vandiperiyar and Kumily Panchayat)	<ul style="list-style-type: none"> Agriculture: Pollution caused by chemical fertilizers, loss of fertility and soil erosion are the main problems. DRM: The planning should be based on geographic, climatic and environmental features of a particular location. Roads: Management of road construction is important, i.e. landslides, quarry management, accident management and worker use of safety gears WRM: Water shortages and the need for conservation, protection of ponds and water bodies and rainwater harvesting are all important and the panchayats have a critical role in the Pamba river basin plan.
3	Kottayam (Kooruthodu, Mundakayam and Manimala Panchayats; and Changanasserri Municipality)	<ul style="list-style-type: none"> Agriculture: The current farming practices are leading to adverse environmental impacts. And, the FPO capacity on dealing with environmental issues have to be built. Roads: Drainage, air & dust pollution, tree cutting, roads not weather resistant, water-logging and unscientific approaches to design and construction. Urban: Unscientific road constructions, degraded canal system, inefficient drainage system, drinking water shortage, decreasing

No.	Sector	Feedback - Highlights
		<p>attention to agriculture sector, air and water pollution, excessive waste generation and absence of waste management are the key environmental issues</p> <ul style="list-style-type: none"> • WRM: River depth is a key issue, integrated approach is required and Government & civil society should work together.
4	Pathanamthitta (Ranni, Perunad and Aranmula Panchayats; and Thiruvalla Municipality)	<ul style="list-style-type: none"> • DRM: LSGIs are not capable. Need to improve their capacity through training and awareness on different sectors. • Roads: Air pollution, worker protection and conversion of paddy land are the key issues. • Urban: Drinking water and sanitation, drainage and sewage systems are the main issues. • WRM: Past constructions were unscientific, sand mining in the rivers, rock falls due to deforestation and waste dumping are issues that need to be addressed in an integrated manner.

51. Two ESSA stakeholder workshops: The feedback was largely on the activities proposed in the Pamba river basin, and the environmental issues. The highlights relevant to the environmental systems were as follows:

No.	Sector	Feedback – Highlights
1	WRM	<ul style="list-style-type: none"> • Sabarimala is one of the largest annual pilgrimage sites in the world where an estimated 50 million devotees are visiting every year. How is that addressed? • How in this particular geographical area is the program going to foster the existing natural resources and address the core issues? • The conservation of Pamba Riverine Ecosystem and abatement of pollution especially solid waste management and legacy waste management system may be given much attention. • What about the Pamba Action Plan? • For the effective implementation, the institutional arrangement is vital. Coordination among agencies is the key. There is a need to involve civil society organisations along with the LSGIs. This has to be a massive effort.
2	General	<ul style="list-style-type: none"> • What are the measures suggesting for the integration of different institutions and prevention and production of anticipated environmental hazards?

52. Email feedback: A Trivandrum resident and a nature / environmental educationist opined that systemic and integrated approach was not adequately adopted in this multi-sector program. The Task Team was of the view that the extent of integration could only be advanced in time, and the current Program design is sufficient to usher the Departments to functioning in a coordinated manner. In particular, the introduction of the river basin management approach in the Pamba river and realizing the integrated outcomes that could result is an initial step for a more comprehensive adoption of systemic thinking and ecology-oriented planning in Government functioning. The other suggestions will be included in the training and institutional development activities.

53. All the feedback obtained through the different forums were considered both from a Program design and ESSA perspective. On the key environmental issues and the lack of capacity within the LSGIs, these will be addressed as a part of the Program's support in developing institutions to create the foundations for multidimensional resilience. This will address the feedback pertaining to Agriculture, DRM, Health, Roads, Urban and WRM. The feedback related to the investments that will be in the four districts along the Pamba

river basin, namely Alappuzha, Idukki, Kottayam, and Pathanamthitta, will have to be addressed through building the capacity in the three sectors - Health, Roads and WRM. These are primarily related to managing civil works through EHS provisions in the bid / contract documents and streamlined monitoring & supervision. Certain capacity already exists within the implementing departments. In the light of the feedback, these were re-examined and measures to enhance the capacity where necessary, e.g. Health Department, were included in the ESSA's Program Action Plan.

54. The overarching feedback about adopting an integrated approach between implementing departments and between GoK and civil society organizations is an important one from the community-level consultations. This has already been considered through the multi-sector Program design at the local level. In specific, the river basin management approach of the Pamba river is aimed to encourage such an integrated approach. Building environmental content in the capacity building initiatives pertaining to the river basin management has been identified as one of the Program Action Plans. In the light of the suggestions received, the environmental content will be enhanced to include ecology-based integrated and systemic thinking.

Social

55. Feedback from the stakeholder consultations: These consultations were carried out both the Bank's ESSA team and by local institution KILA engaged for the purpose. The feedback received from the stakeholders informed the gap analysis and the recommendations made for strengthening the management of social risks and impacts.

Sector	State Consultations	Community Consultations
Agriculture	<ul style="list-style-type: none"> • IAMIS features are being expanded and made more user friendly/ simple • AEU based packages are based on affordable technologies targeting smallholders • AOs should have more time to spend on field for extension work & handholding homestead farmers 	<ul style="list-style-type: none"> • Tenants (and landless) don't get the same scheme benefits as the landowners. • FPO leadership is under constant pressure from external entities, so members need to be educated and made aware about its use and purpose • IAMIS is being used by very few progressive farmers (with smartphones), awareness and easier access needs to be created
Water Resource	<ul style="list-style-type: none"> • Deptt has a limited community interface and banks on LSGs/ NGOs • Comprehensive capacity building of department/authority required to secure interest of vulnerable communities during river basin planning • Basin level discussions were only done sometimes with elected representatives, never with community 	<ul style="list-style-type: none"> • Most Local bodies don't have experience of water budgets or water security plans, but with some capacity development could be best suited to prepare inclusive river basin plans. • The current flood forecasting systems/ messages are too technical and difficult to understand sometimes • Water scarcity felt more acutely on highlands where even water tankers are difficult to reach
Roads	<ul style="list-style-type: none"> • Most projects get delayed due to the process of land acquisition • For roads costing more than INR 150m, there is a E&S cell to assess impacts • Labour management is contractors responsibility and 	<ul style="list-style-type: none"> • Roads made by LSGD need approval by Gram Sabha and consultation with community, not so in case of PWD roads- Panchayats have no role • No discussion or awareness in community on how road packages are

	current PWD tenders don't make prevention of GBV/ SEA part of contractors obligation.	selected and if some screening performed to assess impacts <ul style="list-style-type: none"> • Panchayats should be consulted before road selection and monitor adverse livelihood impacts due to road construction
Social Protection & Disaster Risk Financing	<ul style="list-style-type: none"> • Although revenue department will be nodal for social registry, LSGD is best placed for the job. • Access and inclusion can only be addressed through awareness and gram sabha mobilization • Crop losses are mostly compensated through IAMIS for those already registered on the portal 	<ul style="list-style-type: none"> • There are some exclusion errors in social protection database although periodic update and rectification takes place • Scope for making the procedure for accessing social protection entitlements simpler • Crop loss is compensated only if impact is large scale, payouts are sometimes delayed and insurance is usually accessed by those with smart-phones, large and progressive farmers
Fiscal Reforms	No consultations around this sector	No consultations around this sector
Health	<ul style="list-style-type: none"> • Government facilities are free and charges of private ones are regulated, large population is covered by national health insurance scheme • Worker safety is ensured through series of trainings on infection control and provision of equipment 	<ul style="list-style-type: none"> • There are no cases of denial or discrimination in rendering services although in some areas with no public facilities charges are unaffordable • Need to deploy more health workers to manage pandemic with training on awareness generation and pandemic management • Concerns about long work shift and lack of insurance cover of frontline health workers
Urban	<ul style="list-style-type: none"> • For resilience planning, instead of vulnerable communities, focus should be on vulnerable areas which covers all • Most buffer zones are under high pressure and public awareness can counter attempts at encroachment/ land grab 	<ul style="list-style-type: none"> • There is limited community participation during master plan preparation- lack of clarity about the process of its preparation • SHGs, Resident Associations, ward sabhas need to be involved and inputs sought before finalization of master plans.
Disaster Risk Management	<ul style="list-style-type: none"> • Primary relief agencies are revenue and agriculture but have limited understanding of social issues and risks of the vulnerable • LSGD is therefore being provided a more important role in relief and rehabilitation 	<ul style="list-style-type: none"> • Most elected leaders or community members have not received any formal DRM training and need to create awareness • ULB capacities need to be augmented to steer preparation of climate and disaster informed plans

XI. Disclosure

56. The draft ESSA reports – this draft ESSA Summary Report (Part A), the draft ESSA Environmental Report (Part B) and the draft ESSA Social Report (Part C) were disclosed on Monday, February 8, 2021 in the RKI website. All of these were in English. The draft ESSA Summary Report (Part A) was translated in the local language - Malayalam – and disclosed on Saturday, February 13, 2021. Comments, suggestions and any other feedback was requested along with this website disclosure.

57. All of these disclosures were ahead of the stakeholder workshops planned on Thursday, February 18, 2021 and Monday, February 22, 2021. As part of the invitation to the workshop, the invitees were sent the draft ESSA Reports for their prior reading. This constituted disclosure as well. The feedback obtained during the workshop was used to further refine and finalize the three draft ESSA reports. Once final, the ESSA reports were disclosed in the RKI website and also the World Bank website. Print copies of the ESSA reports will be made available upon request at the RKI office.

XII. Recommendations and Actions / Exclusions

Environment

58. The assessment revealed that the implementing departments have adequate capacity to deal with the various environmental effects, which are low-to-moderate in nature. For those sectors that include civil works, i.e. roads, health and WRM, there will be environmental effects that have to be managed during construction. Capacity augmentation planning in terms of external consultants and including provisions in the bid / contract documents have already been planned. More than addressing gaps, this Program offers opportunity to strengthen environmental performance in the different sectors. Further, the environmental sector institutions such as the DoECC are not integrally connected with the sectoral environmental issues and the sector departments. Their expertise is not reaching these sectors and integrated approaches are not being facilitated. This gap and other areas of strengthening have been included in the Program Action Plan.

59. The following table includes the list of activities to be undertaken towards environmental systems strengthening in the context of the Program activities:

No.	Sector	Description	Timeline	Indicator for completion
E1	Agriculture	Develop relevant environmental content in the training and capacity building to be given to AEU's and FPOs. Conduct such training for mainstreaming environmental considerations.	End of Year 1 and the rest of project period	Evidence of the conduct of training that includes environmental content
E2	Health	Review and strengthen the bid / contract provisions pertaining to EHS for civil works when the new or expansion of PHLs is undertaken	End of Year 1	Standard bid / contract documents of DoHFW include EHS provisions
E3	Health	Develop and conduct focused staff training to streamline BMW management systems in the new or expanded PHLs	End of Year 1 and the rest of project period	Evidence of the training material and the conduct of training in PHLs
E4	WRM	Develop relevant environmental content in the training and capacity building pertaining to institutional development and investment planning. Conduct such training for mainstreaming environmental considerations.	Throughout the project period	Evidence of training conducted that includes environmental content
E5	Environment / RKI	Facilitate a regular dialogue between the environmental sector institutions such as the DoECC and	Throughout the project period	Evidence of the periodic meetings

No.	Sector	Description	Timeline	Indicator for completion
		SPCB and sector institutions to enable a two-way capacity-building.		facilitating the dialogue, discussions and field visits
E6	RKI	Monitor and report the progress on environmental performance of the Program activities as a part of the overall Program reporting	Quarterly and throughout the project period	Evidence of the periodic environmental performance reports

Social

60. The ESSA proposes the following recommendations that have emerged through analysis of potential social risks and the systems' capacities, inputs from stakeholders, including from field consultations with the community on possible ways to better address these.

Sector	Gaps/ Risks	Recommendations
Agriculture	<ol style="list-style-type: none"> Multiple institutions with overlapping mandates leading to low accountability Risk of exclusion - from the planning processes (voice), or representation in decision making roles in FPOs (agency) Lack of a strong and dedicated GRM for closer scrutiny and complaint tracking 	<ol style="list-style-type: none"> Need for a more enabling policy environment with clearer accountability frame Improved departmental capacities, especially of managers and extension staff to ensure inclusion in design and implementation Need for a dedicated GRM to address sector and investment specific grievances
Water Resource	<ol style="list-style-type: none"> Women as prime impactees (of disaster) and benefactors of flood information (preparedness) need to have central role in basin level planning and water allocation RBCMA may lack requisite social capacities to ensure gender mainstreaming and participation in basin planning or developing WRIS that fits community needs Lack of a strong and dedicated GRM for closer scrutiny and complaint tracking 	<ol style="list-style-type: none"> Involvement of local CBOs like Kudumbshree to facilitate participation of women & dialogue with community Close working with LSG for inclusion of interest of all constituencies, equity and community participation in river basin planning, Need for a dedicated GRM to address sector and investment specific grievances
Roads	<ol style="list-style-type: none"> Low participation/ LSG community in selection and prioritization of road packages Existing GRM needs to be further strengthened, RMMS also likely to bolster existing system Land Management practices, especially with respect to management of non-titleholders is not aligned with the Bank policy 	<ol style="list-style-type: none"> Need for closer, direct or indirect dialogue (with users/ CSOs/ LSGs) for selection and screening of road packages A more transparent, accountable and well disclosed GRM will improve usage and trust Current 'eviction' based approach to encroachers and non- titleholders needs to be replaced with a more responsive & rehabilitation based one or exclusion of investments requiring large scale resettlement; labour risks related to GBV/ SEA and

Sector	Gaps/ Risks	Recommendations
		labour influx need to be duly incorporated in tender documents.
Social Protection & DRFI	<ol style="list-style-type: none"> 1. Unification of social protection database may lead to exclusion or need to re-establish eligibility (afresh) leading to denial 2. Eco-system around crop finance is exclusionary, favouring S&M farmers and processing of settlement lacks transparency 3. Other than PDS, no other major social entitlement scheme has a strong GRM, with GRM for crop insurance. 	<ol style="list-style-type: none"> 1. Need to strengthen capacities of institutions for smoother transition, simplified norms and accountability for ensuring continuity of entitlements, as the most vulnerable depend on these safety nets. 2. Need for restructuring crop insurance scheme to make it inclusive and processing transparent, timebound. 3. The new social registry needs a strong, simple, well publicized GRM as people with least awareness and most vulnerability access them; similar mechanism needed around crop insurance as well
Fiscal Reform	No risks	NA
Health	<ol style="list-style-type: none"> 1. Outreach or extn is offered by contractual staff with insecure tenure & vague terms / conditions; sometimes CBO & volunteers, especially for health surveillance, this has health and safety related risks for workers- mostly women. 2. Potential sites for IPHLs may not be free from encumbrances and may have to be vacated for setting up labs 3. Lack of scheme specific GRM 	<ol style="list-style-type: none"> 1. Need of fair working conditions for deptt. staff/ frontline workers/CBOs/ volunteers with reasonable working hours, safety measures and capacity building / awareness on precautions and health safety 2. Need to familiarize concerned institution with the bank policy, esp. with regards to encroachments and need for rehabilitation/resettlement of non-titleholders. 3. Need to create a dedicated GRM around health/ disease surveillance
Urban	<ol style="list-style-type: none"> 1. Good overall social management but need more capacities to understand specific social risks/ vulnerabilities related to sector investments- like capacities for making spatial plans inclusive and linking them with district development plans 2. Accountability framework for town planning is unclear and weak- while ULBs are made responsible for their preparation, they lack regulatory powers 3. Even though LSGD and LSGs have their own GRMs their use is limited and their functioning not as clear/ transparent 	<ol style="list-style-type: none"> 1. ULBs/LSGD will need adequate human and financial resources plus capacities to integrate social management practices into proposed investment areas like development of Master Plans using a participatory process. 2. Stronger legal regime will help in fixing clearer accountability of ULBs for preparation of time-bound, risk informed Master Plans 3. Need to strengthen the existing GRM, create awareness and transition towards digital systems of grievance redress that are traceable and accountable.
Disaster Risk Management	<ol style="list-style-type: none"> 1. Good overall social management but need more capacities to understand specific social risks/ vulnerabilities related to sector investments- like local impacts of climate change and integrating 	<ol style="list-style-type: none"> 1. ULBs/LSGD will need adequate human and financial resources plus capacities to integrate social management practices into proposed investment areas like

Sector	Gaps/ Risks	Recommendations
	<p>those complexities into DRM or LSG plans.</p> <p>2. Climate informed DRM plans will be ineffective if not linked to budgets, local development plans with clear assignment of responsibilities.</p> <p>3. Even though LSGD and LSGs have their own GRMs their use is limited and their functioning not as clear/ transparent</p>	<p>development of Master Plans using a participatory process.</p> <p>2. Need for roadmap with clear assignment of roles and responsibilities within ULBs to integrate CC-DRR into annual plans</p> <p>3. Need to make GRM digitally inclusive and accessible through multiple mediums, grievances traceable, proactive disclosure of grievances and how they are being used for systems improvement</p>

61. Strengthening Capacities for Inclusive and Participatory Planning in Different Sectors.

The PforR operation demands key institutions such as WRD, PWD, Health to engage more closely with communities to meet the PSO and its DLIs. The overall strong capacity of the state on participatory planning needs to percolate down to these sectors through focused capacity enhancement of these institutions on social management. This needs to be complemented by initiating development of specific sector strategies to strengthen the role of women or tribal or migrants as primary benefactors, as they are most vulnerable to disaster/ climate/ health events and may need to be provided a distinct voice and agency through participatory planning and decision making process for greater individual and community level resilience.

62. Improved Capacities of Sectoral Institutions on Social Issues. The key partnering departments need to bolster their capacities for citizen’s engagement, gender mainstreaming, making existing services more inclusive and accessible to citizens and the vulnerable. This will include activities like servicing the information needs of women farmers, tenants/ sharecroppers, S&M farmers through an expanded IAMIS, reorienting the process of selecting or prioritizing road packages and even agriculture package of practices, ensuring an WRIS that can be used by S&M farmers and landless in the river basin. For example, in Urban sector/ ULBs it will mean creating additional capacities for linking spatial plans with district development plans; augmenting capacities of LSGs to assess community level/ local impacts of climate change and building those social risks (depending on social groups impacted and their specific vulnerabilities) in the climate informed plans; tracking inclusiveness of programmes; ensuring allocation of budgets for integrating social management strategies in their work.

63. Fair Working Conditions for frontline staff and outreach workers. Given the program’s focus on deeper engagement with the community, field level cadres of key departments and institutions, who are mostly women and are already overburdened, are likely to see expansion in their current responsibilities if the current planning processes are to be made more rigorous and participatory. Moreover, shortage of staff is often met through hiring of contractual workers or by engaging frontline staff- extension workers in case of agriculture, ASHA/ AWW in case of health or Kudumbshree members providing outreach in local bodies- all of which are mostly women. It is proposed that sectors undertake assessment of the staff arrangements, capacity needs and working conditions of staff in order to evolve specific measures to ensure that the safety, including GBV/SEA, and fair working conditions are met with.

64. Stronger and Dedicated Grievance Redressal Mechanisms. While the state has a reasonably functioning, centralized Grievance Redressal Mechanisms in place, it is proposed to create strong department level GRM in all participating sectors/ departments, or explore creation of a central program level GRM that pans across sectors

to allow improved tracking of inclusion, outreach and benefits and help make the services, practices and packages more accessible. Owing to the complex and multi-sectoral nature of the operation, it will also be important that the PMU undertakes a periodic clustering/ categorization and analysis of complaints to identify the problem areas, provide feedback to the concerned duty bearers and loop the feedback to inform the program strategies and for systems improvement.

65. **Stronger legal framework for social accountability.** Some of the investment areas have legal or operative eco-systems that do not provide for clear accountability. In many sectors like water, agriculture, urban development and social protection, there are multiple institutions with sometimes overlapping mandates that often makes social accountability very difficult to establish. For example, in case of agriculture insurance the operating framework (at least for the national crop insurance scheme- PMFBY) is skewed against the small and marginal farmers and therefore will need re-engineering of the eco-system to remove these exclusionary eligibility criterion, expand awareness and coverage and make the system more transparent. Likewise, in case of spatial development planning or town master planning, accountability is not clear. While the LSG are made accountable for their preparation and finalization, there are no fixed timelines in the enabling policy for different stages of planning. This needs a stronger legal regime or enabling environment, with clear assignment of roles and responsibilities, to help fix clearer accountability for achievement of outputs.
66. **Land Management.** The Program does not foresee any requirement of private lands for Program investments and most investments will mainly be on existing public or government land. However, there is gap in the land management practices of the GoK, specifically Public Works Department (PWD) in relation to their treatment of the non-titleholders (encroachers and squatters), which needs to be aligned with the Bank's Policy. In the present PforR operation due consideration will need to be given to treating such occupants as per the Bank policy- rehabilitating the non-titleholders that may suffer due to economic or physical displacement as a result of the road maintenance and modernization work. Contractors and institutions to be engaged in clearing potential sites, RoWs will have to ensure that the processes are aligned with Bank procedures with respect to management of physical and economic displacements.

Program Exclusions

Environment

67. The assessment confirmed the activities do not include those not eligible for PforR financing. There are no potentially significant, adverse environmental impacts in the Program. In particular, this was confirmed in the Roads, WRM and Health sectors. These are not in the vicinity of any natural habitats or cultural heritage sites. There are no such workplace conditions prone to health and safety risks. And, no significant, cumulative, induced and indirect impacts in the Pamba river basin. During the implementation, it will be required to ensure that all such activities not eligible for PforR financing remain excluded.

Social

68. The following activities are proposed to be excluded from the current investments:
- Considering the nature of operations (PforR), any road repair and maintenance works requiring large scale resettlement and removal of structures (on a single alignment/ package), such that they impact more than 50 persons will be excluded from the list of investments.
 - Any ULB master planning that is likely to impact tribal settlements or common property regimes near or within their municipal limits will be excluded from being

selected as a pilot for City/ Town Master Planning, if this spatial planning is likely to adversely impact existing settlements or resources accessed by these tribal / indigenous communities.

Program Actions and Implementation Support

Environment

69. The Bank's Program focuses on institutional development, investment planning and capital investment activities. Of these, the Bank's implementation support should focus largely on further building the environmental management capacity as a part of the institutional development. With regard to the capital investments, the Bank's implementation support should also supervise compliance to contractual requirements and good EHS practices so that no risks ensue. The program exclusion requirements for PforR financing should be maintained. The sectors of focus will be the WRM for the institutional development activities and the roads for their investments in building climate resilience.

Social

Action Description	Source	DLI #	Responsibility	Timing and Tasks	Completion Measurement
Incorporating social management through plans and bid documents in civil works / investments and social safeguards and social inclusion content in training & capacity building programs for ensuring inclusiveness in sector/ resource planning and implementation	ESS A	NA	RKI-PMSS/PMU and implementing institutions anchoring participatory planning	Year 1: Capacity assessment and Preparation of ToRs for key social positions in RKI-PMU & other key sector institutions; capacity building modules finalized Year 2: Completion of recruitment and deployment, where required Year 2 onwards: regular training of functionaries on different aspects of social management.	IVA, Training completion reports, AMs
If needed set up new or strengthen existing grievance redress mechanism at state, department, local levels to enhance transparency and responsiveness by enabling creation of an open log of grievances and redressal actions.	ESS A	NA	RKI and key departments for each sector	Year 1: Assessment of existing systems & requirement for developing common GRM for RKP by the end of year 1. Year2: Regularly analyse and track grievances to inform the program	IVA, AMs

**RESILIENT KERALA
Program for Results [PforR]**

Environmental and Social Systems Assessment [ESSA]

Part B: ESSA Environmental Report

9 March 2021



THE WORLD BANK

IBRD • IDA | WORLD BANK GROUP

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List of abbreviations and acronyms

AEU	Agroecological Unit
AEZ	Agroecological Zone
AFD	Agence Française de Développement
AIIB	Asian Infrastructure Investment Bank
BMW	Bio-Medical Waste
BOD	Biological Oxygen Demand
CAPEX	Capital Expenditure
CC	Climate Change
COD	Chemical Oxygen Demand
CPCB	Central Pollution Control Board
CPF	Country Partnership Framework
CRN	Core Road Network
CSO	Civil Society Organization
DCAT	Disaster and Climate Action Tracking
DDMA	District Disaster Management Authority
DEA	Department of Economic Affairs, Ministry of Finance, GoI
DLI	Disbursement-Linked Indicator
DPO/L	Development Policy Operation / Lending
DoA	Department of Agriculture, Government of Kerala
DoE	Department of Environment, Government of Kerala
DoF	Department of Finance, Government of Kerala
DoECC	Directorate of Environment and Climate Change
DoR	Department of Revenue, Government of Kerala
DRF	Disaster Risk Financing
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
E & S	Environmental & Social
EHS	Environmental, Health & Safety
EIA	Environmental Impact Assessment
ESHS	Environmental, Social, Health and Safety
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
ESSA	Environmental and Social Systems Assessment
FGD	Focus Group Discussion
FPO	Farmer Producer Organizations
GHG	Green House Gas
GIS	Geographic Information Systems
G(R)M	Grievance Redressal Mechanism
GoK	Government of Kerala
GoI	Government of India
GP	Gram Panchayat
GSDP	Gross State Domestic Product
IDSP	Integrated Disease Surveillance Program
IEC	Information, Education and Communication
IFC	International Finance Corporation
IT	Information Technology

KII	Key Informant Interviews
KILA	Kerala Institute of Local Administration
KFW	Kreditanstalt für Wiederaufbau
KSDMA	Kerala State Disaster Management Authority
LG	Local Government
LSGD	Local Self Government Department
LSGI	Local Self Government Institutions (Gram Panchayat or Municipality or Corporation)
M & E	Monitoring & Evaluation
MoEFCC	Ministry of Environment, Forests and Climate Change
MoHUA	Ministry of Housing & Urban Affairs
O & M	Operations & Maintenance
OH	One Health
OPBRC	Output and Performance-Based Road Contracts
OPEX	OPERational EXpenditure
PDO	Program Development Objective
PforR	Program for Results
PHLs	Public Health Laboratories
PMSS	Project Management Support Services
PMT	Project Management Team
PMU	Project Management Unit
PWD	Public Works Department
RA	Results Area
RM(A)MS	Road Maintenance (Asset) Management Systems
RBCMA	River Basin Conservation and Management Authority
RF	Results Framework
RKDP	Rebuild Kerala Development Programme
RKI	Rebuild Kerala Initiative
RoW	Right of Way
RTI	Right To Information
SDRF	State Disaster Risk Financing
SEIAA	State Environmental Impact Assessment Authority
SOP	Standard Operating Procedures
SPF	State Partnership Framework
SPCB	State Pollution Control Board
TCP	Town and Country Planning
ULB	Urban Local Body
WB	World Bank
WRD	Water Resource Department
WRM	Water Resource Management

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1 Background

1.1 State Context

The State is highly vulnerable to natural disasters and the changing climatic dynamics given its location along the coast and steep gradient along the slopes of the Western Ghats. The State Disaster Management Plan identifies 39 hazard types that can turn disastrous without proper preparedness and risk reduction planning¹. Some of the dominant hazards include: cyclones, storm surge, coastal erosion, sea level rise, tsunami, flood, drought, lightning, landslide, and earthquakes. In recent past the state has experienced Cyclone Ockhi in 2017; floods and landslides in 2018, 2019, and 2020; and the Covid-19 pandemic. The 2018 floods—the worst in the century—led to widespread loss of life, property, and habitats in Kerala, mainly in the Pamba river basin, causing 498 casualties, affecting over 5.4 million people, displacing 1.4 million people, and financial losses of US\$3.74 billion (INR 267.20 billion or Rs. 26,720 crores). The devastating impacts of these disasters highlighted the under-preparedness of the State.

The World Bank's support to build multidimensional resilience in Kerala commenced right after the 2018 floods and landslides. The foundation of the engagement was set by the World Bank supported First Resilient Kerala Development Policy Operation (DPO 1, US\$250 million), approved in June 2019. It supported the Rebuild Kerala Development Programme (RKDP)² – the GoK's strategic and integrated road map for recovery, rebuilding, and resilience. DPO 1 set the course for centering resilience-related policies and institutional reforms in key cross-cutting areas and sectors of the economy. It supported the GoK's efforts to improve fiscal sustainability including through mobilizing private finances. Key policy and institutional reforms to enhance resilience were triggered to enable: holistic river basin management; sustainable and climate-resilient agriculture; risk-informed land-use planning requirements; updating disaster management plans at all levels; multi-year capital planning; and by creating a dedicated institutional modality, the Rebuild Kerala Initiative (RKI), to manage the rollout of the RKDP and DPO 1. These efforts have improved Kerala's capacity to respond to disasters and other extreme events, evidenced by reduced loss of lives, assets, and livelihoods by the 2019 and 2020 floods and landslides.

Kerala experienced the first confirmed cases of Covid-19 in India on January 30, 2020. High levels of urbanization and population density, tourist inflows, regular inward and outward travel of non-residents, and an aging population with co-morbidities made Kerala susceptible to infection and spread. The GoK responded proactively through a robust response plan, based on learnings from the Nipah virus outbreak experience in 2018. As of February 17, 2021, there have been 1,016,848 total confirmed cases, including 60,803 active cases, 951,742 recovered, and 4,032 deaths.³ Kerala has one of the lowest causality rates (0.4%) among Indian states.

¹ Kerala State Disaster Management Authority: Government of Kerala, State Disaster Management Plan 2016,

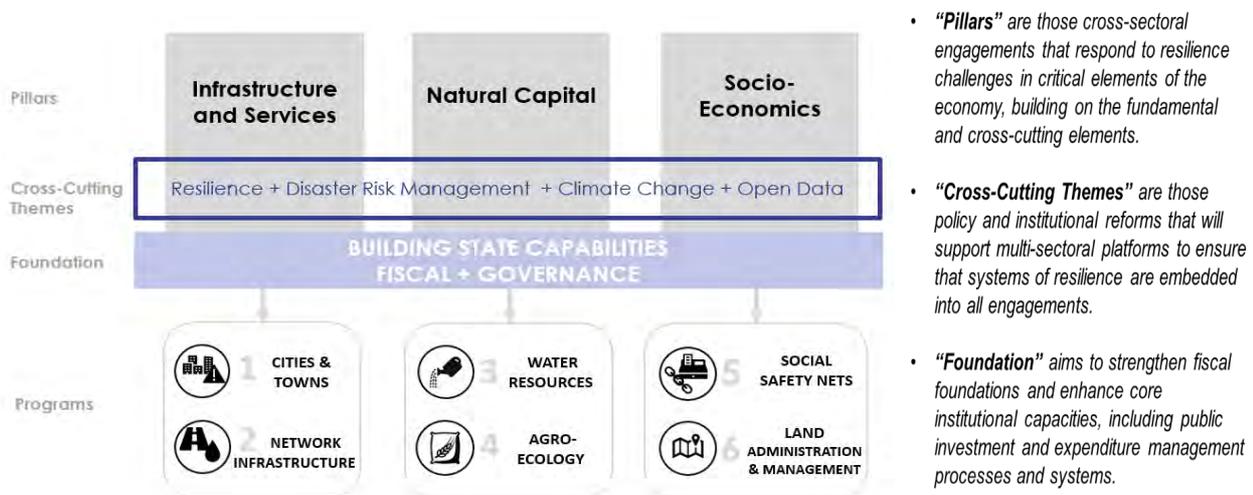
² Rebuild Kerala Development Programme (RKDP): https://rebuild.kerala.gov.in/reports/RKDP_Master%2021May2019.pdf.

³ GoK Dashboard for COVID-19. URL: <https://dashboard.kerala.gov.in/index.php>.

Building on the RKDP and DPO, the partnership between the GoK and the World Bank has both expanded and deepened. Among its highlights are the technical support provided for launching first subnational ‘masala bond’ that raised around US\$300 million to finance rebuilding activities; the RKDP Development Partners Conclave in July 2019; scoping of International Finance Corporation (IFC) and Multilateral Investment Guarantee Agency (MIGA) support for climate resilient infrastructure; and engagements in other sectors built around the core theme of enhancing resilience. The close working relationship between the GoK and the World Bank has influenced the State’s policy, institutional, and investment agenda to advance resilience to climate change impacts and natural disasters. In advancing the partnership, the GoK and the World Bank have worked closely to bring other partners on board, among them, the *Kreditanstalt für Wiederaufbau* (KfW)⁴; and the Asian Infrastructure Investment Bank (AIIB), and *Agence Française De Développement* (AFD) that are co-financing this operation.

A state-level cohesive and strategic GoK-World Bank partnership was developed to strengthen institutional, economic, and social resilience of the State to the impacts of natural disasters and climate change. The Kerala State Partnership Framework (SPF, figure 1) brings together Kerala’s priorities and programs as in the RKDP and the strategic priorities of the World Bank’s India Country Partnership Framework for FY18-22 (CPF, Report No. 126667-IN).

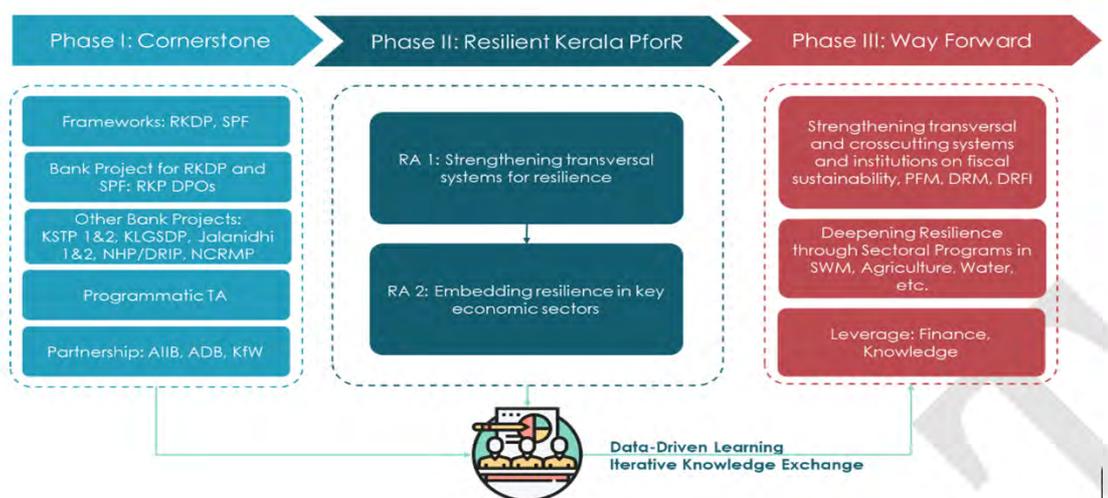
Figure 1. Kerala State Partnership Framework (SPF)



Over the medium term, the engagement with Kerala is expected to evolve and advance through multiple tracks as depicted in Figure 2.

⁴ Provided €2 million grant for technical assistance (TA) and a €100 million loan to parallelly finance DPO

Figure 2. Expected Evolution of the Resilient Kerala Program



DPO 1 was followed by the preparation of a Second Resilient Kerala Development Policy Operation (DPO 2, US\$350 million) aimed at deepening policy and institutional reforms initiated under DPO 1. Due to Covid-19 outbreak and a change in India’s strategy in using World Bank financing, the Government of India (GoI) dropped its request for DPO 2, while majority prior actions were already achieved. Instead, GoI sought World Bank support for Resilient Kerala Program for Results (PforR).

1.2 Government of Kerala (GoK) Program

The RKDP constitutes the GoK’s medium-term road map for a Green and Resilient Nava Keralam (New Kerala) - the main vehicle to mainstream resilience in development. The RKDP launched in July 2019 is to be implemented over a period of eight years. It aims at “the creation of a society that has sustainable livelihoods for its inhabitants and a land with modern infrastructure that cannot be undone by natural disasters”. The RKDP encompasses policy, regulatory, institutional, and investment actions and programs across four cross-cutting and 12 sector-based areas that are critical for resilient and sustainable recovery and rebuilding. It has also initiated critical steps toward addressing climate vulnerability, enhancing resilience and redoubling its efforts to protect the coastline against sea level rise and erosion. An analysis of RKDP priorities details a total outlay of US\$4.96 billion (INR 365.068 billion) for 2019–2027.

A subset of the RKDP and the State Health Mission (SHM) have been strategically selected and merged into the government program (the program) within which the proposed PforR Program (the Program) is situated. Considering the health scope of the Program, which includes promoting an integrated One Health approach to diagnose, track, and respond to disease outbreaks, the ‘Public Health’ section of the State budget has been considered as the government program. The subset of activities considered under Public Health include prevention and control of diseases, strengthening integrated public health laboratories and public health education and training. These activities are complemented by the National Health Mission.⁵

⁵ A GoI program to enhance state systems to improve health outcomes, including disease surveillance and response

1.3 Bank Program

The Bank Program will support a subset of results and priority activities identified under cross-cutting themes (i.e. Fiscal, Climate Change, DRM, Social Protection, Urban) and key economic sectors (i.e. Health, WRM, Agriculture, Road) within the Government program. The results and activities to be supported under the Program have been prioritized with the GoK based on the most urgent challenges for which GoK requested support, considering readiness for implementation, building on previous Bank programs and findings from recent analytical work, and aiming to complement other Bank/donor-financed projects in the State. The Program will be structured into two results areas that will support the GoK to: (i) strengthen transversal systems for resilience; and (ii) embed resilience in key economic sectors.

The Program will be operating through a tiered approach for engagement. At the State level, the Program will support development of systems and institutions to create the foundations for multidimensional resilience. At the local level, drawing from the State level systems and capacities, it will implement the integrated approach in four districts along the Pamba river basin, namely Alappuzha, Idukki, Kottayam, and Pathanamthitta.

1.4 Program Development Objectives and indicators

The development objective of the Program is *to enhance the Kerala's resilience against the impacts of climate change and natural disasters, including disease outbreaks and pandemics.*

PDO level results indicators include the following:

- Fiscal sustainability of GoK to cope with disease outbreaks and natural disasters is strengthened
- Women's access to post-disaster adaptive safety net payment is enhanced
- People are benefiting from local DRM plans and One Health Community Surveillance systems in Pamba Basin districts
- People are benefiting from early flood warning services and flood protection measures in Pamba Basin

1.5 Results Areas (RAs)

A description of the RAs and their associated activities are as follows:

Results Area 1: Strengthening transversal systems for resilience

The results will focus on strengthening transversal systems—both foundational areas and cross-cutting elements—of resilience to help the State prepare and respond systemically to the challenges posed by exogenous shocks from climate change, natural disasters, or disease outbreaks. Key objectives include (a) financial protection against disasters through sustainable fiscal and debt management, (b) a comprehensive DRF and social protection system and (c) disaster preparedness through mainstreaming climate and disaster risk-informed urban and DRM planning.

Enhanced financial protection against disasters will be achieved through the following activities:

(a) **Sustainable fiscal and debt management.** Kerala's limited fiscal space and high levels of debt have severely constrained its ability to deal with major exogenous shocks. Initial steps were undertaken in the DPO to enhance revenues through a masala bond issue and a flood cess. The Program will strengthen GoK's ability to deal with contingent liabilities due to natural disasters and disease outbreaks. The Program will support establishment of a debt management unit in the Department of Finance (DoF) and implement a debt management plan to scale down the State's debt-to-GSDP ratio to a sustainable trajectory. A TA will be provided to enhance the capacity of this unit to strengthen revenue mobilization, and expenditure management.

(b) **Comprehensive DRF and adaptive social protection system.** The existing system for DRF has several issues. Delays in delivering timely, adequate assistance to affected and vulnerable households is a key issue in addition to the increasing burden on State's financial resources. The Program will support the GoK to: develop a comprehensive DRF framework that bolsters the financial resilience of the Government and the communities; build a unified database of vulnerable households and a payments platform which triggers post-disaster safety net payments to the bank account of eligible beneficiaries on time, and protection of the personal data collected, integrated, and processed; roll out modified crop risk insurance, risks transferred to the insurers; and mobilize market-based resources, over and above the State Disaster Relief Fund, either through issuance of bonds or purchase of (re)insurance. The Program envisages disbursing disaster-related payments to the bank accounts of the female head of the household. Decision-making capabilities and financial literacy of women will be enhanced through: (i) conducting information dissemination drives for women on post-disaster safety net payments; (ii) creating help desks at the community level to achieve 100% coverage of bank accounts for women to receive and access payments; and (iii) strengthening community-level support systems for gender-based violence (GBV) prevention and providing referral support to victims of domestic violence. The Program will also rely on Theeramythri program, to support self-employment and empowerment of fisherwomen.

(c) **Risk-informed urban master plans for cities and towns.** Unplanned developments and lack of investments in resilient urban infrastructure and services increased the impacts of 2018 and 2019 floods and landslides. Through the earlier DPO and TA, the TCP Act was amended by GoK to mandate risk-informed master plans by urban local bodies (ULBs), and guidelines for the use of annual plan funds were restructured to enable and encourage multi-year investments in urban infrastructure. The Program will support roll out of these reforms across the State, and incentivize the ULBs in the Pamba River Basin districts for adoption of risk-informed master plans and priority action plans. Beyond the Program, building on the experience, the state department will support ULBs across the State to adopt risk-informed master plans.

(d) **Risk-informed local DRM plans.** World Bank has been supporting the Kerala State Disaster Management Authority (KSDMA) to establish norms, systems, and capacities for strengthening local-level disaster risk planning and management across the State. The Program will build on it and support the formulation/updating of DRM plans with local level climate risk information, for all the 263 Local Self-Government Institutions (LSGIs)

in the Pamba River Basin districts. The Program will include (i) the development of technical tools and training in DRM; (ii) multi-year investment planning integrating climate risk information, at the local level; and (iii) support development of a scoring matrix, called the Disaster & Climate Action Tracker (DCAT), to evaluate local investments which are climate and disaster risk informed. The DCAT will be used by the LSGD to establish a performance and reward-based system for incentivizing LSGIs that mainstream climate and disaster risk in their development and investment planning.

RA 2: Embedding resilience in key economic sectors

This results area aims at embedding norms and practices of resilience in a sample of socioeconomic sectors: health, WRM, agriculture, and roads, to demonstrate an integrated approach to build multisectoral and multidimensional resilience. Key objectives and interventions to achieve the envisaged results are detailed here:

(a) Resilient public health systems. High population density, large number of non-resident citizens and international travelers, aging population with co-morbidities, and large forest cover increase Kerala's vulnerability to large-scale disease outbreaks, especially zoonotic diseases, such as Covid-19. Critical bottlenecks in the GoK's preparedness for disease outbreaks and pandemics include lack of health surveillance, coordination and the associated infrastructure to support the same at the district and local levels. THE PROGRAM intends to strengthen the public health systems of GoK for disease outbreak preparedness and prevention. Specific activities include operationalizing integrated public health laboratories (IPHLs) supporting disease surveillance and enhanced clinical case management in the Program districts; establishment of a One Health platform to strengthen coordination, collaboration, networking, joint surveillance, preparedness, and response to counter health hazards; and implementing community-based One Health surveillance practices by LSGIs. An IT-enabled platform will be established for community level networking of Prevention of Epidemics and Infectious Diseases (PEID) cells at medical colleges to undertake operational and applied research to inform State disease containment policies.

(b) Integrated and sustainable WRM. Declining ground water levels and high variation of rainfall over the years exacerbated by climate change have increased water vulnerability. There is a need for Integrated Water Resource Management (IWRM) to unlock the development potential of water resources, including making more productive use for hydropower, agriculture, fisheries, energy, and domestic needs, and reducing water-related risks and vulnerability to floods, erosion, sedimentation, environmental water stress, and pollution. A draft River Basin Conservation and Management Authority (RCBMA) Act was prepared under the DPO. The Program will support the establishment of the RCBMA to institutionalize integrated reservoir operations, water monitoring, data collection, knowledge management, flood forecasting, and evaluation of environmental flows, for ensuring more efficient and sustainable water allocation to agriculture, irrigation, domestic, industrial, and other uses. The RCBMA will foster multisectoral and interagency coordination to build climate resilience and improve IWRM in the State. An integrated river basin plan and flood forecasting system for the Pamba River Basin is being prepared and will be used as the basis for developing detailed investment plans for mitigating impacts of climate-related events to be supported under the Program.

(c) Sustainable and resilient agriculture. Kerala's agriculture faces persistent climate risks impacting predictability in returns and viability of farming. Over the last two years, through the DPO engagements, GoK has adopted an agroecological zone (AEZ) approach to agriculture sector by delineating the State into five AEZs and 23 agroecological units (AEUs) based on geographic and climatic factors. It further aligned the planning, budgeting, and implementation architecture in the sector to AEZ-based approaches. To support this shift, and to move towards precision farming, an Integrated Agricultural Management Information System (IAMIS) is being developed to improve production. Parallely, new guidelines for establishment of crop-based Farmer Producer Organization (FPO) has been rolled out to promote aggregation of produce, to create volumes, to attract and access the emerging market requirements. In the interim period, a study on AEZ based crop insurance has been completed and recommendations for development of a new insurance product will be undertaken during implementation. The Program will support GoK to strengthen 16 AEUs in the Program districts to facilitate implementation of AEZ-based approaches. The Program will also support increased women's participation in agricultural activities, which has been on the decline in the State, by incentivizing FPOs with at least 25% of their board represented by women members. Focused support would be provided to small and SC/ST women farmers through common service center kiosks to access IAMIS for information, benefits and other services to improve their capacities. Priority will be to include members of Kudumbashree's Joint Liability Groups and 'sangha krishis', who had suffered huge losses post the recurring floods, in the FPOs. In addition, business development and leadership training will be provided for women farmers to strengthen their capacities to support FPO operations. AEU staff will be sensitized to support these initiatives.

(d) Climate-resilient road infrastructure. The road network of the State is susceptible to natural disasters due to intense rainfall and unique terrain features. There is no integrated geographic information system (GIS)-based vulnerability and hazards risk mapping of the asset stock to develop a resilience framework for roads sector. Additionally, a low capital outlay creates challenges for financing road improvement projects to meet resilient standards. Due to limited mechanization and poor capacities of local contractors the state has not been able to fully adopt modern and green construction technologies. Through the DPOs and with KSTP support, the Public Works Department (PWD) has notified core road network (CRN) of 7,000 km and established a GIS-based Road Maintenance Management System (RMMS). The CRN would entail enhanced budgetary provisions, improved climate- and disaster-resilient standards. The Program will support for upgradation of 400 kms of CRN in the Program districts which shall be contracted adopting output and performance-based road maintenance contracts (OPBRC), to address higher disaster and climate risk vulnerability. The Program shall also support establishment of a fully staffed RMMS cell to plan and roll-out similar climate proof designs, budgeting and implantation for the entire road sector in the state.

1.6 Disbursement-Linked Indicators (DLIs)

Program resources will be disbursed based on the achievement of nine DLIs. These DLIs have been chosen to reflect five principles: (i) integrated approach to multidimensional resilience; (ii) alignment with and ability to add value to the Government program; (iii) building on policy and institutional reforms achieved through DPO1 and DPO2 prior

actions; (iv) technical merits; and (v) ability to incentivize results and achievement of the PDO. The following table provides the list of DLIs and the associated funding allocations.

DLI	IBRD (US\$)	AIIB (US\$)	AFD ⁶ (US\$)	Total External Financing (US\$) ⁷	Fund Recipient
RA 1: Strengthening transversal systems for resilience					
DLI 1: Fiscal sustainability to cope with disease outbreaks and natural disasters is strengthened	5,000,000	5,000,000	15,000,000	25,000,000	DoF
DLI 2: Disaster-related adaptive safety net system of GOK is strengthened	5,000,000	5,000,000	15,000,000	25,000,000	DoF
DLI 3: Disaster risk financing and insurance capacity of GoK and vulnerable households in the State are improved	5,000,000	5,000,000	25,000,000	35,000,000	DoF
DLI 4: ULBs developed and sanctioned risk-informed Urban Master Plans and Priority Action Plans	7,500,000	7,500,000	15,000,000	30,000,000	LSGD
DLI 5: Climate risk information integrated into local body DRM plans	17,500,000	17,500,000	30,000,000	65,000,000	LSGD
RA 2: Embedding resilience in key economic sectors					
DLI 6: Capacity to track and respond to zoonotic disease outbreaks of human importance are conducted in a timely manner	15,000,000	15,000,000	5,000,000	35,000,000	DoHFW
DLI 7: Integrated River Basin Management Plan developed for Pamba Basin and implementation commenced.	10,000,000	10,000,000	15,000,000	35,000,000	WRD
DLI 8: FPOs have increased access to new and organized markets	20,000,000	20,000,000	-	40,000,000	DoA
DLI 9: CRN is meeting resilient standards in the Pamba Basin through climate informed investment works and long-term performance-based maintenance contracts	40,000,000	40,000,000	-	80,000,000	PWD
	125,000,000	125,000,000	120,000,000	370,000,000	

The achievement of DLIs/disbursement-linked results (DLRs) will be assessed and verified by the IVA, as per verification protocols agreed between the GoK and the World Bank. The RKI will recruit the IVA which will conduct verification of Program DLIs. The

⁶ The total amount of AFD funding tentatively planned as €100 million (US\$120 million equivalent).

⁷ The breakdown of allocation by DLI has been agreed among IBRD, AIIB, and AFD in consultation with GOK.

IVA shall submit its assessment reports to RKI, which in turn will, submit the report to the World Bank, the AIIB, and the AFD for disbursement of funds. The World Bank will retain the right to make the final decision on whether a DLI has been achieved or not, and may undertake additional quality assurance checks to confirm achievement of the results.

1.7 Institutional and implementation arrangements

The Program will be implemented through GoK's existing institutional modalities and systems. At the apex level, the RKI will serve as the Program Management Unit (PMU), responsible for management, coordination, and monitoring and evaluation (M&E) of the Program. RKI is supported by a Program Management Team (PMT) providing Program Management Support Services (PMSS). The participating sector departments shall be the Program's implementing agencies. RKI will collaborate and coordinate with all departments and associated technical agencies such as the KSDMA, the Kerala Institute of Local Administration (KILA), LSGIs and district administrations in the Program area, to implement the Program. RKI will be supported in the field by District Disaster Management Authorities (DDMAs), which are statutory units headed by the District Collector and includes representation from LSGIs and line departments, to coordinate and oversee implementation in the four districts.

Participating departments (implementing agencies) and supporting line agencies associated with each results area will be responsible for achieving the agreed results. The implementing agencies will be responsible for coordinating with relevant departments, line agencies, and local governments to implement the Program and achieve the agreed results. They will also be responsible, either directly or through coordination and oversight, for ensuring compliance with the relevant fiduciary, environmental and social (E&S) safeguards rules, Program Action Plan (PAP), procurement guidelines, norms and systems of the GoK, during Program implementation.

1.8 About ESSA

At the Program level, the World Bank undertook the Environmental and Social Systems Assessment (ESSA) in which the following were examined: (i) the potential E&S effects of the PforR (including direct, indirect, induced, and cumulative effects as relevant); (ii) the borrower's capacity (legal framework, regulatory authority, organizational capacity, and performance) to manage those effects; (iii) the comparison of the borrower's systems—laws, regulations, standards, procedures, and implementation performance—against the core principles and key planning elements to identify any significant differences between them that could affect Program performance; (iv) the likelihood that the proposed operation achieves its E&S objectives; and (v) recommendation of measures to address capacity for and performance on policy issues and specific operational aspects relevant to managing the Program risks (e.g. carrying out Staff training, implementing institutional capacity- building programs, developing and adopting internal operational guidelines) through a Program Action Plan.

ESSA refers both to the process for evaluating the acceptability of a borrower's system for managing the Program's E&S risks in the particular operational context, and to the final report that is an output of that process.

1.9 World Bank's ESSA requirements

The following are the World Bank's ESSA requirements:

- Preliminary screening is done to ensure that activities that are “judged to be likely to have significant adverse impacts that are sensitive, diverse, or unprecedented on the environment and/or affected people are not included in the PforR design and are excluded from the Program
- Stakeholder engagement is an essential element of the ESSA process. Through this engagement, both internal and external stakeholders get an opportunity to meaningfully participate in the ESSA process, inform the preparation of the ESSA Report, and provide meaningful inputs throughout the lifecycle of the operation. Generally, during the PforR preparation process, field-level one-to-one and focused group community consultations and a stakeholder workshop are conducted to meet the stakeholder engagement requirements.
- Analysis: Using secondary literature and the information collected during the stakeholder engagement process, the ESSA analyses the borrower's applicable systems, considering the system both as it is defined in laws and regulations, and as it is implemented in practice. The purpose of this analysis is to determine the systems' capacity to manage program risks during preparation and throughout implementation.
- Grievance Mechanism (GM): The ESSA reviews the Program-level grievance mechanisms and conducts an assessment of their adequacy and effectiveness. The ESSA confirms that the GMs can receive, record, resolve, and follow up on complaints or grievances received. Further, the ESSA includes any recommendations for enhancing or improving the GM.
- Recommendations: ESSA identifies measures and actions to manage any significant gaps in the borrower's capacity to implement E&S management systems at a level commensurate with the identified risks to The Program, and consistent with the Bank's core principles and planning elements. The Bank and the borrower together agree to implement these as part of The Program.
- Disclosure: It is required for the draft ESSA report to be disclosed before the appraisal decision meeting so that the views of interested members of the broader public may be solicited and considered before all Program decisions are made final. Further, the final ESSA Report and recommended actions are to be completed before negotiations, and the final version is disclosed accordingly.

1.10 About the structure of this ESSA report

This ESSA report is structured into three parts: Part A: ESSA Summary Report, Part B: ESSA Environmental Report and Part C: ESSA Social Report. This volume is the Part B: Environmental Report.

2 Methodology

2.1 Introduction

The methodology included: (a) secondary literature review, (b) screening, (c) consultations – field-level and state-level⁸; (d) analysis and synthesis of systems strengths & areas for improvement; which is followed by (e) preparing the ESSA report. The ESSA was carried out by a team of specialists (staff and consultants)⁹ from the World Bank.

The desk review focuses on understanding the existing policy, operational procedures, institutional capacity and implementation effectiveness relevant to the activities under The Program. This also included a review of the borrowers systems for engaging with citizens, especially the most marginalized and excluded as well as their grievance redress.

2.2 Secondary literature review

The ESSA team reviewed the relevant secondary literature prior to and during the conduct of the ESSA. The key documents included the following: Program Document of the Bank-funded Development Policy Operation / Lending (DPO/L) operation

The list of secondary literature reviewed is included in the Annex ##. Using the findings of the secondary literature, the ESSA team carried out the screening, and prepared the scope of work for the consultants who conducted the consultations with community, particular in the Pamba river basin, which will be the focus of the capital investments under this Program. The

2.3 Risk screening at concept stage

Using the findings of the secondary literature, the ESSA team carried out the environmental risk screening at the concept stage of The Program. This considered the likely risks arising from environmental impacts, contextual risks, institutional capacity & complexity risks and political and reputational risk. The screening revealed that The Program's institutional development and investment planning will result in an overall positive environmental contribution. However the direct environmental effects related to the physical infrastructure activities will have to be effectively managed. The screening revealed that The Program will have a few physical risks due to the environmental impacts of activities, particularly related to physical road, WRM and health infrastructure that are to be supported through co-financing. The contextual risks are limited as these are within the existing, well-established environmental regulatory agencies in Kerala. Possible risks arising from the state's weak environmental capacity were also to be examined. And, political and reputation risks arising from environmental issues were not envisaged under The Program. The risk screening had also confirmed that program activities did not include those not eligible for financing using the PforR instrument. The

⁸ In view of the Covid-19 conditions, ESSA Team participated in the consultations remotely, facilitated by local consultants.

⁹ The World Bank team responsible for the environmental aspects of this ESSA included Vaideeswaran S (Consultant) and Pawan Patil, Senior Environmental Specialist.

environmental risk rating at the concept stage was rated as Substantial and was to be reviewed through further examination of the portfolio of interventions through this ESSA.

The screening also ensured that The Program does not include those components which are not eligible for financing using the PforR instrument. Based on the information available, the following were confirmed: (a) No limited or significant conversion or degradation of critical natural habitats or critical cultural heritage sites; (b) No air, water, or soil contamination leading to significant adverse impacts on the health or safety of individuals, communities, or ecosystems; (c) No workplace conditions that expose workers to significant risks to health and personal safety; (d) No adverse environmental impacts covering large geographical areas, including transboundary impacts, or global impacts such as greenhouse gas (GHG) emissions; and (e) No significant cumulative, induced, or indirect impacts. Further, the preliminary screening confirmed that the exclusion criteria was adhered to.

2.4 Consultations

Apart from a desk review of available information, interviews and consultations were also held with the state-level implementing agencies and community members. Consultations were conducted by the Bank's ESSA team and also through Kerala Institute of Local Administration (KILA), the state's apex organization in the area of local governance and participatory planning. This institute has a state-wide outreach, and the scope of their consultations focused on community in the Pamba river basin, which was planned to be the main beneficiary from The Program activities in the various sectors.

2.4.1 State-level consultations done by the Bank's ESSA team

Between December 2020 and January 2021, the Bank's ESSA team carried out selected consultations with particular stakeholder department in order to better appreciate the possible opportunities for environmental systems strengthening through the institutional development and investment activities, and the environmental effects of investment activities. All of these consultations were done through the virtual approach due the prevailing Covid-19 pandemic. These consultations were held between November and December 2020.

2.4.2 State-level and community consultations done by KILA

To enhance the limited consultations done virtually, the Bank's ESSA team engaged Kerala Institute of Land Administration (KILA) to conduct further consultations. The Bank's ESSA team provided a detailed checklist to guide these consultations (Annex 3). These consultations were conducted at the state level and with communities in the four districts pertaining to the Pamba river basin, i.e. Alappuzha, Idukki, Kotayyam and Pathanamthitta. A total of 11 state-level consultations were conducted with representatives of the implementing departments and their teams. Another 32 community consultations were held at 16 different locations (3 ULBs and 13 Gram Panchayats) in the 4 Pamba river basin districts covering more than 328 community members cutting across social and economic groups. The ULBs covered in each district are furnished here:

- In Alappuzha district, three panchayats - Mannar, Pandanad and Kainakari – and Alappuzha Municipality were covered.
- In Idukki, four panchayats - Peermade, Peruvanthanam, Vandiperiyar and Kumily - were covered.
- In Kottayam district, three panchayats – Kooruthodu, Mundakayam, Manimala – and Changanasserri Municipality were covered.
- In Pathanamthitta, three panchayats – Ranni, Perunad and Aranmula – and Thiruvalla Municipality were covered.

The breakdown of the number of participants in the districts is provided in the following table:

District	No.
Alappuzha	45
Idukki	127
Kottayam	62
Pathanamthitta	94

These consultations were held between December 2020 and January 2021. Further information is included in Annex 4. The analysis of the consultations feedback and how these were addressed through The Program design and / or ESSA is included in Annex 5. The full report of the KILA consultations forms a part of the documents referred and is in Annex 7 List of References.

2.4.3 ESSA Stakeholder workshops

The two workshops were conducted under the aegis of Rebuild Kerala Initiative (18 and 22 February 2021) and were facilitated by KILA. GoK officials from the relevant implementing departments and other stakeholder (community and civil society organizations) representatives were invited to this workshop. All the invitees to this workshop were sent the draft ESSA Report about ten days / week prior to the conduct of the workshop. Given the constraints due to the Covid-19 pandemic situation, the two workshops had to be conducted via Zoom.

At the workshop, the Bank Task team presented a brief overview of The Program and shared the findings – both environmental and social - included in the draft ESSA reports, and sought feedback from the participants. The structure of the workshop was such that it focused on drawing out inputs from the participants so that these can be gainfully used to enhance The Program design and the ESSA itself. The KILA prepared the proceedings of the workshop, which will included the presentations, minutes (including the list of invitees and attendees) and the recording. Using the feedback obtained during this workshop, the draft ESSA reports (Part A, B and C) were revised and recommendations for The Program design were considered. Annex 6 provides a summary of the ESSA stakeholder workshop along with the list of invitees and screen shots of the participation taken when the virtual workshop was under progress.

Further to these workshops, RKI disclosed the draft ESSA reports on their website on 8 February 2021 (English) and 13 February 2021 (draft ESSA summary report in Malayalam) and requested email feedback. And one feedback was received and included in Annex 7.

2.4.4 Analysis, findings and recommendations

Using the data / information collected through the secondary research and consultations (state-level, community-level and stakeholder workshop), the ESSA team carried out the analysis. This focused on determining the strengths and the weaknesses / gaps of the existing environmental regulatory systems and institutional systems relevant to The Program and arriving at recommendations that need to be addressed through The Program Action Plan (PAP).

2.5 *Preparing the ESSA reports*

The draft ESSA reports – Part A, B and C - were prepared by the World Bank ESSA team using the inputs obtained from different sources: secondary information, discussions with the GoK's implementing departments / agencies, consultation feedback (state-level and community-level) through KILA and the feedback from the stakeholder workshop. All of these inputs were analyzed and evaluated to determine the findings and recommendations. The conduct of the ESSA and preparing the set of ESSA reports were done between November 2020 and February 2021.

3 Key issues, benefits, impacts and risks

3.1 Introduction

This chapter examines the Program in each of the sectors in order to determine the environmental issues, benefits, impacts and risks. This was first done at the Program Concept stage and progressively updated, as the Program preparation unfolded. Annex 2 includes a table that examines each of the Program activities and its environmental relevance.

3.2 Sector: Agriculture

The environmental issues in agriculture in Kerala include top soil erosion (flooding and landslides), land degradation, chemical (fertiliser and pesticide) use, and conversion of agricultural lands. The Program activities focus on (i) supporting the paradigm shift of reorganization of the Agriculture Department into agroecological zones with a focus on the Pamba basin and (ii) establishment of integrated agricultural information systems. Supporting the shift in the Pamba basin has positive implications for environment and natural resource conservation. Selecting the crop using the agro-climatic conditions and topography will result in reduced chemical use, restore soil health and result in effective water use. This will bring about better environmental benefits. And, the integrated agricultural information systems will progressively assist the farmer in all aspects that will include chemical use as well. This will once again bring positive environmental benefits. *No negative environmental impacts and risks are therefore perceived in the activities planned in the agriculture sector.*

3.3 Sector: Climate Change and Disaster Risk Management

The Program will focus on building the capacity and enhancing the use of DRM plans at the local level. At the first level, these local level DRM plans will be in place. In parallel, there will be efforts to provide climate risk information through downscaling climate models and developing & implementing a Disaster & Climate Action Tracker (DCAT) to assess the annual plans and incentivize their inclusion of such actions. All of these will be in the context of the DRM plans guidelines, which have strong environmental sustainability principles embedded in them. Given that, *the climate-responsible, resilience-building actions will not have negative environmental risks and hence no risks. On the contrary, the more widespread implementation of local DRM plans could lead to environmental benefits.*

3.4 Sector: Disaster Risk Financing and Social Protection

The Program will focus on improving women's access to post-disaster safety net and/or insurance payments through establishing a unified database that will enable the same. Further, the Program will focus on increasing the effectiveness of agriculture insurance program in Pamba Basin districts by promoting crop insurance. Insurance as a disaster risk financing instrument will complement SDRF/CMDRF funds. *All of these pertain to cash / financial transfers, there are no environmental issues, impacts, benefits or risks.*

3.5 Sector: Fiscal Reform and Debt Management

The Program will focus on fiscal sustainability when having to deal with disease outbreaks and natural disasters. This will be done through developing, adopting and implementing a debt management plan, particularly the priority actions. *Being purely financial in nature, there are no environmental issues, impacts, benefits or risks.*

3.6 Sector: Health

The Program will focus on enhancing the One Health Surveillance Platform at the local level to track and respond to zoonotic disease outbreaks, and on improving district-level Integrated Public Health Laboratories (IPHLs). Construction-related EHS impacts due to establishing new or expanded facilities will entail minor risks. The typology of investment activities will be limited to the IPHLs. Those will be the typology of the investment activities that will be undertaken.

Improved health surveillance should unequivocally establish the link between sanitation / waste management practices and disease. In 2019, Diarrhoea was the highest at 544,027 and Leptospirosis was the highest cause of death at 57. Both these diseases are clearly linked to sanitation and waste management practices. Therefore, improved health surveillance will bring positive environmental benefits. Further, health care facilities have tightened their controls to avoid the spread of infections due to the Covid-19. This needs to be sustained beyond the current pandemic and mainstreamed into all health care facilities in order to strengthen infection control.

Improving IPHLs will offer an opportunity to strengthen bio-medical waste management in health diagnostics, which is only a small contributor to the waste problem. Overall, there are concerns of bio-medical waste management in the state such as only one centralized disposal facility, issues regarding local incinerators, infection control programs have to be scaled-up, liquid waste treatment in health care facilities have to be enhanced and handling the increase in PPEs due to Covid-19. The capacity strengthening will be beneficial and will lead to reducing risks.

Overall, the interventions in this sector provides an opportunity to reduce environmental risks by establishing the link between sanitation / waste management practices and disease, and contributing towards better biomedical waste management in health diagnostics. Construction-related EHS impacts will entail minor risks that need to be managed.

3.7 Sector: Roads

The Program will focus on the rehabilitation of the Core Road Network (CRN) and / or maintenance to resilient standards in the Pamba basin. Further, the Road Maintenance Management Systems, and streamlining its use in the investment and budget planning through long-term performance-based maintenance contracts. The roads selected under the Program are those that do not pass through eco-sensitive areas such as forests; and the rehabilitation will be restricted within the available right-of-way without any widening. Given that, the environmental impacts will be limited and to those related to the construction phase. This will include air, dust and noise pollution; limited tree cutting / trimming; water pollution; worker and public safety; waste, scrap and debris disposal.

These environmental impacts could result in physical risks but can be effectively managed through effective mitigation measures. Once the roads are rehabilitated and / or maintained up to resilient standards through long-term performance-based maintenance contracts, the environmental impacts during the operational phase will be lower than the existing conditions.

3.8 Sector: Urban

The Program aims to streamline developing and sanctioning risk-informed master plans. As this is an investment planning initiative, there will be no direct environmental impacts. With the focus on incorporating risk information, these plans – both the Urban Master Plans and the Priority Action Plans - will consider the environmental risks apart from disaster and climate risks that are directly linked to building resilience. For instance, tighter controls to conserve the paddy land and wetland and to restrict the conversion or reclamation. *Addressing all these risks upfront in the planning is bound to bring positive environmental benefits.*

3.9 Sector: Water Resource Management

Developing and initiating implementation of the Integrated River Basin Management Plan for the Pamba river will be the focus of this Program. Developing flood forecasts, sharing of information between departments (WRD, KSDMA, Agriculture, Irrigation, PWD and LSGD), identifying critical investments and initiating implementation of civil works such as raising embankments, repair of sluice gates, river training works and channel / link lining. Those will be the typology of the investment activities that will be undertaken. The institutional development and investment planning activities will have no negative environmental impacts, and, will contribute positively through the integrated approaches. *The proposed investments will have only construction-related EHS impacts that will be localized, limited and reversible. There will entail limited environmental risks due to these impacts.*

After the recent flood events, particularly the one in 2018, issues related to the Pamba river have become a focus of the National Green Tribunal. Further the polluted stretches of the Pamba river have been the focus of the Kerala State Pollution Control Board in terms of monitoring the water quality, which is known to have very low BOD and DO levels in certain stretches. And, the Pollution Control Board has also been a part of Committees established to study the quality of the water in the Pamba River for the last several years. Given that, *there are contextual risks due to concerns raised on environmental issues raised in different forums and are relevant to the Pamba basin. These need to be considered at the time of (a) designing the capacity building initiatives, and (b) doing the investment planning in order to ensure compliance to the regulations and prevailing orders during the project period.*

4 Applicable legal and regulatory framework

4.1 Introduction

This Program for Results (PforR) focuses on institutional development, investment planning and capital investments in multiple sectors. This chapter examines the environmental legal and regulatory framework (referred hereinafter as “framework”) – both at a national and state level - that are relevant to the activities to achieve the key results areas. By legal, the reference is to acts and rules pertaining to environmental issues. By regulatory, the reference is on the procedures and practices being adopted by the GoK agencies to ensure compliance to the legal requirements.

At the outset, it is to be noted that there is a limited applicability of the framework to the Program activities. These are covered by sector briefly in this chapter.

4.2 Framework applicable to the Program

In India, the national and state framework is well developed. A brief description of the different important elements of the framework that are directly relevant to the Program is provided by sector in the following table.

No.	Title and brief description	Relevance to the Program
A Common to all sectors		
1	<u>Environment (Protection) Act of 1986</u> The Act is an umbrella legislation that provides a framework for Central and State Authorities established under prevailing laws. It provides a single focus for the protection of the environment.	Standards that are specifically applicable to air, water, noise and soil components to all the civil works related to the WSS infrastructure development. None of the works require national or state level EIA clearance. Organization: Department of Environment, Directorate of Environment and Climate Change, various authorities and State Pollution Control Board
B Relevant to sectors with civil works / investment activities – Roads, WRM and health sectors		
2	<u>Air (Prevention and Control of Pollution) Act 1981</u> This Act provides for the prevention, control and abatement of air pollution. It is to control emissions of any air pollutant into the atmosphere when it exceeds the standards set under the Act and associated rules	Under the Act, the contractor is required to obtain the Consent to Establish and Consent to Operate for the ready-mix concrete plant (s) if it is used for the concrete for construction. Organization: State Pollution Control Board
3	<u>Water (Prevention and Control of Pollution) Act 1974</u> This is to control water pollution by controlling water pollutants and the maintaining or restoring of wholesomeness of water, through establishment and empowerment of Boards at the national and state levels. Ensuring adherence to water quality and effluent standards is the main purpose.	Under the Act, the contractor is required to obtain the Consent to Establish and Consent to Operate for all civil works. Further, there should be no dumping the construction waste / debris into nearby water bodies like streams. Organization: State Pollution Control Board
4	<u>Noise Pollution (Regulation and Control) Rules 2000</u>	Under the Rules, the Contractors need to adhere to these rules in the

No.	Title and brief description	Relevance to the Program
	According to the provisions of the rules notified under this act, a person might make a complaint to the designated 'Authority' in the event that the actual noise levels exceed the ambient noise standards by 10dB(A) or more as compared to the prescribed standards. The designated authority will take action against the violator in accordance with the provisions of these rules or other law in force.	context of all civil works under the Program Organization: State Pollution Control Board
5	<u>Construction and Demolition Waste Management Rules 2016</u> The rules shall apply to every waste resulting from construction, re-modeling, repair and demolition of any civil structure of individual or organization or authority who generates construction and demolition waste such as building materials, debris, rubble.	For all civil works, the contractor will have to obtain authorizations for all the different types of wastes as required, and will dispose scrap / waste only to authorized agencies. Organization: State Pollution Control Board.
6	<u>Solid Waste Management Rules 2016 and references in state acts / rules & guidelines including Kerala State Policy on SWM 2018, Kerala SWM Operational Guidelines, 2017, Kerala Municipalities Act 1994 and The Kerala Panchayat Raj Act 1994</u> These rules define solid waste as those generated by all the households, hospitality industry, big and small market vendors. These rules are applicable to the municipal areas and beyond. In particular, the rules have mandated the source segregation of waste in order to channelise the waste to wealth by recovery, reuse and recycle	These Rules are applicable for any incidental waste generated the contractor during the civil works. Organization: LSGIs and State Pollution Control Board.
7	<u>Plastic Waste Management Rules 2016 and state orders</u> This is to ensure segregation, collection, storage, transportation, processing and disposal of plastic waste in a manner that there is no damage is caused to the environment during this process. Ban on single use plastic items in the State, wef. 1.1.2020-GO MS No 6, 2019 Env dt:27.11.2019 and other related orders	These Rules are applicable for any incidental plastic waste generated the contractor during the civil works. Organization: Department of Environment and State Pollution Control Board.
8	<u>Indian Forest Act 1927, Forest Conservation Act 1980, Forest Rights Act 2006 and associated Kerala Preservation of Trees Act, 1986</u> Under this Act, administrative approval must be obtained from the Forest Department to clear designated forestland. According to this although the land is under the control of state government, due to its protected status, approval from the Government for using the land may be required. The State Act includes the requirement of the prior permission in writing of the authorized officer to cut, uproot or burn, or cause to be cut, uprooted or burnt, any tree as defined by the Act.	The use of forestland for non-forestry purposes, replenishing the loss of forest cover by compensatory afforestation on degraded forestland and non-forest land, and permission for tree felling may be required in the context of civil works pertaining to infrastructure development. Though the likelihood of forest land is low, the appropriate forest clearance will be obtained without fail. Prior permission for tree felling to be secured in case it is required for the investment activities. Organization: State Forest Department.
9	<u>Wildlife (Protection) Act 1972</u> The Act provides the details the various kinds of endangered and other important faunal groups that need to be protected. In particular, this deals with permissions for working inside or diversion of national parks and sanctuaries.	In the context of civil works pertaining to infrastructure development, this may be relevant if wildlife is encountered in the Pamba basin.

No.	Title and brief description	Relevance to the Program
10	<p><u>The Ancient Monuments and Archaeological Sites and Remains Act, 1958, and the Rules, 1959</u> The Act and Rules protect the archaeological sites, and no person shall undertake any construction within the protected or regulated area except in accordance with the permission granted.</p>	<p>Organization: State Forest Department. Wherever the civil works for infrastructure development are carried out in the vicinity of cultural properties, the provisions of the Act and Rules are applicable for chance finds. Organization: Archaeological Survey of India offices at Thiruvananthapuram, Ernakulam and Thrissur.</p>
11	<p><u>Building And Other Construction Workers (Regulation Of Employment And Conditions Of Service) Act 1996 and Building And Other Construction Workers (Regulation Of Employment And Conditions Of Service) Kerala Rules, 1998</u> The Act and the associated Kerala Rules is a comprehensive for regulating the safety, welfare and other conditions of service of these workers.</p>	<p>Health and safety arrangements for the construction workers involved with the civil works. Organization: Labour Commissionerate, Department of Labour</p>
C Relevant only to health sector		
12	<p><u>Bio-medical Waste Management Rules, 2016</u> These Rules contains schedules that outline requirements pertaining to categorization and management; standards for treatment and disposal of bio-medical waste; prescribed authority and duties; and label of containers, bags and transportation of bio-medical waste.</p>	<p>All management of bio-medical waste is as per these rules. All health care facilities including the Integrated Public Health Laboratories have to obtain authorizations as per these Rules. Organization: State Pollution Control Board</p>
D Relevant only to the Agriculture sector		
13	<p><u>Kerala Conservation of Paddy Land and Wetland Act, 2008</u> This is intended to conserve the paddy land and wetlands and restrict their conversion or reclamation, to promote growth in the agriculture sector and sustain the ecological balance.</p>	<p>In the unlikely requirement Permission shall be required in case any facility is proposed on paddy land/wetlands (as documented in revenue records). Organization: Department of Revenue</p>
E Relevant only to WRM sector		
14	<p><u>National Green Tribunal (NGT) Act 2010 and Orders</u> The National Green Tribunal has been established under the National Green Tribunal Act 2010 for effective and expeditious disposal of cases relating to environmental protection and conservation of forests and other natural resources including enforcement of any legal right relating to environment and giving relief and compensation for damages to persons and property and for matters connected therewith or incidental thereto. For example, NGT Order Application (OA) No. 75/2020</p>	<p>NGT Orders as applicable. Organization: Government of Kerala, State Pollution Control Board and other special Committees</p>

This Program activities do not entail any upfront environmental clearances but there are procedural requirements such as obtaining consents prior to the commencement of civil works. These are contractor responsibilities that will have to be supervised by the respective departments that are engaged in civil works. If there are specific situations during implementation, e.g. the NGT orders, then additional procedural requirements may be applicable. The standards included in the various legislations will have to be adhered.

5 Institutional Systems Assessment – Procedures, practices and performance

5.1 Introduction

This Program for Results (PforR) focuses on institutional development (including investment planning) and capital investments across multiple sectors. This chapter examines the environmental management systems that are institutionalized and are relevant to the activities to achieve the key results areas. These institutional systems can be broadly classified as (i) those external to the sector and involved with the regulations / enforcement, e.g. State Pollution Control Board, regulatory authorities and State Forest Department and (ii) those within organizations in the respective sectors.

5.2 Regulatory systems

5.2.1 National-level regulatory systems

Description

The Ministry of Environment and Climate Change (MoEFCC) is responsible for the planning, promotion, co-ordination and overseeing the implementation of India's environmental and forestry policies and programs. The broad objectives of the MoEFCC are: (i) Conservation and survey of flora, fauna, forests and wildlife; (ii) Prevention and control of pollution; (iii) Afforestation and regeneration of degraded areas; (iv) Protection of the environment and (v) Ensuring the welfare of animals. These objectives are well supported by a set of legislative and regulatory measures, aimed at the preservation, conservation and protection of the environment. Further, the Central Pollution Control Board (CPCB) is a statutory organization that provides technical services to the MoEFCC on all matters pertaining to the legal and regulatory systems. These broader national-level regulatory systems are a prerequisite and drive state-level legal and regulatory framework that the Program will have to adhere with. It is imperative to have a well-developed, established national system in order to effectively manage environmental effects and risks at the state and the program level. Section 4.2 has further information on the applicable national legislations and regulations that the above institutions are responsible for.

Assessment

In the Indian context, these national-level systems are well-developed and in place across all sectors. The regulatory procedures and practices are clear, streamlined and widely available. In the context of the Program, the national-level regulatory systems are not directly applicable as the management has been devolved to the state. Hence, there are no gaps in these systems vis-à-vis the Bank's Program that needs to be addressed.

5.2.2 State-level regulatory systems

Description

The two regulatory agencies relevant to the Program activities are the Kerala State Pollution Control Board (KSPCB) and the State Forest Department. The KSPCB is

responsible for (a) issuance of consents to establish and to operate to contractor for all civil works prior to their commencement; this is under the Air Act and Water Act; (b) issuance of authorizations as per the BMW Management Rules 2016, and monitor the compliance of various provisions and conditions of the authorization. Further district Level Monitoring Committees under District Collector shall monitor and submit half-yearly reports on compliance to the State Level Advisory Committee headed by the State Health Secretary which shall monitor implementation every six months. The State Forest Department is responsible for issuing the tree cutting clearance if such incidental tree cutting is required for the civil works being planned under this Program. This is particularly relevant to the Roads sector wherein minimal tree cutting may be required as a part of road rehabilitation works.

Related to the judiciary, under the National Green Tribunal (NGT) Act 2010, the Tribunal issues orders for effective and expeditious disposal of cases relating to environmental protection and conservation of forests and other natural resources. Given its statutory importance, these require the attention of the highest level of the State Government.

Assessment

These two state-level regulatory agencies – KSPCB and State Forest Department - are in place and their procedures for compliance are also being administered. The compliance monitoring is being periodically undertaken. The state-level systems pertaining to regulations are streamlined and the organizational capacities are sufficient. The Program activities form a rather small part of the overall responsibilities of these regulatory agencies. The environmental impacts associated with the Bank's Program are localized, minimal and reversible. There are only low environmental risks. The findings were that there are no gaps in these state-level systems vis-à-vis the Bank's Program that needs to be addressed.

Pertaining to NGT cases, the findings revealed that GoK takes the required follow-up action as per the judiciary directions received. Under this Program, these are particularly to the WRM sector as the Pamba basin is one of the NGT areas of attention. This will need to be considered and suitably incorporated as per the prevailing orders during the Program period.

5.3 Program-level organizational systems

5.3.1 Agriculture – Department of Agriculture

Description

The Department of Agriculture will be the main implementing agency of the activities in this sector. The main activities are examined from the organizational systems on environmental management:

- In the promotion and strengthening of Farmer Producer Organizations (FPOs) across state, capacity-building will be done. Training material will have to be developed and implemented. These will offer an opportunity to integrate basics of environmental management as per the crop focus of the respective FPOs.
- In the roll-out of the Integrated Agriculture Management Information System, it is not proposed to include environmental concerns in the first phase and the subsequent

phases have not yet been designed. This will again offer an opportunity to integrate environmental aspects if this is planned during the Program period.

- In promoting and strengthening of agroecologically relevant farming systems across the state through realigned crop assistance schemes and stakeholder capacity building, positive environmental effects are expected as the selected crop will be most suitable for the agroecological conditions. In the training content that will be a part of the capacity building, these positive effects would be emphasized. As mentioned earlier, such training content needs to be developed and made a part of the organizational systems.

There is no environmental cell or division in the Department of Agriculture that will be associated with the Program activities. Environmental effects are generally managed within the agriculture functions at the various levels of the Department.

Assessment

As part of the capacity building, there is an opportunity to integrate the basics of environmental management. Suitable training content needs to be developed and made a part of the organizational systems for Program implementation. Given that the nature of environmental effects are positive and intrinsically embedded in the Program, there is no need for a separate environmental cell or division. The environmental mainstreaming is better accomplished through training that will contribute to organizational strengthening. Overall, in terms of environmental performance, the Department of Agriculture is clearly committed to promote environmentally responsible practices. Apart from the move to agroecological zone approach, the Department also was also found to support organic farming and similar initiatives to reduce the use of chemicals in agriculture. Their capacity was found to be adequate and can be further strengthened as outlined.

5.3.2 CC and DRM – KSDMA

Description

KSDMA will be the main implementing agency of the activities in this sector. Enhancing the DRM plans with climate information is the main activity. This will be done in close collaboration with LSGD as the DRM plans with climate information is for the 263 LSGIs in the Pamba basin. Initially, the plans will be developed and subsequently their increased consideration of climate information will be facilitated through an incentive mechanism. The template for DRM plans include environmental concerns. There is no separate environmental cell or division in the KSDMA. Environmental effects are generally integrated and managed along with other KSDMA activities.

Assessment

In this investment planning initiative, environmental concerns have been identified in the template for DRM plans¹⁰ at the LSG levels. These will suffice in terms of addressing environmental concerns of the DRM plans. With KSDMA's technical capacity to develop

¹⁰ Local Self Government - Disaster Management Plan: Framework, Template and Guidelines, KSDMA and KILA, January 2020.

these plans using relevant information from various sectors, no separate environmental cell or division is required. However, in the capacity building that KSDMA will undertake, it is necessary to cover the management of environmental effects as part of the overall training content when it is developed and during implementation. Their capacity was found to be adequate.

5.3.3 DRFI and Social Protection – Department of Revenue

Description

The Program activities pertain to financial transfers and therefore have no environmental relevance.

Assessment

Assessment was not undertaken as it was not relevant.

5.3.4 Fiscal reform and Debt Management – Department of Finance

Description

The Program activities pertain to financial transfers and therefore have no environmental relevance.

Assessment

Assessment was not undertaken as it was not relevant.

5.3.5 Health – Department of Health

Description

The Program will be implemented by the Department of Health & Family Welfare Department, Government of Kerala (GoK) and would use existing GoK and National Health Mission (NHM) structures at state and district levels. The Program will be implemented through the State Program Management Unit (SPMU) and its units at the district and Block Program Management Unit (BPMU). The SPMU would be responsible for day-to-day project planning, implementation, technical support, monitoring, and fiduciary management.

The Program includes two results areas as follows: (i) *Building and strengthening diagnostics systems at district level* and (ii) *strengthening Integrated Disease Surveillance Program (IDSP)* and institutionalizing *One Health* approach to identify and respond to zoonotic disease outbreaks in a timely manner. Establishing new and rehabilitation of existing laboratories will include minor construction-related EHS impacts, which are best addressed through adequate EHS provisions in the bid / contract documents. Further, health care facilities – including laboratories – have to adhere to the BMW Rules. There is organizational capacity within the Department to address these BMW issues even though this is not referred as an environmental cell or division. There is an overall coordinator in the Department on BMW issues. And, there are assigned responsibilities at the

different levels, i.e. state and health care facility. Related to the other results area, the organizational systems to link disease with environmental issues – waste management and sanitation – is being done though not explicitly documented.

Assessment

In terms of organizational systems dealing with civil works for enhancing diagnostic laboratories, the inclusion of EHS provisions in the bid / contract documents is required to be done. As these environmental effects are construction-related, localized and minor, this would suffice. For the streamlining BMW in these new laboratories, there is capacity within the Department to ensure that these are done in compliance with the BMW rules, i.e. obtaining the authorizations and streamlining its management in the laboratory facilities. Though the contribution of these new laboratories towards bio-medical waste will be miniscule, it is required to ensure that these are properly streamlined.

Related to the disease surveillance, though the organizational systems are in place. It will be useful to review in order to determine how this can be strengthened in a manner that more follow-up action by the LSGIs is done to improve the waste management and sanitation practices. Having documented systems and procedures vis-à-vis surveillance of disease due to environmental causes should be examined as a part of the capacity building under the institutional development activities.

During the stakeholder consultations, the issue of the state's overall BMW management was brought up. Building the overall capacity and contributing to the state's adequacy is well beyond the scope of this Program.

5.3.6 Roads – PWD

Description

The Program will be implemented by the Public Works Department (PWD) with support of primarily the institutions like Kerala State Transport Project (KSTP) and Kerala Highway Research Institute (KHRI). Broadly, the Program includes institutional development pertaining to Road Maintenance Management Systems (RMMS) on the one part. And investment activities that pertain to the core road network (CRN) to resilient standards and long-term performance-based road maintenance contracts in the Pamba river basin on the other part.

The institutional development on RMMS and investments through the maintenance contracts will be done by PWD's maintenance cell. The investments have been so chosen that they have limited or no environmental impacts. As the Maintenance cell has no environmental capacity, the PWD will be engaging external Technical Audit consultants who will support in the event of any environmental incidents. The contractors engaged with the maintenance contracts will have environmental capacity to adhere to the bid / contractual's EHS requirements.

The road rehabilitation in the CRN to resilient standards will be done by the PWD with project-level institutional arrangements akin to that of the Kerala State Transport Project. Here again, the investments have been so chosen that they have limited environmental impacts, i.e. not in ecosensitive areas / forests and limited tree-cutting. As the PWD's in-

house environmental capacity is weak, arrangements have been made to support through external supervision consultants, who will be available till the completion of the investment. The contracts engaged with these road rehabilitation contracts will have the environmental capacity to adhere to the EHS provisions in the bids / contracts.

Assessment

As the road investments have been so chosen that the environmental impacts are minimal, the proposed arrangements of having Technical Audit consultants (for maintenance roads) and Supervision Consultants (for CRN rehabilitation) to support the PWD were found to be satisfactory. Further the bid / contract documents will integrate environmental management plans to be implemented and also other EHS provisions that the contractors will need to necessarily adhere with. However, GoK's effort to build in-house capacity in the PWD requires to be continued, and environmental management training should be integrated with all capacity building initiatives throughout the Program period.

5.3.7 Urban - LSGD

Description

The LSGD will be the prime implementing agency for this program. The Rebuild Kerala Initiative will provide oversight and any support required for procurement, financial management, environmental and social aspects. Within LSGD's jurisdiction, the activities associated with town planning will be executed through the Department of Town and Country Planning. LSGD will directly interface with selected ULBs for supporting and facilitating project development and the investment planning. Over a four-year period, this Program will strengthen the capacity for risk-informed urban planning and implementation. This will result in the preparation of risk-informed master plans and priority action plans for at least four ULBs, one in each district of the Pamba River Basin. To accomplish this, the program will be implemented in two parallel tracks - capacity building and risk-informed Master Planning. Both the capacity building and the risk-informed master planning have to integrate environmental effects. The training content for the capacity building and the guidelines for the master planning will be part of the organizational systems. These will have to include environmental considerations in its design and its implementation. No separate organizational set-up like an environmental cell or division exists in the LSGD or the Department of Town and Country Planning.

Assessment

Though LSGD does not have an organizational set-up related to environmental management, this may not be necessary given the activities proposed under this Program. Integrating environmental considerations in the organizational systems can be accomplished with the planned external agency support that should also include environmental capacity as well. That would be adequate to address possible issues under this Program.

5.3.8 Water Resources - WRD

Description

The Kerala Water Resources Department (WRD) will be the implementing agency for the Program activities that aim to establish and operationalize RBCMA and to initiate implementation of priority investments in the Pamba river. The associated agencies / departments will include (but not be limited to) the Kerala State Disaster Management Authority (KSDMA), and the Departments of Agriculture, Local Self Government (LSGD), Land Commissioner, Environment, Forests, and Planning and Finance, among others. WRD will be the nodal agency various training and capacity building activities, in doing the investment planning and initiating the implementation of critical investments. WRD has been associated with many externally funded projects and is aware of the environmental safeguard requirements. For instance, recently WRD has undertaken ESIA and ESMP studies, and integrated these with the bid / contract documents in their dam projects. Though WRD doesn't have a separate environmental cell or division, they have the capacity to arrange to get the various studies done and to ensure the implementation of environmental management requirements in these investment projects.

Assessment

The Program activities are largely institutional development (including investment planning) in nature. For such activities, the environmental capacity needs to be mainstreamed and this is best achieved through training and capacity building of all the WRD staff involved with operationalizing RCBMA. Establishing a separate environmental cell or division may not be necessary. The training and guidelines that will be a part of their organizational systems require to be adequate environmental management content. Given the focus of the State Pollution Control Board and the National Green Tribunal on the Pamba river basin, it is required to integrate good environmental practices in their organizational systems.

WRD's capacity to address environmental safeguards in large projects will suffice to ensure that these are considered in the context of the investments that will be identified during the Program period and when the implementation is initiated.

WRD's capacity was found to be adequate to address issues under this Program.

6 Assessment of the borrower systems against the three environmental core principles

6.1 Introduction

In this chapter, the borrower systems is assessed against the three environmental core principles and the associated key planning elements. In carrying out this assessment, the guiding questions given in the analytical framework provided in the ESSA Guidance have been used. Its application helped to identify areas in which environmental systems are consistent with Bank principles, those in which systems are functioning well, and those in which there may be important system gaps that need to be addressed before or during implementation. The consistency of the Program systems with these principles on two levels: (1) as systems that are defined in laws, regulations, and procedures (those external to the Program institutions), and (2) the capacity of Program institutions to effectively implement the Program's E & S system (those internal to Program institutions).

The three core principles 1-3 are of environmental relevance and borrower systems are assessed against them. Annex 1 includes the summary of the core environmental principles.

6.2 Core Principle #1: E & S management systems

Both the regulatory systems and the organizational systems were examined vis-à-vis the Core principle. The GoI / GoK's framework (laws and regulations) - environmental, forests and pollution control acts and rules - were assessed and found to be adequate to manage the environmental effects of the Program activities. At the outset, the applicability of the framework is limited and only to the investment activities / civil works proposed in the PWD, Health Department and WRD. Even these activities have only low and moderate impacts, and hence not a major focus of the framework. In relation to civil works, there are procedural requirements such as contractor has responsibilities for obtaining consents from the SPCB or permissions for tree-cutting from the Forest Department. There are performance standards that have to be met. The respective department coordinating the Program activities including civil works, e.g. PWD, have the capacity to incorporate contractual provisions for compliance, supervise their implementation and ensure adherence. The same is the case with the WRD and Health Department, where the civil works, associated environmental effects and legal & regulatory requirements are even more limited. The on-the-ground performance was found to be satisfactory. For externally funded projects, recognizing that their in-house capacity is not sufficient, the PWD systems include the conduct of the ESIA/ESMPs that studies laws and regulations, including compliance requirements in the bid / contract documents, and supervising compliance. And, the WRD is also undertaking large externally funded projects, e.g. dam rehabilitation, for which environmental management is implemented. By and large, the capacity to administer legal and regulatory requirements exists both in the agencies and in the concerned Departments.

At the Program level, the implementing department's in-house capacity will be strengthened through use of external consultants and EHS provisions in the bid / contract documents on EHS management in the sectors where civil works have been planned. For

instance, in the Roads sector, the PWD conducted ESIA/ESMPs with support from external consultants. The PWD is also seeking the support of external supervision consultants to monitor / supervise and the contractors assign responsibility to ensure the implementation of good environmental practices. In WRD, there are large projects for which the capacity is being externally arranged. Similar such sourcing of external capacity may be required once the civil works are identified. In the health sector, the civil works are limited and EHS provisions in the bid / contract documents will be required and are included as a part of the PAP recommendations.

Related to the institutional development activities, it was found that there is sufficient awareness, competence and guidelines with the department systems to ensure that environmental issues are appropriately considered. For instance, in the CC and DRM sector, the guidance for developing DRM plans includes environmental considerations. The environmental mainstreaming required in the context of the Program activities in the different sectors should be built through training and capacity-building programs. The consistency with Core Principle #1 was confirmed.

6.3 Core Principle #2: Natural habitat and cultural properties

The GoI / GoK's regulatory systems pertaining to natural habitats, particularly forests and ecosensitive areas were assessed and found to be adequate to manage the adverse environmental effects if these arise during implementation. The forest clearance for the diversion of forest land and compensatory afforestation, e.g. for tree cutting, are mandatory. Constructions in the proximity of cultural heritage sites such as protected monuments are also regulated and there is a guideline in place to address chance findings.

The Program activities do not include environmental effects on natural habitats or cultural heritage sites. There is clearly no significant conversion or degradation of critical natural habitats or physical cultural heritage is envisaged. In the unlikely case of any such environmental effects, the respective Departments were found to be competent in addressing the regulatory requirements. The consistency to this principle was confirmed.

6.4 Core Principle #3: Public and worker safety

The regulatory systems include the Building And Other Construction Workers (Regulation Of Employment And Conditions Of Service) Act 1996 and Kerala Rules, 1998. The Act and Rules mandate health and safety compliance for all civil works, and is regulated by the Labour Commissionerate. While the systems are in place, the enforcement needs to be strengthened. Therefore, worker and public safety are generally managed through provisions in the bid / contract documents that the respective Departments – having civil works - will be using to procure its contractors. The provisions will be made part of agreements with contractors and will be monitored. Given the prevailing Covid-19 pandemic situation, this should also include additional requirements of the use of PPEs (face masks), physical distancing and handwashing practices that may be required of the contractor and sub-contractor personnel.¹¹ All of these have been included as PAP recommendations. With this further strengthening, consistency to this core principle was also ensured in the Program design.

¹¹ World Bank ESF / Safeguards Interim Note: Covid-19 Considerations in Construction / Civil Works Projects, April 2020

7 Consultations and disclosure

7.1 Introduction

This chapter includes the main findings of the consultations during the conduct of the draft ESSA between November 2020 and January 2021. There were consultations conducted by the Bank team as well as by the Kerala Institute of Local Administration (KILA), which is the state's apex institution in the area of local governance and participatory planning. Using the collected information, the draft ESSA was prepared. The findings and recommendations of the draft ESSA will be shared through a stakeholder workshop to be conducted in January 2021. This chapter also informs of the disclosure processes adopted for the ESSA during its preparation and also during implementation. This chapter provides reference to the Annexes that include the summary of the consultations during the conduct of the ESSA (Annex 5) and the stakeholder workshop (Annex 6 – to be included) as well.

7.2 Stakeholder consultations

7.2.1 State-level consultations

These consultations were carried out both the Bank's ESSA team and by KILA. The highlights relevant to environmental systems are compiled in the following table:

No.	Sector	Feedback - Highlights
1	Agriculture	<ul style="list-style-type: none">• Agroecological Zone (AEZ) approach with agroecological management units will lead to selecting the most suitable crop for particular ecosystems. This will lead to less environmental damage, i.e. less fertilizer use, less pesticide use and less erosion. It is expected to be beneficial for the environment.• Building the relevant environmental capacity in the Farmer Producer Organization as part of the overall capacity strengthening will be required.• In the Integrated Agricultural MIS, the first is to focus on information of economic and financial relevance to the farmer. Subsequently, this will be extended to include relevant environmental information as well.
2	CC and DRM	<ul style="list-style-type: none">• In the template for disaster management plans for the LSGIs, there is inclusion of environmental considerations such as environment-friendly roads, water & soil conservation, green buildings and adoption of the green protocol.• Flood, land use changes, watershed management and appropriate capacity building of LSGIs should be done in an integrated manner.
3	Disaster Risk Financing	<ul style="list-style-type: none">• There are no environmental effects and hence environmental systems are not relevant.

No.	Sector	Feedback - Highlights
4	Fiscal / Debt	<ul style="list-style-type: none"> • There are no environmental effects and hence environmental systems are not relevant.
5	Health	<ul style="list-style-type: none"> • There is only one bio-medical waste disposal facility in the state. This is a constraint and disposal facilities need to be expanded. • For liquid waste, the treatment systems are not adequate. Further there are no municipal sewer network except for Thiruvananthapuram. Therefore, there are liquid waste disposal constraints. • ISDP data for 2019 revealed that (i) there is the highest occurrence of deaths due to Leptospirosis; and (ii) there is the highest number of cases of diarrhoea. Both these are due to poor solid waste and sanitation practices.
6	Roads	<ul style="list-style-type: none"> • None of the roads in the Program pass through ecosensitive areas such as forests and wildlife areas. • To manage the construction-related impacts during the road rehabilitation, the contractor requires to have environmental capacity. Further, there will be environmental capacity within the supervision consultants to support the PWD. • For the long-term performance-based maintenance, there will be supervision consultants to support the PWD in overseeing the contract. These supervision consultants will interface between the PWD and the contractors; and provide the necessary support on environmental issues as well. • There will be no widening in any of the roads rehabilitation that are being planned under the Program. There may be some incidental tree-cutting that will be done after taking the required permissions.
7	Urban	<ul style="list-style-type: none"> • Risk informed plans will be beneficial. This should necessarily include environmental risks. One of the main urban problems is the conversion of land use (paddy lands, wetlands and hilly lands), which results in environmental problems indirectly. Town and Country Planning Department will need the capacity to develop these risk informed plans and facilitate the adoption by the LSGs. • Finding land for waste disposal, preventing the conversion of paddy land and adopting proper scientific approaches to planning are the main issues.
8	WRM	<ul style="list-style-type: none"> • In the river basin approach, environmental management has to be integrated. Capacity building of the WRD institutions will be required in order to achieve effective environmental performance. • WRD has done a number of externally aided projects (e.g. dams) and is familiar with the environmental studies such

No.	Sector	Feedback - Highlights
		<p>as ESIA and ESMPs, which are used to manage environmental impacts.</p> <ul style="list-style-type: none"> • The Pamba River Basin is particularly important from an environmental point of view as it has been a focus of the State Pollution Control Board in terms of polluted stretches and also the National Green Tribunal in the aftermath of the floods. In finalizing the river basin plan, the environmental concerns should be duly considered and suitably integrated. • River pollution due to drainage outfalls, pesticide run-off and lack of a scientific approach are the primary problems that needs to be addressed in an integrated manner.

7.2.2 Summary of community consultations

The highlights relevant to environmental systems from the consultations with the gram panchayats and municipalities (covering 328 community members) in the four districts done by KILA were as follows:

No.	Sector	Feedback - Highlights
1	Alappuzha (Mannar, Pandanad and Kainakari Panchayat; and Alappuzha Municipality)	<ul style="list-style-type: none"> • Agriculture: AEU-based planning will help protect the environment. • Roads: These assets are inhibitors of natural flow and there is a lack of proper scientific approaches in road design & construction. • Urban: Capacity strengthening of LSGIs to manage the main problems – floods, water contamination and solid waste pollution – is required. • WRM: Depth of the Pamba river is decreasing, river mining should be regulated an integrated approach is necessary.
2	Idukki (Peermade, Peruvanthanam, Vandiperiyar and Kumily Panchayat)	<ul style="list-style-type: none"> • Agriculture: Pollution caused by chemical fertilizers, loss of fertility and soil erosion are the main problems. • DRM: The planning should be based on geographic, climatic and environmental features of a particular location. • Roads: Management of road construction is important, i.e. landslides, quarry management, accident management and worker use of safety gears • WRM: Water shortages and the need for conservation, protection of ponds and water bodies and rainwater harvesting are all important and the panchayats have a critical role in the Pamba river basin plan.
3	Kottayam (Kooruthodu, Mundakayam and	<ul style="list-style-type: none"> • Agriculture: The current farming practices are leading to adverse environmental impacts. And, the FPO capacity on dealing with environmental issues have to be built.

	Manimala Panchayats; and Changanaserri Municipality)	<ul style="list-style-type: none"> • Roads: Drainage, air & dust pollution, tree cutting, roads not weather resistant, water-logging and unscientific approaches to design and construction. • Urban: Unscientific road constructions, degraded canal system, inefficient drainage system, drinking water shortage, decreasing attention to agriculture sector, air and water pollution, excessive waste generation and absence of waste management are the key environmental issues • WRM: River depth is a key issue, integrated approach is required and Government & civil society should work together.
4	Pathanamthitta (Ranni, Perunad and Aranmula Panchayats; and Thiruvalla Municipality)	<ul style="list-style-type: none"> • DRM: LSGIs are not capable. Need to improve their capacity through training and awareness on different sectors. • Roads: Air pollution, worker protection and conversion of paddy land are the key issues. • Urban: Drinking water and sanitation, drainage and sewage systems are the main issues. • WRM: Past constructions were unscientific, sand mining in the rivers, rock falls due to deforestation and waste dumping are issues that need to be addressed in an integrated manner.

7.2.3 Consultations feedback - How addressed in the Program

All the feedback obtained from the various stakeholder consultations have been considered both from a Program design and ESSA perspectives. On the key environmental issues and the lack of capacity within the LSGIs, these will be addressed as a part of the Program's support in developing institutions to create the foundations for multidimensional resilience. This will address the feedback pertaining to Agriculture, DRM, Health, Roads, Urban and WRM. The feedback related to the investments that will be in the four districts along the Pamba river basin, namely Alappuzha, Idukki, Kottayam, and Pathanamthitta, will have to be addressed through building the capacity in the three sectors - Health, Roads and WRM. These are primarily related to managing civil works through EHS provisions in the bid / contract documents and streamlined monitoring & supervision. Certain capacity already exists within the implementing departments. In the light of the feedback, these were re-examined and the ESSA's Program Action Plan has included measures to enhance the capacity where necessary, e.g. in the Health Department to manage the construction-related EHS impacts. Annex 4 compiles the highlights in detail. Against each feedback, how this has been addressed in the Program design and ESSA has been examined.

The overarching feedback about adopting an integrated approach between implementing departments and between GoK and civil society organizations was an important one from the community consultations. This has already been considered through the multi-sector Program design at the local level. In specific, the basin management approach of the Pamba river is aimed to encourage such an integrated approach. Building environmental

content in the capacity building initiatives pertaining to the river basin management has been identified as one of the Program Action Plans.

7.2.4 ESSA Stakeholder workshops

The two mid-February 2021 ESSA stakeholder workshop provided additional feedback both to the Program design and the draft ESSA reports. The main feedback was to the activities in the WRM sector and in the Pamba basin. The highlights were the following:

No.	Sector	Feedback - Highlights
1	WRM	<ul style="list-style-type: none"> • Sabarimala is one of the largest annual pilgrimage sites in the world where an estimated 50 million devotees are visiting every year. How is that addressed? • How in this particular geographical area is the program going to foster the existing natural resources and address the core issues? • The conservation of Pamba Riverine Ecosystem and abatement of pollution especially solid waste management and legacy waste management system may be given much attention. • What about the Pamba Action Plan? • For the effective implementation, the institutional arrangement is vital. Coordination among agencies is the key. There is a need to involve civil society organisations along with the LSGIs. This has to be a massive effort.
2	General	<ul style="list-style-type: none"> • What are the measures suggesting for the integration of different institutions and prevention and production of anticipated environmental hazards?

During the workshops, the Bank provided a detailed response on how the Program design and the ESSA address the issues raised. A more detailed description of the feedback and how these were addressed through the Program Design / ESSA are included in Annex 6.

7.2.5 Email feedback to RKI

There was one feedback obtained from a Trivandrum resident and a nature / environmental educationist opined that systemic and integrated approach was not adequately adopted in this multi-sector program. The Task Team is of the opinion that current Program design pilots an integrated approach towards planning, which includes bringing in concept of river basin planning and crowding-in interventions from multiple departments in the same basin. In particular, the introduction of the river basin management approach in the Pamba and realising the integrated outcomes is an initial step for a more comprehensive adoption of systemic thinking and ecology-oriented planning in Government functioning. Further, the suggestions received will form a part of the training and institutional development activities in the different sectors.

Building environmental content in the capacity building initiatives pertaining to the river basin management has been identified as one of the Program Action Plans. In the light of

the suggestions received, the environmental content will be enhanced to include ecology-based integrated and systemic thinking considerations.

7.3 Disclosure

7.3.1 Draft ESSA reports

The draft ESSA reports – the draft ESSA Summary Report (Part A), this draft ESSA Environmental Report (Part B) and the draft ESSA Social Report (Part C) will be disclosed on Monday, February 8, 2021 in the RKI website. This disclosure included the English version. The draft ESSA Summary Report (Part A) was translated in the local language - Malayalam – and will be disclosed in the RKI website on Tuesday, February 9, 2021. Comments, suggestions and any other feedback will be requested along with this website disclosure.

Further, all the invitees to the ESSA stakeholder workshop - GoK officials from the relevant implementing departments and other stakeholder (community and civil society organizations) representatives - will be sent the draft ESSA Summary Report about a week prior to the conduct of the workshop. Disclosure to the invitees will also be accomplished through this approach.

At the workshop, the Bank Task team will present a brief overview of the Program and will share the findings – including environmental - in the draft ESSA report, and seek feedback from the participants. Disclosure to the invitees in the form of a presentation was also accomplished through this approach.

7.3.2 Final ESSA reports

The feedback obtained through the disclosure will be used to strengthen the Program design and the draft ESSA reports. The final versions of ESSA reports will be used to replace the drafts in the RKI website. And, the final versions will also be disclosed in the World Bank external website.

7.3.3 During Program Implementation

On its website, RKI will disclose information on the Program as a whole and about the ESSA implementation in particular. This will be periodically kept up-to-date.

Further, the disclosure of information will be done in line with the Right to Information Act 2005. This mandates timely response to citizen requests for government information. Further, Section 4(1)(b) of the RTI Act lays down the information which should be disclosed by Public Authorities on a *suo moto* or proactive basis.

7.4 Grievance Mechanism

The assessment of the grievance mechanism was elaborately carried out under the social assessment. As grievance mechanism is the same for both environmental and social issues and there are more community / public grievances than environmental ones, this is covered in the draft ESSA social report. At the coordination level, within Rebuild Kerala Initiative (RKI), Project Management Support Services (PMSS) will be responsible for implementation, coordination, monitoring and evaluation. Their services will include

grievance management as well. And, within each of the sectors and their institutions, there are separate grievance mechanisms. Gaps and institutional strengthening requirements have been identified as a part of the social assessment. These are included in the draft ESSA Summary Report and the draft ESSA Social Report.

8 Findings and recommendations

8.1 Introduction

This chapter includes the findings and recommendations emerging from the analysis presented in the earlier chapters. As part of the findings, the Program exclusions and highlights both on environmental issues have been included. And, as part of the recommendations, the ESSA inputs to the Program Action Plan and to the Implementation Support Plan covering environmental issues have been included. In these inputs, the focus is on strengthening the environmental systems relevant to the Program activities in the various sectors addressed.

8.2 Findings

8.2.1 Program exclusions

The Bank's Program was reviewed to ensure that the activities do not include those not eligible for PforR financing. It was confirmed that:

PforR financing eligibility	Verification notes
No limited or significant conversion or degradation of critical natural habitats or critical cultural heritage sites;	None of the already identified investments – in Roads, WRM and Health sectors - are in the vicinity of any natural habitats or cultural heritage sites. And, guidelines for their non-inclusion in the investments that will be identified during the program period.
No air, water, or soil contamination leading to significant adverse impacts on the health or safety of individuals, communities, or ecosystems;	None of the already identified investments – in Roads, WRM and Health sectors – have significant EHS impacts. Impacts are limited, localized, reversible and low-to-moderate in nature.
No workplace conditions that expose workers to significant risks to health and personal safety;	None of the already identified investments – in Roads, WRM and Health sectors – have such workplace conditions prone to worker health and safety risks.
No adverse environmental impacts covering large geographical areas, including transboundary impacts, or global impacts such as greenhouse gas (GHG) emissions;	No such large-scale impacts. All are limited, localized, reversible and low-to-moderate in nature.
No significant cumulative, induced, or indirect impacts;	Even though the investments are in the Pamba river basin, none of the impacts are large enough to result in any cumulative, induced and indirect. In fact, the Program activities are expected to enhance the environmental quality of the Pamba river basin.

There were no potentially significant, adverse environmental impacts in the Program design. During the implementation, all such activities shall remain excluded. As part of the Bank's implementation support, it will need to be ensured that none of the activities identified during the Program period deviate from these PforR eligibility requirements.

8.3 Highlights

The following are the main highlights from the findings:

- Overall: The Program activities, particularly the institutional development and the investment planning has the potential to deliver significant environmental benefits, e.g. in the CC and DRM, Urban and WRM sectors. These can be enhanced and sustained through strengthening of the environmental systems.
- Overall: The Program investment activities will have localized, reversible and minor environmental impacts. These impacts are not within eco-sensitive or culturally sensitive areas. Some of these impacts are relevant to worker and public safety as well. All of these can be mitigated through management measures for which the arrangements were found to be satisfactory. There are some gaps for which recommendations for strengthening systems have been made in the Program Action Plan.
- Overall: Most of the Program activities do not fall under the purview of regulatory systems except for civil works – Health, Roads and WRM – which will require the contractor to get consents from the SPCB as required. These are simple, standard and well-established regulatory requirements.
- Overall: The environmental sector institutions such as the DoECC are not integrally connected with the sectoral environmental issues and the sector departments. Therefore, their expertise is not reaching the sectors. Also, their own expertise is not evolving with the sector experiences, i.e. practices being adopted and the performance being achieved.
- Agriculture: The move towards the agroecological approach will lead to appropriate crop selection that is consistent with the natural features of the agroecological unit. This will lead to reducing the use of fertilisers and pesticides during crop cultivation. This will bring positive environmental benefits in terms of reducing chemical run-offs. No separate systems strengthening is required to enhance these benefits.
- CC and DRM: The LSG's DRM templates and guidelines already take into account a number of environmental considerations. These organizational systems should be sufficient to mitigate the impacts when the Program moves to implementing these initiatives.
- Health: Improving the disease surveillance has the potential to link particular diseases with possible waste management and / or sanitation issues within the community. Strengthening systems will assist in taking preventive action, which is to address waste management and / or sanitation issues effectively. And, in the case of expanded health care diagnostic facilities, streamlining BMW systems will be necessary and should be done with the support of the SPCB.
- Roads: Rehabilitating the CRN and establishing the long-term performance based contracts for road maintenance – both in the Pamba basin – will have localized and reversible negative environmental impacts. Given the limited environmental capacity of the PWD, the Program has already included strengthening of environmental systems in its design, i.e. through the provision for supervision consultants for the

CRN rehabilitation contracts and technical audit consultants for the road maintenance contracts.

- **Urban:** Having risk-informed master plans and identifying priority plans will consider climate risks, disaster risks and others including environmental risks. Such upfront considerations through the proposed systems strengthening will go a long way in avoiding unnecessary negative environmental aspects as well.
- **WRM:** By structure, making operational RCBMA establishes an integrated approach that augurs well for better environmental management within the river basin. Training and capacity building on environmental management should be included so that there is environmental systems strengthening of the sector as a whole. As the Pamba river basin has been a focus of the NGT after the floods of 2018 and also due to certain polluted stretches, it is important to ensure that the Program activities incorporate all the stakeholder concerns adequately.

During the Program concept stage, the environmental risk rating was indicated as substantial as the nature of the investments was not confirmed then. Based on the review of the portfolio of Program activities, it is clear that (a) the already identified investment activities have been chosen keeping in view that the environmental impacts will be minor, e.g. not in the vicinity of eco-sensitive areas or will require cutting of a limited number of trees if at all; (b) the investment activities to be identified during the Program period will necessarily adhere to the eligibility criteria guideline that is consistent with the Bank's PforR eligibility for financing; and (c) the existing systems with some strengthening will be able to address the low-to-moderate environmental impacts / risks associated with the Program. Given these findings, the environmental risk rating is categorized as moderate.

8.4 Recommendations & Inputs

8.4.1 ESSA Recommendations

The following table includes the list of activities to be undertaken towards environmental systems strengthening in the context of the Program activities:

No.	Sector	Description	Timeline	Indicator for completion
E1	Agriculture	Develop relevant environmental content in the training and capacity building to be given to AEU and FPOs. Conduct such training for mainstreaming environmental considerations.	End of Year 1 and the rest of project period	Evidence of the conduct of training that includes environmental content
E2	Health	Review and strengthen the bid / contract provisions pertaining to EHS for civil works when the new or expansion of IPHLs is undertaken	End of Year 1	Standard bid / contract documents of DoHFW include EHS provisions
E3	Health	Develop and conduct focused staff training to streamline BMW management systems in the new or expanded IPHLs	End of Year 1 and the rest of project period	Evidence of the training material and the conduct of training in IPHLs
E4	WRM	Develop relevant environmental content in the training and capacity building pertaining to institutional development and investment planning. Conduct such training for mainstreaming environmental considerations.	Throughout the project period	Evidence of training conducted that includes environmental content
E5	RKI / Environment	Facilitate a regular dialogue between the environmental sector institutions such as the DoECC and SPCB and sector institutions to enable a two-way capacity-building.	Throughout the project period	Evidence of the periodic meetings facilitating the dialogue, discussions and field visits
E6	RKI	Monitor and report the progress on environmental performance of the Program activities as a part of the overall Program reporting	Quarterly and throughout the project period	Evidence of the periodic environmental performance reports

8.4.2 ESSA inputs to the Program Action Plan

Based on the ESSA recommendations, the Program Action Plan has included environmental activities which is included in the following table.

Action Description	Source	DLI #	Responsibility	Timing and Tasks	Completion Measurement
Incorporating environmental management through plans and / or bid documents in civil works / investments, and environmental safeguards content in training & capacity building programs	ESSA	NA	RKI and implementing agencies	Continuous and to commence within three months of loan effectiveness	Incorporation of environment compliance in plans, bid documents for the civil works / investments, Inclusion of environmental safeguard modules in training & capacity building programs

8.4.3 ESSA Inputs to the Implementation Support Plan

The Bank's Program focuses on institutional development, investment planning and capital investment activities. Of these, the Bank's implementation support should focus largely on further building the environmental management capacity as a part of the institutional development. With regard to the capital investments, the Bank's implementation support should also supervise compliance to contractual requirements and good EHS practices so that no risks ensue. The sectors of focus will be WRM and Agriculture for the institutional development activities and the Roads for their investments in building climate resilience.

Annex 1: Summary of ESSA Core Principles and Exclusion List

Summary of ESSA Core Environmental Principles

Core Principle #1: Program E&S management systems are designed to (a) promote E&S sustainability in the Program design; (b) avoid, minimize, or mitigate adverse impacts; and (c) promote informed decision-making relating to a Program's E&S effects

Core Principle #2: Program E&S management systems are designed to avoid, minimize, or mitigate adverse impacts on natural habitats and physical cultural resources resulting from the Program. Program activities that involve the significant conversion or degradation of critical natural habitats or critical physical cultural heritage are not eligible for PforR financing.

Core Principle #3: Program E&S management systems are designed to protect public and worker safety against the potential risks associated with (a) the construction and/or operation of facilities or other operational practices under the Program; (b) exposure to toxic chemicals, hazardous wastes, and otherwise dangerous materials under the Program; and (c) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards.

Exclusion List

Under the Policy, activities that are “judged to be likely to have significant adverse impacts that are sensitive, diverse, or unprecedented on the environment and/or affected people are not eligible for financing and are excluded from the Program.” More specifically, PforR financing should not be used to support programs, or activities within programs, that in the Bank's opinion involve the following:

- Significant conversion or degradation of critical natural habitats or critical cultural heritage sites;
- Air, water, or soil contamination leading to significant adverse impacts on the health or safety of individuals, communities, or ecosystems;
- Workplace conditions that expose workers to significant risks to health and personal safety;
- Large-scale changes in land use or access to land and/or natural resources;
- Adverse E&S impacts covering large geographical areas, including transboundary impacts, or global impacts such as greenhouse gas (GHG) emissions;
- Significant cumulative, induced, or indirect impacts;

Annex 2: Environmental Screening of activities – benefits, impacts and risks¹²

Program Activities	Environmental Impacts, Risks & Benefits	+ve / -ve / nil
Sector: Agriculture		
(i) promoting and strengthening of Farmer Producer Organizations (FPOs) across State;	Opportunity to integrate environmental content in the strengthening of FPOs.	+ve
(ii) roll-out of the Integrated Agriculture Management Information System; and	Opportunity to integrate environmental information to facilitate better farmer decisions.	+ve
(iii) promotion and strengthening of agroecologically relevant farming systems across the State through realigned crop assistance schemes and stakeholder capacity building.	AEZ / AEU approaches are intrinsically environmentally responsible as the crop selection is based on the local ecosystems.	+ve
Sector: CC and DRM		
(i) developing local level climate and disaster risk data;	Availability of data has the potential to lead to environmentally sound decisions.	+ve
(ii) strengthening capacity of LSGs to prepare risk informed local DRM plans;	Upfront considerations of all risks – including environmental risks – has the potential to lead to environmentally sound decisions.	+ve
(iii) developing a scoring matrix (the Climate Action Tracker (CAT)) to track investments that are climate and disaster risk informed (or co-benefits); and	No environmental relevance	nil
(iv) pilot a system of financial incentives to the 263 LSGs in the Pamba River Basin to develop and activate local DRM plans and achieve agreed co-benefits target.	Promoting DRM and CC has the potential to lead to better environmental decisions.	+ve
Sector: DRFI-SP		
(i) adopting a comprehensive DRFI strategy;	No environmental relevance	nil
(ii) putting in place an institutional framework for managing the DRFI system;	No environmental relevance	nil
(iii) building a Statewide adaptive safety net system with parametric norms for	No environmental relevance	nil

¹² The environmental screening was done from the Concept Stage, and has been updated to reflect the list of Program activities at the Decision meeting in February 2021.

Program Activities	Environmental Impacts, Risks & Benefits	+ve / -ve / nil
support and a payments platform which triggers disaster-related ex ante or ex post payments to bank accounts of affected populations, particularly the poor and vulnerable, in a transparent and timely manner;		
(iv) piloting such payments to vulnerable fisherfolk families in the Pamba river basin districts;	No environmental relevance	nil
(v) rolling out market based risk transfer mechanisms through agriculture risk insurance for targeted farmer groups in the Pamba river basin districts and leveraging additional funds from the market either by issuance of bonds and/or purchase of (re)insurance.	No environmental relevance	nil
Sector: Fiscal		
(i) establishing and strengthening a debt management unit in the DoF;	No environmental relevance	nil
(ii) carrying out a debt restructuring study and adopting a debt restructuring action plan; and	No environmental relevance	nil
(iii) implementing a debt management plan to bring the State's debt-to-GSDP ratio onto a more sustainable path.	No environmental relevance	nil
Sector: Health		
(i) operationalizing integrated PHLs supporting disease surveillance and enhanced clinical case management in Pamba River Basin districts;	There will be additional / incremental increase in the generation of bio-medical wastes; training of personnel and streamlining waste systems will be required.	-ve
(ii) establishing a OH platform to strengthen coordination, collaboration, networking, joint surveillance, preparedness and response to counteract health hazards; and	Strengthened surveillance will establish a link between community waste management and sanitation practices, and human health. This will lead to better environmental management practices.	+ve
(iii) piloting community-based OH surveillance practices in Pamba River Basin districts and scaling it up if resources allow.	Strengthened surveillance will establish a link between community waste management and sanitation practices, and human health. This	+ve

Program Activities	Environmental Impacts, Risks & Benefits	+ve / -ve / nil
	will lead to better environmental management practices.	
Sector: Roads		
(i) implementing the RMMS with a fully functional climate module;	Building climate resilience in road maintenance has the potential to improve environmental management as the designs will be appropriate	+ve
(ii) establishing a RMMS cell with required in-house and contracted staff to produce annual capital, maintenance and climate works program, which would inform state road sector planning and budget; and	Opportunity to integrate environmental expertise pertaining to roads O & M in the RMMS cell. This is particularly relevant to those roads that require climate adaptation	+ve
(iii) implementing climate-resilient CRN road infrastructure and long-term OPBRC contracts in selected districts along the Pamba river basin.	Construction-related environmental impacts – though minor, localized and reversible – will have to be properly managed using management measures.	-ve
Sector: Urban		
(i) developing guidelines for risk-informed Master Planning;	Opportunity to integrate environmental risk considerations in these guidelines.	+ve
(ii) developing capacity building programs for risk-informed planning and training Department of Town and Country Planning (DTCP) and ULBs; and	Opportunity to integrate environmental content in the planning and training of DTCP and ULBs	+ve
(iii) preparing risk-informed Master Plans and Priority Action Plans for at least four ULBs in Pamba River Basin, after generating all the risk data and maps required and conducting stakeholder engagement.	Opportunity to integrate environmental content in the risk-informed Master Plans	+ve
Sector: WRM		
(i) equipping the RBCMA with advanced water resources planning and analytical tools, along with the needed staff, capacity and equipment;	Advanced water resources planning and analytical tools has the potential to include environmental considerations and that will become integral to the staff capacity building	+ve
(ii) operationalizing systems of integrated reservoir operations, water monitoring, data collection and	Increased sophistication in integrated approaches in WRM has	+ve

Program Activities	Environmental Impacts, Risks & Benefits	+ve / -ve / nil
management, flood management (including flood forecasting), evaluation of environmental flows, and more efficient water allocation to agriculture, irrigation, domestic purposes, industrial, and other uses to improve productive and sustainable water use;	the potential to contribute to better environmental management.	
(iii) fostering multi-sectoral and inter-agency coordination to mainstream climate resilience into water resources planning and management;	Better inter-agency coordination has the potential to result in better river basin decisions, which are environmentally sustainable.	+ve
(iv) developing climate-proofed local level district management plans; and	Climate proofing of local-level district management plans has the potential to lead to environmentally sound decisions.	+ve
(v) implementing priority investments based on integrated river basin plans developed for Pamba River Basin districts.	Construction-related environmental impacts – though minor, localized and reversible – will have to be properly managed using management measures.	+ve

Annex 3: Consultations - Suggested Checklist¹³ recommended for KILA

DRM

Results Area 1:

Building systems and institutional capacities for managing shocks from climate change, natural disasters and disease outbreaks

Program Activities:

Description	Dept / Agency
Establish protocols for climate informed planning and tools for application [1]	LSGD, LSGIs, KSDMA
Train LSG staff on application of local DRM plans and climate proofing processes [1]	LSGD, LSGIs, KSDMA
Apply screening and planning tools for climate proofing/ smart investments in LSGIs [1,2]	LSGD, LSGIs, KSDMA

Note: 1. Institutional development (e.g. capacity building, training, institutional strengthening); 2. Investment planning and management; and 3. Infrastructure development and maintenance.

Environmental Checklist:

Sector / Department / District

- What are the key environmental aspects to be considered in climate-informed planning? For establishing protocols, should KSDMA and LSGD's capacity require strengthening? What are the gaps? What's the type of capacity strengthening on environmental aspects? [Note: Capacity strengthening can be (a) environmental norms and guidelines; (b) environmental training and (c) incentives for environmental performance.]

LSGIs / Community

- What are the key environmental aspects to be considered in climate-informed planning? What is the capacity of the LSGIs in applying these tools in ensuring that environmental aspects are addressed? What are the gaps? What is the nature of capacity strengthening required in the LSGIs?
- In LSGIs located in eco-sensitive areas or culturally sensitive areas, what are the additional issues that need to be addressed? Are there any particular gaps? What is the capacity strengthening in these LSGIs that will be required?

¹³ These checklists were based on the Program activities as of December 2020. The exact description and the wording of the Results areas and activities may vary from the later version of the Program Appraisal Document (PAD), e.g. those included in Annex 2.

DRFI / SP

Results Area 1:

Building systems and institutional capacities for managing shocks from climate change, natural disasters and disease outbreaks

Program Activities:

Description	Dept / Agency
Develop a unified registry for disaster assistance and social welfare benefit payments [1]	DoF, DoR, KSDMA, DoA, Fisheries
Develop guidelines on payment norms/modalities, administrative rules, and monitoring arrangements; [1]	DoF, DoR, KSDMA, DoA, Fisheries
Develop and adopt a comprehensive disaster risk finance and insurance strategy/action plan; [1]	DoF, DoR, KSDMA, DoA, Fisheries
Pilot at least two alternative risk transfer and insurance (parametric) products targeting both household/vulnerable population and the state government.[1]	DoF, DoR, KSDMA, DoA, Fisheries

Note: 1. Institutional development (e.g. capacity building, training, institutional strengthening); 2. Investment planning and management; and 3. Infrastructure development and maintenance.

Environmental Checklist

Sector / Department / District

- Nil

LSGIs / Community

- Nil

Fiscal

Results Area 1:

Building systems and institutional capacities for managing shocks from climate change, natural disasters and disease outbreaks

Program Activities

Description	Dept / Agency
Establish and staff a debt management unit to produce quarterly/annual debt forecasts/ updates and annual debt management plans; [1]	DoF
Undertake a feasibility study on debt restructuring options and implementing its recommendations, considering the fiscal implications of recent natural disasters and Covid-19 pandemic [1]	DoF

Note: 1. Institutional development (e.g. capacity building, training, institutional strengthening); 2. Investment planning and management; and 3. Infrastructure development and maintenance.

Environmental Checklist

Sector / Department / District

- Nil

LSGIs / Community

- Nil

Urban

Results Area 1:

Building systems and institutional capacities for managing shocks from climate change, natural disasters and disease outbreaks

Program Activities

Description	Dept / Agency
Establish systems and strengthen institutional and technical capacities of ULBs to undertake and operationalize risk-informed master planning, and TCP and LSGD to support and incentivize risk-informed master planning by ULBs. [1,2]	LSGD

Note: 1. Institutional development (e.g. capacity building, training, institutional strengthening); 2. Investment planning and management; and 3. Infrastructure development and maintenance.

Environmental Checklist

Sector / Department / District

- What are the key environmental issues relevant to the master planning process from a TCP and LSGD perspective? What are the gaps, if any? What kind of capacity strengthening is required within the TCP and LSGD that can be integrated with the risk-informed approach? [Note: Capacity strengthening can be (a) environmental

norms and guidelines; (b) environmental training and (c) incentives for environmental performance.]

- Are there any specific additional considerations for the master planning process when it is in eco-sensitive or culturally sensitive areas? Any additional capacity strengthening requirements?

LSGIs / Community

- What are the key environmental issues relevant to the master planning process from an ULB perspective? What are the gaps, if any? What kind of capacity strengthening is required that can be integrated with the risk-informed approach?
- If the ULBs are located in eco-sensitive or culturally sensitive areas, are there additional issues that need to be dealt with? If yes, what kind of capacity strengthening is required to address them effectively in the risk-informed approach?

Health

Results Area 2:

Supporting effective Covid-19 response and disease outbreak preparedness

Program Activities

Description	Dept / Agency
Plan for expanded laboratory network developed and approved; Establishment of infrastructure; Procurement of materials, chemicals, and equipment; Training of personnel.[1,3]	DoHFW, DoAH
Plan for expanded Integrated Disease Surveillance Program (IDSP) for humans (including zoonotic diseases) developed and approved; piloting of system; modifications; and expansion.[1,2]	DoHFW, DoAH

Note: 1. Institutional development (e.g. capacity building, training, institutional strengthening); 2. Investment planning and management; and 3. Infrastructure development and maintenance.

Environmental Checklist

Sector / Department / District

- In expanding the laboratory network, additional arrangements for managing the bio-medical waste – as per BMW Rules 2016 – will have to be put in place? What is the capacity strengthening required in terms of equipment, awareness-building and competence training?
- What are the environmental implications related to IDSP in terms of BMW and infection control?

LSGIs / Community

- What is the prevailing capacity in managing BMW – infection control protocols, storage of BMW and collection of BMW with the treatment facility - in the sub-centres, primary health care facilities, secondary health centres and existing laboratories, if any, connected to these? What are the gaps? What is the capacity strengthening required? [Note: Capacity strengthening can be (a) environmental norms and guidelines; (b) environmental training for awareness & competency building, and (c) incentives for environmental performance.]

- What is the on-the-ground environmental performance of the existing IDSP? What are the gaps, if any? What are the capacity strengthening needs that needs to be considered with the proposed expansion?

WRM

Results Area 3:

Demonstrating integrated approaches to multidimensional resilience at the local level

Program Activities

Description	Dept / Agency
Develop the Pamba basin plan through capacity building support [2]	WRD
Establish flood forecasting and IROS for the Pamba basin through capacity building support [1]	WRD
Operationalize RBCMA with technical and operational staff through capacity building support (training, equipment investments) [1,3]	WRD
Establish WRM Command and Control Center through capacity building support (training, equipment investments) [1,3]	WRD
Identify critical investments in Pamba Basin [2]	WRD
Make operational flood forecasting and IROS for 4 districts in Pamba basin [1,3]	WRD
Complete 2 climate proof investment plans based on the Pamba basin plan [2]	WRD

Note: 1. Institutional development (e.g. capacity building, training, institutional strengthening); 2. Investment planning and management; and 3. Infrastructure development and maintenance.

Environmental Checklist

Sector / Department / District

- With the RBCMA, what requires to be done to strengthen the environmental capacity? In which agencies? Any suggestions on how it should be done?
- Any suggestions on integrating environmental capacity through awareness and training in the context of implementing the RCBMA?
- What are the key environmental issues to consider in the Pamba river basin? What are the capacity strengthening needs to address these issues? [Note: Capacity strengthening can be (a) environmental content in the river basin plan including norms and guidelines; (b) environmental training for awareness and competence building, and (c) incentives for environmental performance.]

LSGIs / Community

- In implementing the integrated river basin approach in the Pamba river basin, what are the key environmental issues that need to be considered? Which agencies should be involved and how should their capacity be strengthened?
- The Pamba river basin includes highlands, forests and water bodies. It also includes culturally sensitive properties such as the Sabari Mala. Which agencies should be involved and how should their capacity be strengthened to avoid impacts on these natural habitats and culturally sensitive properites as the intergrated river basin approach is implemented?

- What will be the critical investments in the Pamba basin? What are their environmental impacts likely to be? How should capacity be strengthened to address them?

Agriculture

Results Area 3:

Demonstrating integrated approaches to multidimensional resilience at the local level

Program Activities

Description	Dept / Agency
Realignment of state budget support towards promotion of AEU designated crops. [1]	DoA, SFAC (Small Farmer's Agri-Business Consortium)
Promotion and strengthening of Farmer Producer Organizations (FPO) in select AEU in Pamba basin [1,3]	DoA, SFAC (Small Farmer's Agri-Business Consortium)WRD
Expansion of Integrated Agriculture Management Information System (IAMIS) as per Software Requirement Specifications (SRS)[1,3]	DoA

Note: 1. Institutional development (e.g. capacity building, training, institutional strengthening); 2. Investment planning and management; and 3. Infrastructure development and maintenance.

Environmental Checklist

Sector / Department / District

- What are the key environmental issues confronting agriculture, e.g. excessive water use, soil run-off, use of chemical pesticides and excessive use of chemical fertilizers, and what is the capacity of agencies to address them? Is there a need to strengthen the capacity? [Note: Capacity strengthening can be (a) environmental guidelines; (b) environmental training and (c) incentives for environmental performance.]
- How will the transition to AEU result in the better environmental performance? What needs to be done, if any, to facilitate the transition more effectively and quickly? Capacity strengthening requirements (training, awareness, competence) if any?
- In the strengthening of FPOs, do environmental aspects have to be addressed? If yes, what capacity strengthening is required and how can these be facilitated?
- In IAMIS, what and how can environmental information be included so that it can guide improving the environmental performance of the agriculture sector?

LSGIs / Community

- Due to the AEU designated cropping pattern, is there likely to be any environmental implications? If yes, what are they? What capacity strengthening is required to address them?
- What is the capacity of a typical FPO to take action related to environmental issues? What capacity augmentation is required?

Roads

Results Area 3:

Demonstrating integrated approaches to multidimensional resilience at the local level

Program Activities

Description	Dept / Agency
Conduct TA, training and capacity building [1]	PWD
Implement RMMS (Survey and data collection for entire CRN, Roll out FWP, Staffing of RMMS Cell, CRN Budget allocation and COE institutionalization) [1,2]	PWD
<ul style="list-style-type: none"> • Roll-out of performance-based management contracts for road asset management in the Pamba Basin – List of roads included 	PWD
<ul style="list-style-type: none"> • Capital works and climate enhancement layered works for climate resilient core road networks (CRN) implemented in Pamba basin - List of roads included 	PWD

Note: 1. Institutional development (e.g. capacity building, training, institutional strengthening); 2. Investment planning and management; and 3. Infrastructure development and maintenance.

Environmental Checklist

Sector / Department / District

- What would you suggest about integrating environmental assets in the RAMS? Is there a need for capacity strengthening within the PWD pertaining to RAMS and in general? Capacity strengthening (content including guidelines, awareness, competence, budgets)?
- Any suggestions on natural habitats (highlands, forests, wetlands and others) and cultural property considerations in the proposed guidelines on climate-resilient construction? Capacity strengthening (content including guidelines, awareness & training)?
- Any suggestions on public and worker safety in the considerations in the proposed guidelines on climate-resilient construction? Capacity strengthening (content including guidelines, awareness & training)?

LSGIs / Community

- What are the key environmental issues related to the roads? Which are the Government agencies involved? Is there a gap in their capacity? If yes, what strengthening is required?
- Which are the forests, wetlands and other eco-sensitive areas, if any, associated with roads?
- Which are the cultural considerations in relation to roads, if any, that need to be addressed? What requires to be done and by whom? What capacity strengthening is required, if any?
- What are the public and worker safety issues seen in road projects? Any particular roads wherein this is a significant concern? ? What capacity strengthening is required, if any, with the Government agencies, e.g. PWD, Local Government and Police?

List of roads under the output and performance-based road maintenance contracts

Road name	District	Approx. Length (km)
Chengannur Angamaly	Kottayam/Ernakulam	118.00
Chengannur-Mavelikkara	Alappuzha	16.00
Kozhenchery- Chgengannur	Pathanamthitta/Alappuzha	14.00
Ponkunnam-Thodupuzha	Idukki/Kottayam	50.00
Kumaly-Pooppa Part I & II	Idukki	78.60
Vattavada Top Station-Moonar	Idukki	44.00
Kayamkulam-Mavelikkara-Thiruvalla	Alappuzha/Pathanamthitta	31.00
K.P. Road from Kayamkulam to Adoor	Alappuzha/Pathanamthitta	21.00
Thrikkunnapuzha-Karthikapally-Thattarambalam;Pandalam-Kaipattoor	Alappuzha/Pathanamthitta	118.00
Kollam-Ayoor	Kollam	30.00

List of roads under the climate-resilient core road networks (CRN)

Package 4

Road name	District	Approx Length (km)
Gandhinagar-Medical College-Babu Chazhikadan road-Kottayam- Parippu road-Athirampuzha Liessue-Kaippuzha-Mannanam- Pulikkuttisery-Parolickal- Muttappally road	Kottayam	21.95
Vadayar Chandappalam- Mulakkulam Road and Vadayar Kallattippalam Muttuchira road	Kottayam	24.70
Pathanamthitta Ayroor-Muttukudukkallathupadi - Muttukudukka Prakkanam-Prakkanam Elavumthitta-Kulanada Ramanchira-Thannikkuzhy Thonnamala road	Pathanamthitta	28.12
Mallapally-Komalam Paduthodu Kalloopara Chengaroor Komalam Kavungumprayar Pattakala, TMV road	Pathanamthitta	22.65
Malamekkara Kunnathukala Chala Puthenchanda factory Junction Azad Junction road	Pathanamthitta	8.6
Thattararnbalam-Michael Junction-Kochalumood-Mangankuzhy-Pandalam	Allapuzha	21.8
Veeyapuram-Edathua-Puthukarry-Marnbuzhakkary-Kidangara-Kunnamgary-Kumarangary-Valady-Mullakarthuruthy	Allapuzha	21.35

Package 3

Road name	District	Approx Length (km)
Mookannoor Ezhattumugham road and Blachippara Palissery road	Ernakulam	20.30
Kakkadassery - Kaliyar road	Ernakulam	20.60
Kumarakom-Nedumbassery road (proposed SH)	Ernakulam	15.75

Road name	District	Approx Length (km)
Ponkunnam-Thodupuzha	Ernakulam	21.03
Neyyassery-Thokkumbansaddle road	Idukki	28.50
Nenmara - Nelliampathy road	Palakkad	30.71
Kodungallur- shornur (SH-22) road	Thrissur	34.00
Vazhakkodu-Plazhy (SH-74) road	Thrissur	22.64
Thrissur Kuttippuram road (SH 69)	Thrissur	29.98
Arakunnam-Amballoor-Poothatta-Piravam Road	Thrissur	7.00

Note: Only the road in Idduki is in the Pamba basin.

Annex 4: Feedback from KILA's state-level and community-level consultations, and how these are addressed

A State-level consultations

No.	Description of feedback	How addressed through Program Design / ESSA
Agriculture		
1	Soil acidity is the cause for reducing agricultural productivity	The AEU approach adopted in the Program will help address the issues of soil health.
2	Soil runoff, pesticide and fertiliser overuse also exists	The AEU approach adopted in the Program will help address in addressing these issues.
3	Intensive campaigns and education on watershed management with greater community involvement is required.	This will be taken up under the WRM sector and LSG initiatives.
4	NRM, bio-resources and recycling initiatives	Though not an explicit part of the Program but would partly addressed through various sector interventions particularly Agriculture and DRM.
5	Key sectors require environmental guidelines, e.g. housing	This is outside the scope of this Program, however existing procedures related to environmental assessments address the issue. Additional provisions as may be necessary would be incorporated in master planning process.
6	Including environmental considerations in Agriculture Information Management Systems should be explored.	Its importance is recognized and considered in the information processing and dissemination of the Integrated AIMS through crop-based package of practices.
CC and DRM		
7	Flood and land use changes are to be addressed in an integrated manner.	The multi-sector Program brings together various sectors and crowds in resources in a limited geography to achieve integrated approach towards flood management.
8	Waste management during the disaster event is a problem.	This is recognized and will be addressed through the LSGI's DRM plans.
9	Watershed management to deal with flood and drought	Watershed management approach will address both flood and drought.
10	Capacity strengthening of LSGD is required	LSGIs capacity strengthening will be an integral part of the Program design.
Health		
11	Centralised bio-medical waste management systems are causing a problem. It is overburdened. A	Addressing this problem is beyond the scope of this Program.

No.	Description of feedback	How addressed through Program Design / ESSA
	decentralised system is required in each district.	
12	Health assessment should be a part of environmental assessment	During Program implementation, environmental assessments are not required as the nature of investments are limited. If done, this will be incorporated.
	Roads	
13	Including environmental aspects into RAMS is a good idea. Capacity enhancements should include environmental aspects.	Program design focuses on environmental management aspects in the performance-based contracts and in strengthening the PWD's capacity in addressing those issues
14	The monitoring mechanism of the contractors on environmental aspects needs strengthening.	Program design includes the provision for technical auditors who will oversee environmental aspects and advise corrections wherever required
	Urban	
15	Waste management and finding land for disposal is a major issue.	Beyond the scope of this Program. However, risk-informed master planning process should address the issue if identified in the process of stake holder consultations at that stage.
16	Paddy land conversion is a real problem. Mainly an enforcement problem in the paddy and wetland act	Beyond the scope of this Program. However, risk-informed master planning process should address the issue if identified in the process of stake holder consultations at that stage.
17	GPs need to be given training in methods and scientific approaches	Training / capacity building of the LSGIs is an integral part of the Program.
18	Buffer zones of eco-sensitive areas are under tremendous pressure due to high demand from the construction industry. Awareness must be created to emphasise the importance.	This will be included under the training / capacity building of the LSGIs during Program implementation. In addition, risk informed master planning process should address the issue if identified in the process of stake holder consultations at that stage.
	WRM	
19	Training and capacity building on biodiversity management, groundwater recharge and protecting flora & fauna needs to be done.	Training / capacity building of the various agencies involved with WRM is an integral part of the Program.
20	Interface between concerned Department should be effective.	Program design aims to have an integrated basin management approach that would bring the stakeholder departments together.

No.	Description of feedback	How addressed through Program Design / ESSA
21	Pollution of the rivers from drainages. Pesticide run-off is also another concern.	This will be considered as a part of the Program implementation; activities will comply with the applicable environmental laws.
22	Using scientific expertise to come up with a comprehensive solution is required.	The Program design includes a basin management approach which adopts scientific approach towards problem-solving.

B Community-level consultations

B1: Alappuzha District

No.	Highlights of stakeholder feedback	Program Design / ESSA How addressed
Agriculture		
1	AEU-based planning will help protect their environment.	Program design incorporates AEU-based approach
2	FPO must promote bio-pesticides to protect from environmental damage	While the program is not focused at that, however resilience being the corner stone of program AEU plans should address these aspects that emerging as good practices.
CC and DRM		
3	The main environmental issue is the decreasing depth of rivers in the region. Desilting must be done on regular intervals to ensure the river reaches its natural capacity during the monsoon.	Basin level planning will address the issue of capacities of water bodies and channels.
4	In Alappuzha municipality and also at Kainakary, roads need to be constructed at an elevation to protect from floods and on the basis of scientific planning.	The roads stretch selected under the Program will incorporate climate and disaster resilient features.
5	In Pandanadu GP, stagnant water in paddy fields requires to be diverted.	Program design includes LSGIs investment planning, which will identify such issues that need to be addressed at the local level.
6	Local action plan on climate change is required and appropriate training has to be provided.	This is a part of the Program design.
Health		
7	Transparency in the operation of the centralised BMW disposal agencies lacking.	Beyond the scope of this Program.
8	Lack of pure drinking water has forced people to rely upon contaminated sources	Beyond the scope of this Program.

No.	Highlights of stakeholder feedback	Program Design / ESSA How addressed
9	PHCs and private hospitals do not have the capacity to manage BMW properly.	Beyond the scope of this Program.
10	Need for a decentralised waste management facility in each district.	Beyond the scope of this Program.
	Roads	
11	Roads are inhibitors of natural flow of water.	The Program is aiming the road designs to be climate and disaster resilience.
12	Absence of crash barriers in selected roads.	The Program is aiming the road designs to be incorporate appropriate road safety measures.
13	More scientific and technical implementation of road projects is necessary.	The Program is aiming the road designs to be climate and disaster resilience and also address road safety and other important aspects of road designed based on scientific studies.
14	There are issues of air pollution due to dust during road construction.	Environmental management plans will be implemented during construction to address these issues.
	Urban	
15	Floods, high tides from water bodies, water contamination and solid waste pollution are the main issues. Capacity strengthening is required.	Training / capacity building of the LSGIs is a part of the Program design.
16	In eco-sensitive areas, ULBs must be specifically capable of handling the disaster management needs.	Building capacity of LSGIs (including ULBs) is a part of the Program design. Managing issues in eco-sensitive areas will be integrated into the training modules.
17	Weather stations are required in the vicinity of eco-sensitive areas.	Beyond the scope of this Program. However, basin level plan by WRM department should address the issues related to availability of relevant data.
	WRM	
18	Rivers need to be rejuvenated and depth of river bed is decreasing.	Basin level planning will address the issue of capacities of water bodies and channels.
19	Road construction along the paddy fields in the valley should address water management.	The roads selected under the Program have been designed to be climate-resilient and designs have considered management of water flows.
20	River sand mining should be regulated.	The Program will address this as part of the river basin management approach.
21	An integrated approach should be established.	The objective of the multi-sector Program is to establish an integrated approach.

B2: Idukki District

No.	Highlights of stakeholder feedback	Program Design / ESSA How addressed
	Agriculture	
1	In Kumily GP, pollution caused by chemical fertilizers and loss of fertility due to soil erosion have created a need for organic agricultural practices.	Beyond the scope of the Program. However, there are schemes to promote organic agricultural practices. These will be implemented along side the AEU approach.
2	In Vandiperiyar, the use of chemical fertilizers should be regulated.	Beyond the scope of the Program.
	CC and DRM	
3	In Peerumade and Peruvanthanam panchayats, the environmental issues raised: develop plans based on the geographical, climatic and environment features of the particular location; planting trees; develop schemes for maximum use of rainwater, (develop and train rapid response team in each panchayat (rescue operation and use different resources/tools), conservation of small and large water bodies, soil conservation, protection of river shores, waste(solid/liquid) disposal, and removing water logging	The Program design is multi-sectoral. These will be addressed through not only disaster management sector but also urban and WRM sectors.
4	In Kumily GP, large scale constructions on eco-sensitive areas, sand mining and paddy field filling were identified as issues.	There will be no large-scale construction in eco-sensitive areas under this Program. Issues of sand mining and paddy field filling are outside the scope. However, the river basin planning will address these issues.
5	In Vandiperiyar the concerns were on agricultural methods, soil erosion, and flow of water. Quarry operations and earthmoving equipment need more training.	The Program design will result in strengthening the DRM planning at the local level. These issues will get addressed through those plans.
	Health	
6	In Peerumade, Peruvanthanam, Kumily and Vandiperiyar panchayath, BMW facilities at a local level is the expressed need.	Beyond the scope of the Program.
	Roads	
7	In Peerumade Panchayat, land use conversion of paddy, reduction agricultural productivity and water scarcity.	Beyond the scope of the Program.

No.	Highlights of stakeholder feedback	Program Design / ESSA How addressed
8	In Peruvanthanam panchayath, the environmental issues related to roads are landslides and dangerous extraction by quarries and clogging of sewage drains.	Environmental management plans will be implemented as part of the construction procedures.
9	In Kumily GP, flow of water, traffic management due to construction and accident management were identified as environmental concerns.	These are a part of Environmental management plans, which will be implemented as part of the construction procedures.
10	In Vandiperiyar GP, safety training for workers and issuing safety gears were identified	Construction safety is a part of Environmental management plans, which will be implemented as part of the construction procedures.
	WRM	
11	In Peerumade, and Peruvanthanam panchayats, water shortages and the need for conservation, protection of ponds and water bodies and rainwater harvesting. These panchayats have a critical role in the Pamba river basin plan.	The river basin management approach will address these issues.
12	In Kumily panchayat, cleaning of water canals and implementing anti-litter practices were identified.	The river basin management approach will address these issues.
13	In Vandiperiyar GP, pollution of the river, soil erosion and associated loss of fish life were identified. Importance of check dams and small canals to ensure water for agriculture were also noted.	The river basin management approach will address these issues.

B3: Kottayam District

No.	Highlights of stakeholder feedback	Program Design / ESSA How addressed
	Agriculture	
1	At Mundakayam GP, the current farming practices are leading to adverse environmental impact. The system should be based on soil characteristics rather than being market-driven.	The AEU approach adopted under this Program primarily address the issue of appropriate cropping practices for climate and soil parameters in the region.
2	FPOs are incapable of addressing environmental issues. They need to build their capacity.	While the focus of the programs will be on creating market linkages, as part of the capacity building of the FPOs, the environmental aspects will also be integrated.

No.	Highlights of stakeholder feedback	Program Design / ESSA How addressed
3	At Changanaserry, the need is to improve the cropping selection using the AEU approach.	Program design supports the AEU approach.
4	FPOs are capable but need to provide Government support.	Through this Program, support to the FPOs will be provided to improve their activities.
CC and DRM		
5	Climate informed planning must be induced at the school level onwards as per the Manimala GP.	Beyond the scope of this Program, as the education sector is not included.
6	The political environment and social nexus are hindering the progress of climate-informed planning.	As part of the integrated approach, this Program aims to address various issues related to climate-informed planning and mechanism is being created to incentivize mainstreaming of climate and disaster risk management into investment planning.
7	An integrated training platform to solve the environmental issues.	Program design includes training and capacity building across multiple sectors. These will include environmental training as required.
8	Unscientific construction is taking a toll on the environment.	As part of the integrated approach, this Program aims to address various issues related to climate-informed planning and mechanism is being created to incentivize mainstreaming of climate and disaster risk management into investment planning.
9	The cultural and traditional value of these sensitive regions needs to be protected. This is particularly the case during the pilgrimage season.	The Program supports decentralized planning, and this should help prioritize local issues.
10	Financial resources are a constraint to ensuring climate-resilient bridges.	The overall objective of the Program is to bring in more resources towards climate and disaster resilient planning of investments.
Health		
11	A lack of sufficient staff in managing BMW being done by the centralised agency. The system should be decentralised.	Beyond the scope of this Program
12	IDSP helps in early identification of pandemic incidences.	The Program aims to strengthen and expand the system for timely detection to undertake remedial measures.
Roads		
13	Drainage facility, air and dust pollution, cutting down of trees, road construction	The Program is aiming the road designs to be climate and disaster resilience and

No.	Highlights of stakeholder feedback	Program Design / ESSA How addressed
	that are not weather resistant causing water logging. Unscientific construction and lack of monitoring and maintenance.	also address road safety and other important aspects of road designed based on scientific studies. Environment management plans will also be part of the construction procedures.
14	Stop funding projects which are covering forests, wetlands and eco-sensitive areas (Mundakayam GP).	The Program does not support any investments in eco-sensitive areas.
15	A more participatory approach, involvement of cultural and development experts and focus on road safety should be undertaken.	The Program design has been developed including different expertise that comprises road safety as well.
	Urban	
16	Unscientific road constructions, degraded canal system, inefficient drainage system, drinking water shortage, decreasing attention to agriculture sector, air and water pollution, unavailability of waste management units, extensive use of plastics, bio and non-bio waste management and lack of proper monitoring	The Program objective is to enhance climate and disaster resilience of various participating sectors.
	WRM	
17	Changanassery ULB the main environmental issues they are facing are pollution, coastal line damage.	The Program supports the river basin management approach which will address these issues.
18	In the Pamba river basin plan, the main issue is the decreasing depth	Basin level planning will address the issue of capacities of water bodies and channels.
	Government and civil society should collaborate.	The multi-sector Program aims to be integrated across stakeholders.
19	In coastal areas, the losing soil fertility.	Coastal areas and issues therein within the purview of the river basin will be addressed under the Program.
20	In Manimala, the main issues identified were drought, flood and pollution. Agriculture, water resource department and LSGD should get involved	The Program objective is to enhance climate and disaster resilience of various participating sectors and mainstream these issues in investment planning.
21	In the Pamba river basin, soil, water and transportation. construction and development activities	The river basin management approach will address these issues.
22	In Koruthode FGD, the river basin plan must take an integrated approach covering all areas of environment. Water and unique ecosystems are the most critical investment in this region	By its very nature, the river basin management approach is integrated and will address these issues.

No.	Highlights of stakeholder feedback	Program Design / ESSA How addressed
23	LSGD must play a critical role in implementing the Pamba river Basin Plan. Agencies like Kerala Sastra Sahitya Parishad. Training must be more integrated and should be made effective to deal with practical issues.	Training / capacity building is a part of the Program design. The LSGD and the civil society organizations as relevant will be engaged to be part of the training activities.

B4: Pathanamthitta District

No.	Highlights of stakeholder feedback	Program Design / ESSA How addressed
	CC and DRM	
1	In Thiruvalla municipality is the unscientific construction which leads to water logging in many places. LSGIs are not capable.	The Program supports approaches that have their basis in technical studies. Capacity building of the LSGIs is a part of the Program
2	In Aranmula panchayath, the LSGs lack of trained and equipped personnel	Capacity building of the LSGIs is a part of the Program
3	In Ranni panchayath, the LSGI have no capacity.	Capacity building of the LSGIs is a part of the Program
4	In Perunad grama panchayath, there are several environmental aspects: environment protection, conservation of small and large water bodies, protection of river shores, protection of trees and planting trees, waste(solid/liquid) disposal, soil conservation, removing water logging, rain water harvesting, volunteer group formation, training for rescue operation in disaster and training to use different resources/tools.	Through the various training and capacity building activities in the different sectors, the Program aims to address these issues as relevant locally.
5	Improve the capacity of LSGIs, study, training and awareness of different sectors, enhance the stakeholder's capacity and improve transparency	Capacity building of the LSGIs is a part of the Program
	Health	
6	In Tiruvalla municipality, primary and secondary health centres have no options to deal with BMW.	Beyond the scope of the Program. However, the Program will streamline proper BMW management within the health care facilities where interventions are made.
7	In Ranni panchayath , BMW should be disposed in a decentralised manner	Beyond the scope of the Program
8	In Perunad panchayath, the staff in managing the biomedical waste is less; Health officials need training in	Beyond the scope of the Program. However, the Program will streamline proper BMW management within the

No.	Highlights of stakeholder feedback	Program Design / ESSA How addressed
	environmental protection, waste management.	health care facilities where interventions are made. Training / capacity building will be done and will address environmental issues.
	Roads	
9	In Aranmula panchayath, water-logging is the major issue.	The Program aims to build climate-resilient roads.
10	In Ranni panchayath, the main environmental issues concerning road developments are air pollution and unhygienic sewage systems. Workers employed by contractors have to be protected.	Environment management plans will be part of the construction procedures.
11	In Perunad panchayath, the environmental issues related to roads are filling of paddy fields, reducing agricultural productivity, and developing water scarcity.	The Program aims to build climate and disaster resilient roads.
	Urban	
12	Drinking water and sanitation, drainage and sewage system renovation are the main issues.	While the Program scope does not address the issues directly the efforts towards multisectoral integrated planning and mainstreaming climate and disaster resilience in investment planning of LSGIs should address the issues.
	WRM	
13	In Thiruvalla municipality, the pattern of agriculture, construction of roads, housing etc, and their effect on the ecology of the Pamba River should be examined. Travancore Devaswom Board should be included.	The Program supports a river basin management approach which will address these issues in conjunction with all relevant stakeholders.
14	In Aranmula panchayath the major environmental issue is the flow regulation of the river water in the Pamba. A minimum level of river water is needed to maintain groundwater levels.	The Program supports a river basin management approach that would also address the river flow issues.
15	Past constructions were unscientific which caused the diversion of river water and more aggressive soil erosion	Through the river basin management approach, the Program aims to plan based on scientific and technical studies.
16	Unscrupulous mining of sand, rocks along with deforestation.	The river basin management approach will address these issues.
17	In Ranni panchayath, main concerns of the project should be Forestation,	The river basin management approach will address these issues. However,

No.	Highlights of stakeholder feedback	Program Design / ESSA How addressed
18	<p>Environmental Conservation and Waste Eradication.</p> <p>Illegal sand mining and waste dumping has to be urgently stopped. Urgent restoration of the river bank is necessary to prevent it from collapsing regularly.</p>	<p>waste minimization or eradication is outside the scope.</p> <p>The river basin management approach will address these issues.</p>

Annex 5: Summary report of the two state-level ESSA stakeholder workshops (February 2021)

Introduction

As a part of Environmental and Social Systems Assessment (ESSA), the Rebuild Kerala Initiative (RKI) and Kerala Institute of Local Administration (KILA) jointly convened two state-level ESSA stakeholder consultation workshops on 18 February 2021 and 22 February 2021. Given the prevailing Covid-19 constraints, both these workshops were done using the virtual forum (Zoom). Prior to the workshops, the draft ESSA reports – ESSA Summary Report (Part A), ESSA Environmental Report (Part B) and the ESSA Social Report (Part C) - were sent to the invitees. The English version of the three reports and the Malayalam version of the ESSA Summary Report were sent along the invitation. The invitees were requested to go through the draft before the workshop so that the suggestions and feedback can be an output of a careful examination. The English version of the three reports were disclosed in the RKI website on 8 February 2021 and the Malayalam version of the Summary report on 13 February 2021. The participants were thus given enough time and opportunity to download, read and provide their feedback on the draft ESSA reports. And, these reports have already benefited from extensive stakeholder consultations at the state-level and in the four Pamba river basin districts. Additionally, provision was made to email feedback on these draft ESSA reports to the RKI.

Purpose

The purpose was to offer an opportunity to the stakeholders to provide a feedback to the draft ESSA reports in general and the assessment, findings and recommendations in specific.

The details list of invitees is provided in Appendix 1 of this Annex. In the first workshop, there were 54 participants, and in the second workshop there were 27 participants. The screenshots of the two workshops are given in Appendix 2.

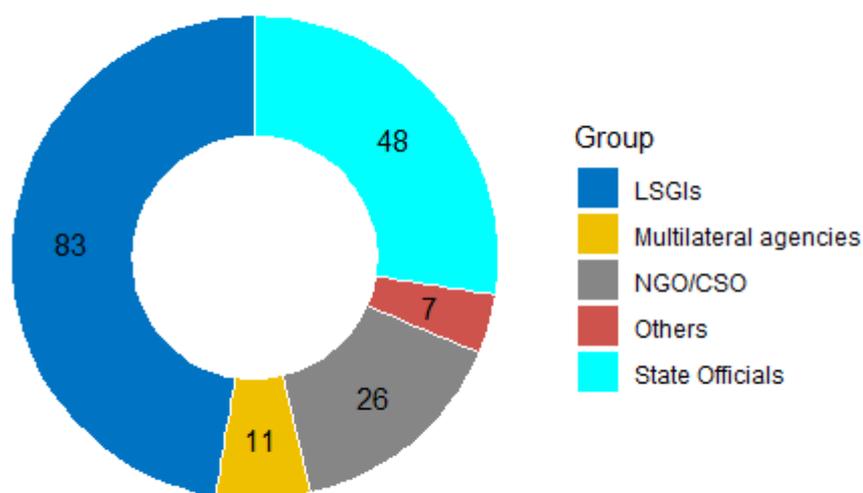
Structure of the workshops

Both the workshops had identical structures: Opening remarks from KILA and / or RKI, Presentation of the Program by the World Bank Task Team Leader, Presentation about the ESSA by the World Bank Senior Social Development Specialist, Presentation about the social findings by the Social Development Consultant and on the environmental findings by the Environmental Consultant. After the presentation on the findings, ample time for stakeholder feedback was provided. For each feedback obtained, the World Bank Task Team provided a detailed response on the considerations already undertaken and will be taken up during implementation. All of the stakeholder feedback and the responses are recorded in this Annex.

In the first of the two workshops, Mr. R.K. Singh, Additional Chief Secretary, Government of Kerala, provided the opening remarks.

Participation

A total of 175 participants were invited to the workshops which consisted of state/district level officials, NGOs, CSOs, Local Self Governance Institutions (LSGIs), multilateral organizations, independent researchers and individuals. The category wise breakup of the invited participants is given in the following figure.



The first of the two workshops benefited from the participation of the Mr. T.K.A. Nair, Former Cabinet Secretary from the Government of India. During the workshop, Mr. Nair shared his detailed feedback for the Program's consideration.

ESSA Team - Environmental Presentation

The Bank's ESSA team made a short presentation on the Environmental Systems Findings. The presentation is included in Appendix. It was noted that the borrower's capacity to address environmental impacts of the program at departmental level as well as, state and national level regulatory levels were checked against the core principles of the bank. The report finds that these capacities were consistent with what core principles. As far the exclusion principle is concerned the assessment finds no links to the program which could cause significant environmental effects during the implementation of the program. The recommendations based on the environmental assessment were also presented.

ESSA Environmental Team - Q&A

Feedback from Shabeer Mohammed, Citizens India Foundation

Description: This ESSA prepared for geographic focus on areas of the Pamba River Basin, right? Sabarimala is one of the largest annual pilgrimage sites in the world where an estimated 50 million devotees are visiting every year. Sabarimala is situated in Pathanamthitta district this temple complex located at Sabarimala in Tiger reserves. Rites and rituals on Sabarimala pilgrims' are completely connected with the Pamba River. The large influx of pilgrims brings health hazards and diverse environment impacts on both pilgrims and local inhabitants. Actually, I think this ESSA did not mention anything about that large influx. Out of these 50 million people 80% to 90% are coming in a short span of three months. They're coming from four states and and from countries such as Sri Lanka, Malaysia and Indonesia. That actually is a major problem. From the base camp of Sabarimala, *Nedumala*, there are trekking routes to Sabarimala through the forest area. This camp is very small and cannot contain all the pilgrims. There is a need for another special plan for this area for ESSA to consider. Because that is another focus area. Also I have a suggestion, that a green pilgrimage program for such places to be a model of forest environment and public health. I didn't see anything regarding the Sabarimala pilgrimage in ESSA.

ESSA Team Response: Now, if you remember that when we spoke about the program, there are some program activities, which were in the investments are fairly clear as to what is going to be done. For instance, in the road sector, there are particular investments over the next four years that have been designed and the planning has already reached an advanced stage and that will get implemented as a part of the program. Then there are the other investment planning tools and institutional development aspects initiatives that are a part of this program. In particular, if you recall, I mentioned about the work that's going to be done on the climate change in the DRM as well as on the urban and there's going to be a lot of institutional development activities in the context of the RCBMA, which is the water resources interventions that we're doing. Now, these are more granular and they will get into the details of what needs to get done within the various local governments in the Pamba River Basin. And of course, whatever we do in the Pamba River Basin has to consider what you just mentioned, broadly in terms of that river basin receives a large number of people who visit every year from the neighboring states and all over the world. So it is not as though that is not going to be considered but, it will be considered at a local level. And it will be considered through the various investment plans that we get developed, and the various institutional development exercises that will be done as a part of the overall program. In terms of the second suggestion to have a green pilgrimage program, this is something that we have not yet considered. This is a very good suggestion. So then again, I would think as a part of the overall institutional development exercise, over the Pamba in the Pamba River Basin as a part of the program, if this does, this does emerge from a state level or at a local level through the various consultations that will be held, we will definitely considering throwing it into the program.

Bank Task Team Response: Because I also got to travel every year, I could immediately relate what you addressed and there are two parts to it. One is the water resource management. Another one is the environment management and the combined impact of

it, on the lives of the people who are residing and who are dependent on the forests and the area around it and the other local government areas around it. So, this is one of the things which we are addressing in the Basin Plan which will be taken up the the first phase of the basin, I mean, there's two-three levels to the basin plan. Some detail assessment will have to be done before we come up with a plan. It is a very nice suggestion which you are given as a green pilgrimage before we get into drawing up the course of the charter there. So that plus with the support of the local governments is going to be very, very critical because if they don't participate in this program, even the state government coming out of the policy will not be able to bring the change. So their role is going to be very critical as we move forward. And this is definitely going to put in this feedback. We will address that and as we move forward and as we build an implementation, KILA will be sought after for giving the very valuable inputs on how to design and carry forward to the implementation. It's easier said than done when especially when you have this spike in the influx of people that are otherwise normally very quiet and serene and green. So, that is something that we will be definitely looking into the planning and then implementation. Definitely we, RKI and the State government will definitely come back to key people like you for engaging in the process because it's a collective engagement which is required there.

Bank Task Team Response: It's a program for results, the result areas have been identified and one of the result areas is the basin level plan which will be developed. It is going to be a multi-stakeholder approaches where, not only the people that it will consult, but also the departments and the activity that would come in as part of the basin level plan. The second level is the institutions that work in that area, which are the local governments, they are also free to incorporate the positive and the affirmative actions in their planning process. So I think, even though many of the issues may not specifically get mentioned and flagged in the program or ESSA or in the related documents but if you look into the activity level details, and these details will emerge with continued association with the NGOs and with the community, with the people who have who have experience of the these issues. The program would assure such association, which will then not only help in identifying the issues but will also get addressed.

Feedback from Ms. Meena Kuruvila

Description: When we're thinking about capacity building programs, we should have a clear cut training module and we should give the TOT for the resource persons also. Then another important thing is we should identify the target group from the community itself or from the concerned local Self Govt. For example, women, school teachers, they are an important target group. The youth and elders of that community are also one of the important target groups. Then other government officials, so many government departments are there under the LSGIs. They should also get this type of training. So, for different target groups different training modules should be prepared. And before starting the training, we have to conduct some sort of small research like, what knowledge they have before that training. After that training, the exercise must be repeated to know the outcome of the training and the implementation of their knowledge in the community, so that, based on that level of capacity building, we have to plan for the capacity buildings to reach the community. Finally, we have to plan the training, based on the target of the local self-government.

Feedback from the Director of Agriculture

Description: The training and capacity building should be given to the Agri Ecological Units instead of Agri Ecological Management Units.

ESSA Team Response: Thank you very much for the suggestion, we'll make the appropriate inclusions in the proposed capacity building during implementation.

Feedback from Mr. Jomon

Description: How in this particular geographical area is the program going to foster the existing natural resources and address the core issues?

ESSA Team Response: This is likely to be done in two levels. The first level is when we are looking at the Pamba River Basin, the water resource management initiative of having the comprehensive River Basin management approach will hopefully as a part of the implementation come up with the balance in the use of the various resources in the region. That's one of the objectives of having an integrated river basin approach. So that's one way in which this, the use of existing resources will be managed.

The second is from the point of view of the risk informed master plans as well as the tracking tools that we're going to have as part of the DRM. We also expect that there'll be some throughout of what are the risks that come out of the various resource use particularly, what I have in mind as I respond is the use of land and what are the environmental risks and therefore, how does risk inform master planning regard land as a resource, so that will also get addressed during the implementation, when it comes to actually doing the various things at local government level.

Task Team Response: The way the program is designed, particularly on the urban planning side and also on DRM and climate risk mitigation side is that the more affirmative actions you take, the capacity of mitigating the risk or climate variability or the disaster would get rewarded. So I think it's now basically up to the local government and institutions to bring more and more of such actions. There is going to be a kind of graded response in the sense that every year the target for the local governments to achieve will be higher and higher. So I think that there's a good set of incentive mechanisms for the institutions to start thinking of these initiatives.

Feedback from Mr. Madav Reddy

Description: What are the measures suggesting for the integration of different institutions and prevention and production of anticipated environmental hazards?

ESSA Team Response: One of the things that we are looking at is when we are doing climate resilient roads, the building of climate resilient roads is not just a responsibility of the PWD. We need to get the involvement of the other departments who also can contribute gainfully in addressing a variety of issues and needs in the context of climate resilience. Let's take for instance, Soil Survey and soil investigation department; one of the ways in which we are doing it at the program design is that we will have at a higher level a coordinating committee, in order to ensure that some of these issues get addressed

while we are actually doing the climate resilient road construction. Now, this is one aspect in terms of the other aspects of the program, wherein if you're looking at integration and coordination is the main theme, and which is one of the reasons why we're having a multi sector program at the Mumbai River Basin, the approaches, River Basin approach and which requires integration and coordination just come out very clearly, from the consultations we have had and also integral to our program design. So that's how the different institutions will work together. And we are also saying that apart from the institutions, we work with the various civil society organizations which can contribute gainfully in the implementation of the program.

Feedback from Mr. Kalaiarasan Periasamy, DoECC, GoK

Description: The conservation of Pamba Riverine Ecosystem and abatement of pollution especially solid waste management and legacy waste management system may be given much attention.

ESSA Team Response: This is something that would definitely get interest as a part of the overall River Basin management approach. But one of the things that we need to keep in mind is that this is a program with limited resources, limited capacities, and limited timeframe. So one of the things that we will strive to end to ensure that we do as much as we possibly can. But some of these issues are really very hard issues on the ground. Secondary information, research on this revealed that there is a lot that needs to be done. But whatever we can incorporate as part of the Pamba River Basin planning, we definitely will include.

Feedback from CARD KNH

Description: What about the Pamba Action Plan?

Essa Team Response: Yes, we have reviewed the Pamba action plan and we are aware that that exists. The work has been done both by CESS as well as the State Pollution Control board as well as the KSDMA on the Pamba River Basin. The Program design considers that and will incorporate during implementaton. And as in when we get into the nitty gritty of the Pamba River Basin Plan, we will ensure that we will integrate the inputs that we get from various sources.

Feedback from Mr. T K A Nair, Former Chief Secretary, GoI

Description: we also need to stress again and again that the institutional arrangement or the law which was passed, gives you practical reality. Just to have a legal framework is just not enough. Coordination we all agree is the essence of everything and without an integrated plan and coordinate production, nothing will happen. This has been the history particularly in respect of Pamba. Pamba is inextricably linked to the Sabarimala pilgrimage. So, various aspects of the river basin management are extremely important and unless they are looked at and unless they are addressed, well again, we will be ending up with another plan. And another equally important aspect that I would like to mention here is that the willing cooperation and participation of the people living on either side of the Pamba river basin, they are crucial people who can either make the scheme successful or otherwise. That can be achieved only through the local Panchayats. From

my own personal experience, the Panchayats may not be extremely keen to undertake this task. There are for various other organizations, such as Youth in various colleges, schools, etc, and nongovernmental organizations. All of them have got to be together in a massive effort, for this plan to have any chance of success.

One more thing, let me stress, the biomedical waste you mentioned about it's good. That is very good, because in certain areas where you have large hospitals like medical college or hospital premises biomedical waste management is the problem. But throughout the state, one of the most important and one of the most pernicious problems is waste management. The whole stage looks like a dumping yard. So therefore, municipalities and Panchayats, particularly, are very important. Capacity building capacities, in particular of staffs, engineers, etc., are extremely important. In the panchayats, how can you mobilize the public opinion against people who are polluting the environment by throwing waste? Waste management in any program needs to evolve as an integral element in the context of Kerala because Kerala spares to become a clean slate, and a green state. Thank you.

ESSA Team Response: Those suggestions and observations are indeed in line with the Program design. Sufficient focus and action will be taken during implementation.

Bank Task Team Response: There is also a Kerala solid waste management project, which as you highlighted the issues of solid waste, is very important and critical for the state. That project is also in preparation should be getting approved, probably next month, which is taking a deeper look at the issues of solid waste management in the State. In terms of the planning part, where it needs to be integrated into the Basin Plan and the local government plans, while this project could also work on that, there will be a lot of activities on that front through that project.

Feedback from Ms. Shyama Kuriakose

Description: There are several laws on enrollment and forests, which are outdated and not in tune with the current theme of climate change resilience. So are there any plans to amend these outdated frameworks?

ESSA Team Response: I can't agree with you more. that there is a need for reviewing all the regulations and figuring out as to what is compatible with climate resilience and what is not. But this program is focusing largely on climate resilience within the state of Kerala. And it's in the sectors that have been identified and building resilience capacity. Now, if we get into a law focused program, then all of that in terms of reviewing these laws and which are outdated and strengthening these laws and revising these laws, that's a fairly large piece of activity that would need to get done. So to give you a direct answer, is there any plans to amend the same under the program? The answer is no. But one of the things that we can assure you is that if we find some of the laws are outdated, and they are going to cause negative environmental effects and they are going to be countered to the resilience goals, we will examine them and make sure that we do don't adopt designs which are outdated and don't implement anything which is outdated. So to that extent, within the program design, we can make sure that we work with the government of Kerala and request them to ensure that some of these outdated things that you speak

about are not implemented. But in terms of going back and amending the laws themselves that is well beyond the purview of this program.

Concluding remarks

The organizers – RKI, KILA and the World Bank - thanked all the participants and institutions for the suggestions and feedback they have given to revise the draft ESSA report. The announcement regarding the email feedback mechanism was also mentioned along with the timeframe for the same.

Appendices

Appendix 1: List of State level Officials invited

Sl no.	Name	Position	Department
1	Sekhar L. Kuriakose	Member Secretary	Kerala State Emergency Operations Centre, KSDMA
2	Smitha R Nair	Joint Director of Fisheries	Directorate of Fisheries
3	P. Venugopal IAS	Principal Secretary	Department of Food and Civil Supplies
4	Gigi George	Chief Town Planner	Local Self Government Department
5	Renu Raj IAS	Director	Directorate of Urban Affairs
6	K M Dileep	Director	Directorate of Animal Husbandry
7	C.K. Jagadeesan	Dy.DHS(Planning)	Directorate of Health Services
8	A Nadeer	Executive Engineer, ALAPPUZHA	Irrigation Department
9	V. Rejatha	Deputy Director of Agriculture	Department of Agriculture Development and Farmers' Welfare
10	Jiju P Alex	Director of Extension	Kerala Agricultural University
11	Ajith Ramachandran	Chief Engineer(Roads)	Public Works Department
12	Chandini	Agriculture department	Kerala State Planning Board
13	Rathan U Kelkar IAS	Director	State Health Mission, Government of Kerala
14	Meenakshy	Add.DHS (PH)	Directorate of Health Services, Government of Kerala
15	Shaji	Environmental Engineer	Kerala state Transport Project (KSTP), Government of Kerala
16	Vijay Rohidekar	Team Leader PMC-KTSP-II, Eptisa, Project Management Consultant	Kerala state Transport Project (KSTP), Government of Kerala
17	Madhav Reddy	Project Management Consultant,	Louis Berger Group
18	Debashis Pal	Environmental consultant, EGIS	New Delhi
19	P.N Rajesh	Senior Town Planner, Town and country Planning Department	Government of Kerala
20	Priyesh R	Director, Irrigation research and design Board	Water resources department, Government of Kerala
21		Director (Generation - Civil)	Kerala State Electricity Board
22	G Jayalekshmi	Head/Senior Scientist (Programme Co-ordinator)	Krishi Vigyan Kendra, Kerala Agricultural University,

Sl no.	Name	Position	Department
			Kumarakom P.O, Kottayam Kerala 686563
23	D.Balamurali I.A.S	Director	Directorate of Environment and Climate Change
24	Sreekala S	Member Secretary	Kerala State Pollution Control Board
25		Principal Secretary	Revenue & Disaster Management, State Relief Commissioner & Convener, Kerala State Disaster Management Authority
26		Principal Secretary & APC	Department of Agriculture Development & Farmers' Welfare
27		Secretary, Animal Husbandry	Animal Husbandry Directorate
28		Director	DIRECTORATE OF FISHERIES,
29		Executive Director	Information Kerala Mission (IKM)
30		Additional Chief Secretary	Department of Local Self Government
31		Principal Secretary	Health & Family Welfare
32		Additional Chief Secretary	Water Resources Department
33		Additional Chief Secretary	Finance Department
34		Secretary	Public Works Department
35		Principal Secretary	Local Self Govt Department (Urban)
36		Director	Department of Panchayats
37		Additional Secretary	Department of Local Self Government
38		Chief Engineer	Department of Local Self Government
39		Chairman	Kerala State Pollution Control Board
40	Dr Mridul Eapen	Kerala State Planning Board	mridul@cds.ac.in,
41	Dr. B Ekbal	Kerala State Planning Board	ekbalb@gmail.com,
42	Prof. K N Harilal	Kerala State Planning Board	harilal@cds.ac.in,
43	Prof T Jayaraman	Kerala State Planning Board	tjayaraman@gmail.com,
44	Prof. R Ramakumar	Kerala State Planning Board	ramakumarr@gmail.com,
45	Member Secretary, KSPB	Kerala State Planning Board	ms_spb.ker@nic.in,
46			Principal Secretary Revenue <venu@nic.in>,
47			chiefagri.spb@kerala.gov.in,
48			nagesh.spb@kerala.gov.in,
49			ssdnklaspb@gmail.com

Appendix 2: List of LSGIs invited for the workshop

District	Panchayath/Municipality/Block	Email id
Alappuzha	Alappuzha	secretaryalappuzha@gmail.com,
Alappuzha	Chengannur	seccgnrmlty@gmail.com,

District	Panchayath/Municipality/Block	Email id
Alappuzha	Harippad	sec.hpd@gmail.com,
Alappuzha	Ambalapuzha North	ambalapuzhanorthgp@gmail.com,
Alappuzha	Ambalapuzha South	ambalapuzhasouth@gmail.com
Alappuzha	Punnapra North	punnapranorthgp@gmail.com
Alappuzha	Punnapra South	punnaprasouthgp@gmail.com
Alappuzha	Purakkad	purakkadgp@gmail.com
Alappuzha	Aryadu	aryaadgp@gmail.com
Alappuzha	Mannancherry	mannancherrygp@gmail.com
Alappuzha	Mararikulam South	mararikulamsouthgp@gmail.com
Alappuzha	Champakulam	nrega.ckm@gmail.com,
Alappuzha	Edathua	edathuagramapanchayat@gmail.com
Alappuzha	Kainakary	kainakarygp@gmail.com
Alappuzha	Nedumudi	nedumudygp@gmail.com,
Alappuzha	Thakazhy	nregatky@gmail.com
Alappuzha	Thalavady	thalavadygp@gmail.com,
Alappuzha	Ala	alagramapanchayat@gmail.com
Alappuzha	Bhudhanoor	secretarybudhanoor@gmail.com
Alappuzha	Cheriyanaad	cheriyanaadgp@gmail.com,
Alappuzha	Mulakuzha	mulakkuzhagp@gmail.com
Alappuzha	Pandanadu	pandanaadgp@gmail.com
Alappuzha	Puliyoor	puliyoorgp@gmail.com
Alappuzha	Thiruvanvandoor	hiruvanvandoorgp@gmail.com,
Alappuzha	Venmoney	venmonygp@gmail.com,
Alappuzha	Cheruthana	cheruthanagp@gmail.com
Alappuzha	Karuvatta	karuvattagp@gmail.com
Alappuzha	Kumarapuram	kumarapuramgp@gmail.com
Alappuzha	Thrikkunnappuzha	thrikunnappuzhagp@gmail.com
Alappuzha	Veeyapuram	veeyapuramgp@gmail.com
Alappuzha	Chennithala-Thripperunthura	chennithalathripperunthuragp@gmail.com
Alappuzha	Mannar	mannargp@gmail.com
Alappuzha	Ramankary	secretaryramankary@gmail.com
Idukki	Elappara	elapparagp@gmail.com
Idukki	Kokkayar	secretarykokkayargp@gmail.com
Idukki	Kumily	kumilygp@gmail.com
Idukki	Peerumade	gpsec.peermade@hotmail.com
Idukki	Peruvanthanam	peruvanthanamgp@gmail.com
Idukki	Vandiperiyar	vandiperiyargp@gmail.com
Kottayam		
Kottayam	Erumely	erumelygpktm@gmail.com
Kottayam	Koruthodu	koruthodugpktm@gmail.com,
Kottayam	Manimala	manimalagpktm@gmail.com,
Kottayam	Mundakayam	mundakkayamgpktm@gmail.com,
Pathanamthitta		
Pathanamthitta		
Pathanamthitta	Chenneerkara	chenneerkkaragramapanchayat@gmail.com
Pathanamthitta	Cherukole	,cherukolegp@gmail.com,
Pathanamthitta	Elanthoor	elanthoorgp@gmail.com,
Pathanamthitta	Kozhencherry	kgp030405@gmail.com,

District	Panchayath/Municipality/Block	Email id
Pathanamthitta	Mallappuzhassery	mallappuzhassery.gramapanchayat@gmail.com,
Pathanamthitta	Naranganam	naranganam.gp@gmail.com,
Pathanamthitta	Omalloor	omalloorgp@gmail.com,
Pathanamthitta	Ayroor	agpsec301@gmail.com,
Pathanamthitta	Eraviperoor	eraviperoorgp@gmail.com,
Pathanamthitta	Ezhumattoor	ezhumattoorpanchayat@gmail.com,
Pathanamthitta	Koipuram	koipuramgramapanchayat@gmail.com,
Pathanamthitta	Puramattom	puramattomgp@gmail.com,
Pathanamthitta	Thottapuzhassery	tpsry1@gmail.com,
Pathanamthitta	Aurvappulam	aruvappulampanchayat@gmail.com,
Pathanamthitta	Konni	konnigp@gmail.com,
Pathanamthitta	Malayalapuzha	gpmalayalappuzha@gmail.com,
Pathanamthitta	Mylapra	mylapragp@gmail.com,
Pathanamthitta	Thannithodu	thannithodugp2015@gmail.com,
Pathanamthitta	Kottanad	kottanadgp@gmail.com
Pathanamthitta	Kottangal	kottangalgp@gmail.com,
Pathanamthitta	Aranmula	aranmulagp@gmail.com
Pathanamthitta	Kulanada	,secretarykulanadagp@gmail.com
Pathanamthitta	Mezhuveli	,mezhuvelygp@gmail.com,
Pathanamthitta	Kadapra	kadapragp@gmail.com
Pathanamthitta	Kuttoor	kuttoorgp@gmail.com
Pathanamthitta	Nedumpuram	nedumpuram.secretary@gmail.com,
Pathanamthitta	Niranam	niranamgp@gmail.com,
Pathanamthitta	Chittar	chittargp@gmail.com,
Pathanamthitta	Naranammoozhy	secretarynaranammoozhygp@gmail.com,
Pathanamthitta	Ranni	rannigp@gmail.com,
Pathanamthitta	Ranni-Angadi	ranniangadigp@gmail.com
Pathanamthitta	Ranni-Pazhavangadi	rannipazhavangadigp@gmail.com
Pathanamthitta	Ranni-Perunadu	rperunadugramapanchayath@gmail.com
Pathanamthitta	Seethathodu	lsgdseethathode@gmail.com,
Pathanamthitta	Vadaserikara	vadasserikkaragp@gmail.com
Pathanamthitta	Vechoochira	vechoochiragp@gmail.com,

Appendix 3: List of NGO/CSOs invited for the workshop

S. No.	Name of the NGO	Location	Head/ Nodal Person - NGO
1	Kerala Grama Nirmmana Samithy KGNS	Kozhikode	Mr. Manikandan
2	OISCA	Kozhikode	Mr. Narendradev
3	Welfare Services Ernakulam	Ernakulam	Mr. Ajaykumar
4	Rajiv Youth Foundation	Manjeri	Rasheed
5	Centre For Employment And Educational Guidance	Malappuram	Mr.Ashraf

6	Peoples Services Society	Palakkad	Fr.Jestin
7	Kerala Rural Development Agency	Karunagappally, Kollam	Chairman- Ibrahimkutty
8	Changanachery Social Service Society	Changanacherry	Fr. Joseph Kalarickal - Secretary/ Executive Director
9	Jyothi Jeevapoorna Trust Archana Women's Centre	Kottayam	Shiny Joshi - Senoir Programme Officer
10	Peermade Development Society	Idukki	Dr Siby Joseph - Director
11	Centre for Socio - Economic and Environmental Studies	Pathanamthitta	Krisnakumar K K
12	Kerala Voluntary Health Service	Kottayam	Saju Itty
13	Soci-Economic Unit Foundation	Alppuazha	Saji Sebastian
14	Soma	Trivandrum	Satheesh
15	Solidarity Movement of India (SMI)	Idukki	T.K Thulaseedaran Pillai
16	CARD	Thiruvalla- Pathanamthitta	Rev. Abraham P.Varkey
17	The Palai Social Welfare Society	Kottayam	Dantees Koonanickal P.V George
18	Kottayam Social Welfare Society	Kottayam	Fr.Mathew
19	Gandhiji Study Centre	Idukki	Jose Vattakandam
20	AVARD	Kottayam	Fr. Manoj
21	High Range Development Society	Idukki	Fr.Mathew Thadathil
22	Rajagiri Out Reach	Ernakulam	Meena Kuruviila
23	Bodhana-Tiruvalla Social Service Society	Pathanamthitta	Fr.Samuel
24	STARS	Kozhikkode	Mr.Robin
25	AGES	Trivandrum	Mr.Mohan
26	MIRROR	Wayanad	Mr.Thomas Pulpally

Appendix 4: Others (activists, environmentalist, and researchers) invited for the workshop

S. No.	Name	Email id
1	Jayan Champakulam	jayanchampakulam@gmail.com
2	Omal Shaji	omalshaji@gmail.com,
3	Sajida	sajidassbi@gmail.com
4	TKA Nair	akuttynair@gmail.com
5	Shabeer	shabeermhd@gmail.com
6		2cifoffice@gmail.com
7		iyerbhag@gmail.com

Appendix 5: Officials invited from of multilateral development/funding agencies

S. No.	Name	E mail id
1	jan.alber	jan.alber@kfw.de,
2	Elif Ayhan	Elif Ayhan <eayhan@worldbank.org>,
3	Balakrishna Menon Parameswaran	Balakrishna Menon Parameswaran <bmenonparameswar@worldbank.org>,

4	Deepak Singh	Deepak Singh <dsingh2@worldbank.org>
5	Balakrishnan Madhavan Kutty	Balakrishnan Madhavan Kutty <bmadhavankutty@worldbank.o
6	DUMAS Agathe	dumasa@afd.fr
7	VIDAL DE LA BLACHE Clemence	vidaldelablachec@afd.fr
8	RAGOT Fanny	ragotf@afd.fr
9	BOSLE Bruno	bosleb@afd.fr
10	Amy Chua	amy.chua@aiib.org,
11	Cheewee Tan	cheewee.tan@aiib.org

Appendix 6. Participation Screenshots of First ESSA Stakeholder Consultation Workshop, February 2021

The screenshot shows a Zoom meeting interface. At the top, there is a recording indicator and a status bar indicating 'You are viewing Deepak Singh's screen'. The main content is a slide titled 'Timeline' with a background image of a flooded area with palm trees. The slide is divided into three columns representing different time periods:

- August 2018:** Floods and landslides. Accompanied by an icon of a building with water waves below it.
- September 2018:** Kerala Joint Rapid Damage and Needs Assessment (JRDNA). Accompanied by an icon of three people.
- June 2019:** First Resilient Kerala Development Policy Operation (DPO 1, US\$250 million). Accompanied by an icon of a classical building.

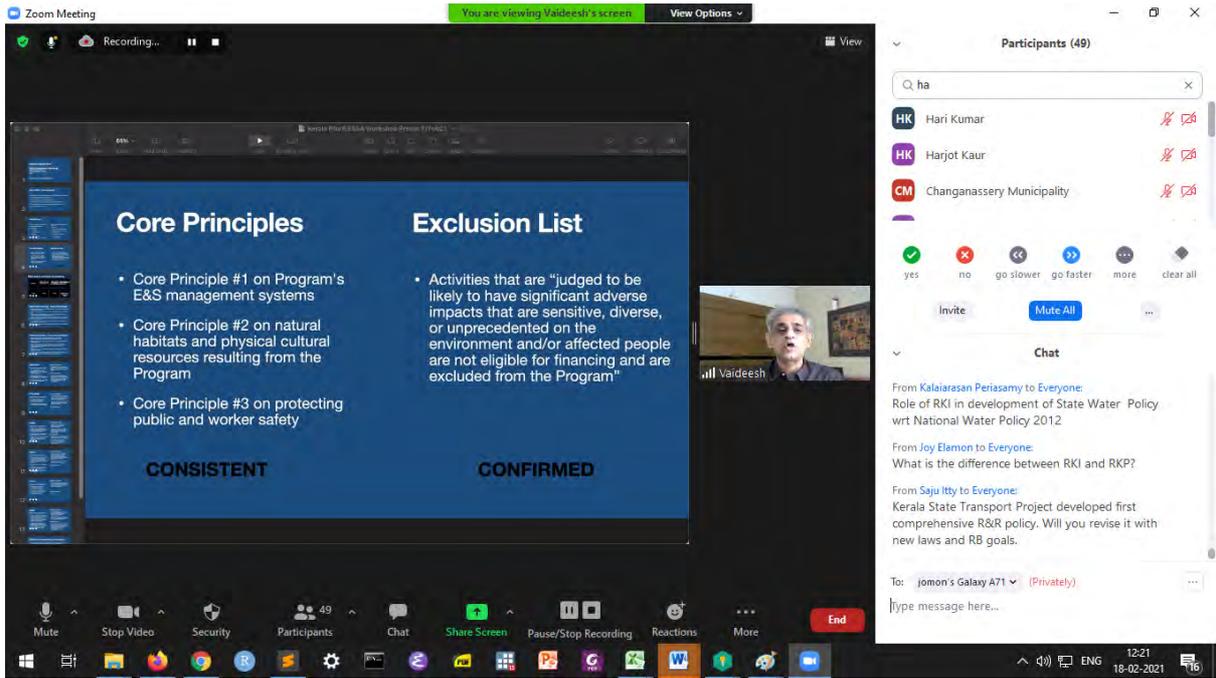
Below the timeline, there are two columns of text:

- Policy Operation converted to PforR
- financed the AIIB and complemented by the KfW through TA support

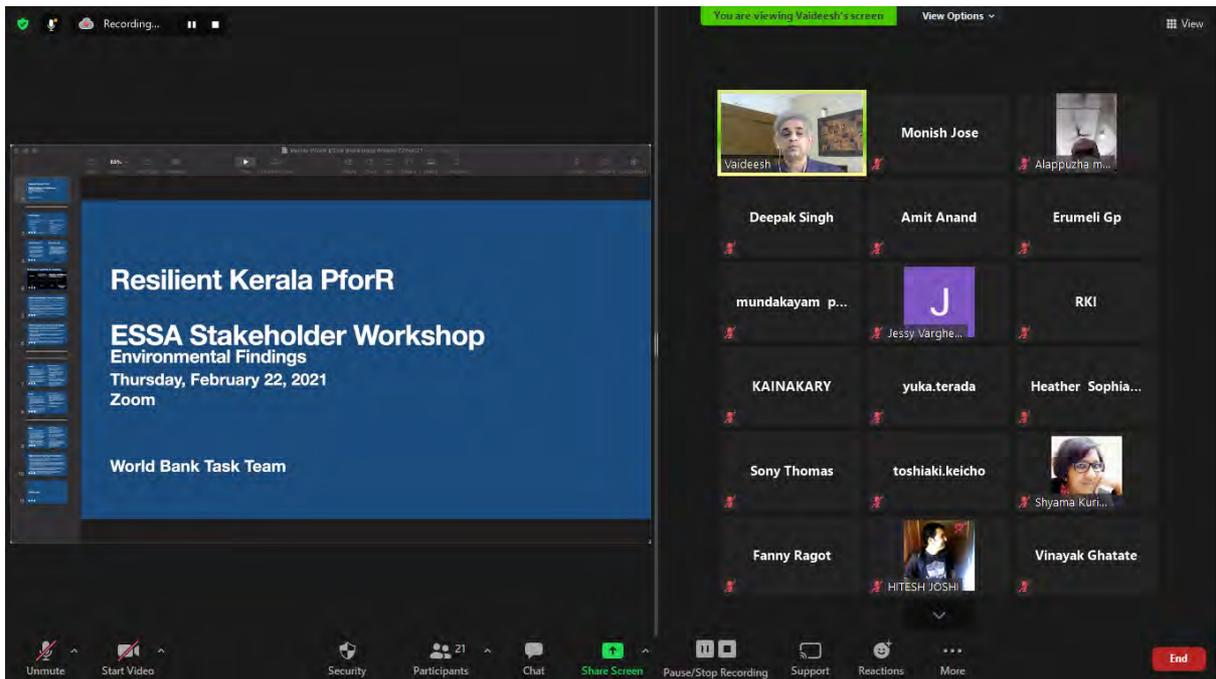
On the right side of the slide, there is a grid of video thumbnails for participants:

- rajesh
- Galaxy J6
- Monish Jose
- Deepak Singh
- reddy madhav
- rajesh k
- Galaxy 27 (2018)
- Meena Kuruvilla

At the bottom of the screen, the Zoom control bar is visible, showing options like Mute, Stop Video, Security, Participants (53), Chat, Share Screen, Pause/Stop Recording, Support, Reactions, More, and an End button.



Appendix 7. Participation Screenshots of the Second Stakeholder Workshop, February 22, 2021



Zoom Meeting

Recording...

Zoom Meetings is using the webcam

KoruthoduGP	Monish Jose	Galaxy M30s	RKI	KAINAKARY
yuka.terada	Amit Anand	The best gift is... Nancy Jacob	Heather Sophia...	Pradeep
Vaideesh	Deepak Singh	Sony Thomas	toshiaki.keicho	Swati
Nandita Roy	Shyama Kuriak...	DPM Sir	Arun PS	Fanny Ragot
Ambalapuzha bl...	punnapra south	AJAY VERMA	Harjot Kaur	

Participants (24)

Find a participant

- Nancy Jacob [Unmute] [More]
- NR Nandita Roy
- P Pradeep
- PS punnapra south
- R RKI
- Shyama Kuriakose
- ST Sony Thomas
- S Swati
- T toshiaki.keicho
- V Vaideesh
- Y yuka.terada
- AB Ambalapuzha block

yes no go slower go faster more clear all

Invite [Mute All]

10:44 22-02-2021

Annex 6: Highlights of feedback from the ESSA stakeholder workshops & via email, and how these are addressed

No.	Description of feedback	How addressed through Program Design / ESSA
A	Stakeholder Workshops¹⁴	
A1	Sabarimala is one of the largest annual pilgrimage sites in the world where an estimated 50 million devotees are visiting every year. How is that addressed?	These issues will be addressed in detail in the integrated river basin management approach in the water resources sector, in the risk informed master plans and in the annual budget planning process adopted by the LGs through the use of the Disaster and Climate Action Tracking (DCAT) tool.
A2	The TOT for the resource persons should also be planned as a part of the capacity building.	This will be planned as a part of implementing capacity building across the different sectors.
A3	It should be Agroecological units instead of Agroecological Management Units.	This will be corrected.
A4	How in this particular geographical area is the program going to foster the existing natural resources and address the core issues?	This is likely to be done in two levels: (1) The first level is when we are looking at the Pamba River Basin and the comprehensive River Basin management approach; and (2) the risk informed master plans as well as the tracking tools that are going to be a part of the DRM will identify issues relevant to natural resources.
A5	What are the measures suggesting for the integration of different institutions and prevention and production of anticipated environmental hazards?	This has been included wherever directly relevant. For instance, in implementing the climate-resilient roads, the involvement of the Forest Department, Soil Survey and PWD will be required. This has been planned for.
A6	The conservation of Pamba Riverine Ecosystem and abatement of pollution especially solid waste management and legacy waste management system may be given much attention.	It is intended to be one of the focus areas in implementing the integrated river basin approach in the Pamba river.
A7	What about the Pamba Action Plan?	The work done by CESS, Pollution Control Board and KSDMA have been considered while preparing the Program design. These will also be considered during implementation.

¹⁴ For a more detailed description of the feedback obtained and the response given during the workshop, please refer Annex 5. In this table, only a brief has been provided.

No.	Description of feedback	How addressed through Program Design / ESSA
A8	For the effective implementation, the institutional arrangement is vital. Coordination among agencies is the key. There is a need to involve civil society organisations along with the LSGIs. This has to be a massive effort.	This is what is intended to be achieved through the integrated approach and the capacity building will involve the LSGIs and relevant civil society organisations.
A9	Bio-medical waste and waste management is integral aspect in Kerala as it aims to be clean and green.	This is beyond the scope of this Program. However, the proposed World Bank project on Solid Waste Management Project will contribute towards addressing these issues.
A10	There are several laws on environment and forests, which are outdated and not in tune with the current theme of climate change resilience. So are there any plans to amend these outdated frameworks?	These are beyond the scope of the Program.
B	Via Email from one stakeholder¹⁵	
B1	<p>Overall Comments</p> <p>This is an excellent opportunity for Kerala State to 'build back better' in an integrated manner towards sustainability. The focal areas of health, agriculture and disaster management lend themselves to a systemic approach where efforts towards rejuvenating biodiversity could provide socio-ecological benefits. However the proposed programme and the ESSA continues to see these as discrete units thereby neglecting this opportunity to build resilience. The term resilience is used extensively across the programme description and the ESSA. This is a term derived from ecology which demands a systemic approach. Systemic resilience, particularly in the face of planetary challenges such as climate change is possible only when we define and implement programmes through projects that cut across Government's administrative boundaries in their design while in implementation</p>	<p>Noted. Changing the current practice of Government's working as discrete units is recognized as a problem that this multi-sector Program design aims to address in general and with its integrated river basin planning approach in specific. This Program is really the first step in ushering that change. It is envisaged that achieving an ecology-based systemic approach will eventually be met as more integrated development initiatives are effectively implemented both by the different Government departments and civil society in coordination.</p>

¹⁵ Feedback was received from Mrs. Radha Gopalan, a resident of Trivandrum and engaged with nature education curricula for schools and young people.

No.	Description of feedback	How addressed through Program Design / ESSA
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individual departments may have specific roles and responsibilities. Cross-cutting understanding of such a transdisciplinary approach is completely missing both from the design of the programme and the ESSA. For instance in the Health programme, building resilience against pandemics is not possible unless we build and restore the natural 'firewalls' that forests and biodiversity provides, to prevent spillover. An integral part of building and strengthening resilience is ensuring that these 'firewalls' between wildlife and human habitations are not destroyed. In addition building more such firewalls will in turn provide many other ecosystem services towards socio-ecological resilience, chief among them mitigating climate change through carbon sequestration. There is no evidence of an overarching sustainability framework at a programmatic level that cuts across all sectors allowing for monitoring & mitigating secondary and tertiary impacts due to individual projects. More specific comments to illustrate the above points are provided below.

B2 Agriculture

The agroecological programmes have been described as offering “a paradigm shift to more sustainable and resilient food systems while restoring ecosystem services and biodiversity in the context of climate change.” (p.14). However, the programme description and risk assessment focus seems to be only on selection of suitable crops, market linkages and FPOs. In the consultations reservations about FPOs have been expressed “FPOs are incapable of addressing environmental issues. They need to build their capacity (p.67)”. This is an important point as there is strong evidence of the negative socio-ecological impacts of focus only on

Noted these good suggestions and these will be considered for including in the environmental part of the technical assistance to be implemented under this Program in the agriculture sector.

No.	Description of feedback	How addressed through Program Design / ESSA
-----	-------------------------	---

market linkages and agribusiness connections. There is no mention of promoting agroecological practices such as Agroforestry and use of community embedded experiential knowledge of integrated farming practices to build climate resilience. In the context of building resilience in agriculture, the ESSA should consider the points around market linkages being raised with respect to the Farm Acts. Given the well-established relationship of resilience in agriculture and food systems with biodiversity and more recently the implications for zoonoses, it is critical for the Resilient Kerala programme to incorporate all these aspects into programme design be it in capacity building of programme implementers, administrators or communities. The ability to see interlinkages and long-term manifestation of seemingly local actions must be built into technical assistance and capacity building components.

B3 Urban

In the context of urban spaces it is important to point out that not just paddy land but other open lands and wetlands within urban spaces also need to be focussed upon in the various projects. Today the absence of conservation and maintenance of wetlands, open lands and green spaces in urban areas is leading to extensive flooding and loss of carbon sequestration capacity. Stakeholder consultations have also highlighted this issue – p. 39. An integral part of building resilience in urban spaces is the need to rejuvenate and create appropriate local ecosystems. Given the strong infrastructure focus of the proposed investments it is imperative that a mitigation plan for projects emphasize the elements of conserving and rebuilding / rejuvenating local socio-

The Program design introduces the use of the Disaster and Climate Action Tracking (DCAT) tool by the LSGIs. The importance of conservation and maintenance of wetlands, open lands and green spaces are activities that the LSGIs will be encouraged to identify. Once identified, these will be included in their respective budgets. It is intended to build the LSGIs capacity by making operational the use of the DCAT tool. Also, the LSGIs will be encouraged to make their budgetary allocations based on outcome-based interventions and not on investment requirements.

Further, LSGIs will be facilitated to developed risk informed master plans. The conversion of the existing or past land uses are resulting in increasing the risks. The new master planning process

No.	Description of feedback	How addressed through Program Design / ESSA
	ecological systems e.g., lakes, ponds, marshlands etc.	should address these environmental risks as well.
B4	<p>Health</p> <p>As indicated earlier, the ESSA should have highlighted the need for a systemic approach to health rather than one focussing purely on surveillance and associated infrastructure. This approach should build relationships between the project elements under Agriculture, Urban and Water Resources with elements under Health. Given Kerala's history of zoonoses and the socio-ecological context of the areas to be covered under the programme, this is a crucial aspect.</p>	<p>At the first instance, the integrated approach has been planned at a state level. Within the health sector, the Program design was decided based on the immediate needs of the Department of Health, and hence the focus on expanding surveillance. As implementation progresses, this suggestion of drawing connections between health and other sectors will be considered as feasible. The link between waste management and sanitation (urban sector) and occurrence of disease (health sector) was identified as one of the areas to be pursued under the IDSP.</p>
B5	<p>Conclusions</p> <p>It is surprising to see the absence of a systemic and integrated approach in the design of the Resilient Kerala programme. One of the key responsibilities of a programmatic ESSA is to determine and bring forth the need for interlinkages and interconnections particularly in a programme whose focus is on building resilience. In the 21st century and for the future, planetary challenges are forcing us to take an ecosystem approach. Therefore the approach to ESSA and more so the World Bank's ESSA guidelines must be informed and shaped by systems thinking and a framework of sustainability rather than the fragmented and discrete project-based approach that characterised development in the 20th century.</p>	<p>Through having a multi-sector Program, the aim is to usher a cross-sector, transdisciplinary working approach within the Government of Kerala. It is intended to be a first step. In fact, the river basin management approach to be adopted in the Pamba river aims to facilitate such a working approach.</p> <p>The suggestions / remarks on the World Bank's ESSA guidelines itself are noted.</p>

Annex 7: List of consultation meetings held

List of virtual meetings held with GoK officials by the Bank's ESSA team on environmental issues

Agriculture

Mrs. Chandini, Agriculture Department, Kerala State Planning Board, Government of Kerala

Mr. Nissan SA, Former Deputy Director, IT Division, Government of Kerala

Health

Dr. Rathan Kelkar, Director, Health Mission, Government of Kerala.

Dr. Bindhu Mohan, Additional Director, Health Services (Responsible for biomedical waste management), Government of Kerala

Dr. Meenakshy, Health Services, Integrated Disease Surveillance Programme (IDSP), Government of Kerala.

Roads

Mr. Shaji, Environmental Engineer, Kerala State Transport Project (KSTP), Government of Kerala.

Mr. Vijay Rohidekar, Team Leader PMC-KSTP-II, Eptisa, Project Management Consultants, Kerala State Transport Project (KSTP), Government of Kerala.

Mr. Madhav Reddy, Louis Berger Group, Project Management Consultants, Package 3 and 4 of the Core Road Network

Mr. Debashis Pal, Environmental Consultant, Egis, New Delhi [Consultant for Package 4]

Urban

Mr. P.N. Rajesh, Town & Country Planning Department, Government of Kerala.

WRM

Mr. Priyesh R, IDRB / WRD, Government of Kerala

List of state-level consultation meetings conducted by KILA

Dr. Sekhar L. Kuriakose, Member Secretary, Kerala State Emergency Operations Centre, KSDMA

Smt. Smitha S Nair, Joint Director of Fisheries, Directorate of Fisheries

Sri. P. Venugopal, IAS, Principal Secretary, Department of Food and Civil Supplies

Sri. Gigi George, Chief Town Planner, Local Self Government Department

Dr. Renu Raj IAS, Director, Directorate of Urban Affairs

Dr. K M Dileep, Director, Directorate of Animal Husbandry

Dr. C.K. Jagadeesan, Dy.DHS (Planning), Directorate of Health Services

Mr. Nadir, Executive Engineer, Irrigation Department

Dr. Rajatha, Deputy Director, Department of Agriculture Development and Farmers' Welfare

Dr. Jiju P Alex, Director of Extension, Kerala Agricultural University

Mr. Ajith Ramachandran, Chief Engineer (Roads), Public Works Department

List of LSGI consultations conducted by KILA in the districts

Alappuzha

Mannar Panchayat
Pandanaad Panchayat
Kainakari Panchayat
Alappuzha Municipality

Idukki

Peermade Panchayat
Peruvanthanam Panchayat
Vandiperiyar Panchayat
Kumily Panchayat

Kottayam

Kooruthodu Panchayat
Mundakayam Panchayat
manimala Panchayat
Changanaserri Municipality

Pathanamthitta

Ranni Panchayat
Perunad Panchayat
Aranmula Panchayat
Thiruvalla Municipality

Breakdown of the number of participants in the districts

District	No.
Alappuzha	45
Idukki	127
Kottayam	62
Pathanamthitta	94

Annex 8: List of references

General

1. Kerala Floods and Landslides 2018: Joint Rapid Damage and Needs Assessment Report, September 2018
2. Rebuild Kerala Development Programme: A Resilient Recovery Policy Framework and Action Plan for shaping Kerala's Resilient, Risk-informed Development and Recovery from 2018 Floods, Rebuild Kerala Initiative, Government of Kerala, World Bank Group and ADB.
3. Rapid Policy Strategic Environmental Assessment of the Rebuild Kerala Development Program (Draft, March 2019) Report, World Bank Task Team, Development Policy Operation (DPO 1) May 9, 2019.
4. Draft Report of the Environmental Analysis of the Proposed Second Development Policy Operation (DPO 2), Draft, April 27, 2020
5. Proposed Resilient Kerala Program-for-Results, Program Concept Note (PCN) and Program Appraisal Document (PAD)
6. Kerala Institute of Local Administration (KILA)'s Report on consultations conducted at the state-level and in the four districts – Alappuzha, Idukki, Kottayam and Pathanamthitta – in the Pamba River Basin, February 2021.
7. All applicable national and state level legislations and regulations (as listed in the report)

Agriculture

8. Strengthening of e-Governance in Agriculture Department (Towards SMART Agriculture), Rebuild Kerala, A Report
9. Operational Guidelines for Farmer Producer Organizations in Kerala, SFAC-Kerala, Government of Kerala,

CC and DRM

10. Local Self Government, Disaster Management Plan, Framework, Templates and Guidelines, KILA, KSDMA, January 2020

Health

11. ISDP Data on Communicable Diseases 2019.
12. KSPCB Guidelines for management of bio-medical waste (contaminated or suspected to be with Covid-19), 20 March 20.

Roads

13. ESIA and ESMP of 251 km of roads in the central districts of the Kerala State Package III
14. ESIA and ESMP of 147 km of roads in the southern districts of Kerala State Package IV
15. ESIA and ESMP of 23.129 km roads of Pathanamthitta District Package IV, September 2020

WRM

16. Sample Bidding Document for Procurement of Works, With Financing from KfW Bank, October 2020.
17. Presentation on Kerala iRoads RMMS Project Status, TRL, 26 September 2020
18. Bidding documents for Output and Performance Based Road Contract for the Maintenance Roads under Package III
19. Central Water Commission, Guidelines for the preparation of the river basin plan, GoI, June 2007
20. Debris removal from Pamba, Order of NGT in OA No. 75/2020, KSDMA, 8 October 2020.
21. Action Plan for rejuvenation of polluted stretch (Mannar-Thakazhy) of River Pamba (Priority IV), July 2019
22. Kerala River Basin Conservation and Management Authority Bill, 2020 (Draft)

RESILIENT KERALA PROGRAM
Program for Results [PforR]

Environmental and Social Systems Assessment [ESSA]

Part C: ESSA Social Systems Assessment

15 March 2021



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Abbreviations

ABPA	Agri Business Promoting Agencies
<u>AEZ</u>	Agro-Ecological Zones
ANM	Auxiliary Nursing Midwives
ASHA	Accredited Social Health Activist
CRN	Core Road Network
CBOs	Community Based Organisations
CSU/SSU/DSU	Central, State and District Surveillance Units (under IDSP)
CC	Climate Change
CCC	Citizen's Call Centre
CSO	Civil Society Organisations
DBT	Direct Benefit Transfer
DPO	Development Policy Operation
DLI	Disbursement Linked Indicators
DRM	Disaster Risk Management
DDMA	District Disaster Management Authority
DT&CP	Department of Town and Country Planning
DCAT	Disaster and Climate Action Tracker-
DRR	Disaster Risk Reduction
DRFI	Disaster Risk Financing and Insurance
DoA	Department of Agriculture
DPC	District Planning Committee
ESSA	Environmental and Social Systems Assessment
E&S	Environmental and Social
ER	Elected Representatives
ESDD	Environment and Social Due Diligence
ESHS	Environment, Social Health and Safety standards
HLEC	High-Level Empowered Committee
FPOs/FPCs	Farmer Producer Organisations/ Farmer Producer Companies
GoK	Government of Kerala
GP	Gram Panchayat
GRC	Grievance Redress Cell
GRM	Grievance Redress Mechanism
IAMIS	Integrated Agriculture Management Information System
IDSP	Integrated Disease Surveillance Program
IPHLs	Integrated Public Health Laboratories
IWRM	integrated water resources management
IEC	Information Education Communication
ICT	Information Communication Technology
IVA	Independent Verification Agency
KSDMA	Kerala Disaster Management Authority
KILA	Kerala Institute of Local Administration
KSTP	Kerala State Transport Project
KBs	Krishi Bhawans
KVKs	Krishi Vigyan Kendras
LSGD	Local Self Government Department
LSGs/LSGIs	Local Self Governments/ Local Self Governance Institutions
NABARD	National Bank for Agriculture and Rural Development
OPBRC	Output and Performance-Based Management

PMKSY	Pradhan Mantri Krishi Sinchayee Yojana
PMFBY	- Pradhan Mantri Fasal Bima Yojana
PforR	Program for Results
PSIA	Poverty and Social Impact Analysis
PRIs	Panchayati Raj Institutions
PoPs	Package of Practices
PwDs	People with Disabilities
PIM	Participatory Irrigation Management
PDNA	Post Disaster Needs Assessment
RAs	Results Areas
RKDP	Rebuild Kerala Development Programme
RKI	Rebuild Kerala Initiative
RKP	Resilient Kerala Program
RKVV	Rashtriya Krishi Vikas Yojana
RBCMA	River Basin Conservation and Management Authority
RMMS	Road Maintenance Management System
RoW	Right of Way
R&R	Resettlement and Rehabilitation
SFAC	Small Farmers Agri- business Consortium
SIA	Social Impact Assessment
SC/ST	Scheduled Caste /Scheduled Tribe
SHGs	Self Help Groups
SCSP	Scheduled Castes Sub-Plan
SPV	Special Purpose Vehicles
TSP	Tribal Sub-Plans
ULBs)	Urban Local Bodies
VDMC	Village Disaster Management Committees
WRD	Water Resources Department
WHS	Water Harvesting Structures
WUA	Water Users' Association
WRIS	Water Resource Information System
WCP	Women Component Plan

Introduction and Program Description

The State of Kerala is highly vulnerable to natural disasters and changing climatic dynamics given its location between the western coast and steep slopes of the Western Ghats. It is prone to a host of natural hazards such as cyclone, monsoon storm surge, coastal erosion, sea level rise, tsunami, flood, drought, landslides/ land subsidence and earthquakes. In the last 3 years the state has seen several such adverse events one after the other, starting with Cyclone Ockhi in 2017, floods and landslides in 2018, 2019 and 2020, the Nipah virus in 2019 and the present COVID-19 pandemic. The 2018 floods led to widespread loss of life, property, and habitats, affecting several millions, and leading to economic losses of nearly US\$3.74 billion (Rs. 26,720 crores). These events and their impacts highlighted the level of under-preparedness of the State to deal with these natural disasters and climate change shocks.

In order to support Government of Kerala (GoK), World Bank initiated a strategic engagement to build multidimensional resilience in Kerala through the First Resilient Kerala Development Policy Operation (DPO 1, US\$250 million- June 2019) by extending support to Rebuild Kerala Development Programme (RKDP)¹ —the state’s strategic roadmap for recovery, rebuilding and resilience.² This DPO identified the need to mainstream resilience-focused policy and reforms in key sectors. It supported key policy and institutional reforms for a) improved irrigation-agriculture nexus, b) engendering river basin management, c) shifting to sustainable and climate-resilient agriculture, d) risk-informed land use planning and updating disaster management plans, e) apart from fiscal reforms to ensure greater investments for preparedness and rehabilitation. Under this DPO a dedicated institution- the Rebuild Kerala Initiative (RKI), was set up to coordinate, manage and monitor the roll out of RKDP and DPO 1 across various government departments and agencies. As part of the DPO GoK has already initiated reforms laid out in the RKDP- such as local disaster risk mapping, performance-based contracting of roads, shifting agricultural and river basin management practices to align with agro-ecological conditions and introducing risk-informed master planning for cities and towns.

This partnership has improved state’s capacity to respond to disasters and improved resilience of the community and treat resilience and disaster risk management as cross-cutting concerns in policy formulation and implementation across key sectors. It has also led the way towards deepening and broad basing this partnership by looking at additional sectors that are crucial for building the resilience of the state and its citizens to shocks of climate change, natural disasters and disease outbreaks.

Larger Government Program

The ‘p’ for the current operation is Government of Kerala’s flagship program, the Rebuild Kerala Development Program (RKDP) that outlines the roadmap for a New Kerala (Nava Keralam) that is more resilient, green, inclusive and vibrant. RKDP offers a paradigm shift in the approach towards post-disaster recovery, rebuilding and resilience and also offers the design blueprint for new development thinking for the State that is embedded in the principles of sustainability, equity, inclusiveness and effectiveness.

To be operationalised by the Rebuild Kerala Initiative, a special purpose vehicle, the core

¹ Rebuild Kerala Development Programme (RKDP):

https://rebuild.kerala.gov.in/reports/RKDP_Master%2021May2019.pdf

² RKDP provides the strategic guidance and a roadmap for Green and Resilient Nava Keralam (New Kerala); it proposes to create a special purpose vehicle to operationalize a multi-sectoral resilient recovery programme and mainstream resilience in development for the state.

principles on which RKDP is based upon are:

1. *Fast, efficient and inclusive growth*
2. *Improving resilience of communities and assets*
3. *Applying the build-back-better philosophy*
4. *Adoption of innovative and modern technologies*
5. *Use of fair and equitable rehabilitation practices*
6. *Emphasis on Capacity building of institutions and agencies*
7. *Building asset management frameworks*
8. *Simplification of processes and procedures*

The Resilient Kerala PforR builds on the foundations of policy and institutional reforms initiated under Resilient Kerala DPO 1. The new PforR aims at two key Results Areas (RAs): (1) Strengthening transversal systems for resilience; and (2) Embedding resilience in key economic sectors. The former aims at working to strengthen the state levels institutions and systems for greater resilience, the latter aims at addressing the underlying drivers of floods and landslides by building states capacities and simultaneously working on integrated water resources and reservoir management; improved land use planning and management; and ecologically sound agriculture practices.

Program Description

The Program Development Objective *'is to enhance the State Government of Kerala's (GOK) resilience against the impacts of climate change, natural disasters and disease outbreaks.'*

The Program will support two Result Areas that contribute to the outcomes of RKDP- first through support for state-wide systems and institutions development, and second for piloting sectoral investments in four districts along the Pamba river basin- Alappuzha, Idukki, Kottayam, and Pathanamthitta.

RA 1: Strengthening transversal systems for resilience. Building on RKDP and the policy and institutional reforms achieved through RKP DPO 1 and 2 prior actions, this RA aims to enhance the sustainability of GOK's fiscal and debt management framework to cope with largescale exogenous shocks, and institutionalize climate and disaster risk informed urban and disaster risk planning at the State level for enhanced preparedness and response.

Objective 1.1: Enhancing the sustainability of the GOK's public finances to cope with exogenous shocks

The Program aims at strengthening public debt management capacity and fiscal sustainability of the GOK to manage its contingent liability to natural disasters and disease outbreaks, and to ensure that these events do not negatively impact the debt profile and budget objectives for the State's sustainable development. This will be complemented by parallel TA and capacity building support to enhance revenues, and to improve expenditure efficiency and performance orientation in select spending departments.

The Program will support the development and implementation of a comprehensive state disaster risk financing & insurance plan and social protection system. This will enable the GOK to identify and develop potential public and private sources (e.g. bonds, (re)insurance) of disaster risk financing to safeguard the state finances, provide transparent and timely assistance to the vulnerable households, and to protect the economy and livelihoods against natural disasters and pandemics. The system provides cost-benefit trade-offs to investments in climate

and disaster risk reduction, risk retention, and risk transfer and ensures that the GOK is financially prepared to enact effective preparation, response and reconstruction actions. Relief payments made to fisherfolk families will be made to the bank accounts of female head of the family, which is expected to empower women further and ensure better usage of funds.

Objective 1.2: Mainstreaming climate and disaster risk informed development and investment planning

This Program intends to establish norms, systems and capacities for risk-informed master planning and implementation across the State, and pilot risk-informed Urban Master Plans and Priority Action Plans in a sample of urban local bodies (ULBs) in the Pamba River Basin. This intends to support better disaster preparedness from planning, service delivery and emergency response perspective.

The LSGD has initiated development of local body DRM plans. These plans are a part of local development plans, which are updated on an annual basis by the LSGs based on extensive public consultations. The LSGD is currently pursuing aligning the investment planning of local governments (LGs) with DRM plans. Specifically, the LSGD provided the LGs with vulnerability and disaster risk profiles for each local body with draft state level hazard and vulnerability grid maps prepared by the KSDMA. One of the key bottlenecks for improving and mainstreaming climate-informed local body DRM plans is the lack of down-scaled climate data and information which can be utilized to better evaluate localized climate and disaster risks as well as associated sectoral impacts .

The Program will support mainstreaming climate and disaster risk considerations into the development and implementation of local DRM plans. These risk-informed local DRM plans and target-based grant incentives (measured and tracked by climate co-benefits through DCAT) will motivate LGs to invest in disaster risk reduction, to enhance disaster preparedness, and to ‘Build Back Better’ in recovery, rehabilitation, and reconstruction phases. Over time, these changes will mainstream climate change and DRM considerations into local planning and development processes.

RA 2: Embedding resilience in key economic sectors: Building on the policy and institutional reforms achieved through RKP DPO 1 and DPO 2 in key economic and climate-sensitive sectors, this RA will test an integrated approach basin-based multidimensional resilience at local level among key climate-sensitive sectors: health, water resources management, agriculture and road.

Objective 2.1: Strengthening the resilience of public health systems for disease outbreaks

The Program intends to strengthen the public health systems of the GOK for disease outbreak preparedness and prevention. This includes strengthening diagnostics systems at the district level through empowered State PHLs with facilities for molecular diagnostics and rare zoonotic intra-parasite detection to support timely identification of diseases with potential for outbreaks; and strengthening Integrated Disease Surveillance Program (IDSP) with enhanced capacity and institutionalizing OH approach to identify and respond to zoonotic disease outbreaks in a timely manner.

Objective 2.2: Strengthening the resilience of water resources systems

Declining ground water levels and high variation of rainfall over the years exacerbated by

climate change have increased vulnerability, with many dried wells getting inundated during the floods. There is need for integrated water resources management to unlock the development potential of water resources. There is a lack of detailed information on water resources conditions to properly manage water resources and plan measures to make more productive use of water in various water-dependent sectors and mitigate water-related risks. The DPO1 supported drafting a River Basin Conservation and Management Authority (RBCMA) Act, which is currently awaiting legislative approval. The Act will empower the RBCMA to conserve and regulate water resources within the State; facilitate its sustainable management, allocation and utilization; and fix rates for use of water for agriculture, industrial, drinking, inland transport, commercial and other purposes.

The Program will enable the operationalization of RBCMA, which will play a critical role in building climate resilience through improved integrated water resources management. This includes tooling and upskilling the RBCMA to operationalize integrated reservoir operations, water monitoring, data collection and management, flood management (including flood forecasting), evaluation of environmental flows, and more efficient water allocation to agriculture, irrigation, domestic purposes, industrial, and other uses to improve productive and sustainable water use. Climate-proofed local level district management plans will ensure climate resilience is mainstreamed into water resources planning and management.

Objective 2.3: Strengthening resilience of agricultural productivity through AEZ-based practices

Agro-ecological approaches offer a paradigm shift to more sustainable and resilient food systems while restoring ecosystem services and biodiversity in the context of climate change. Through DPO 1, the State has been divided into five Agro-Ecological Zones (AEZs) of unique agroecological characteristics and suitability for specific crops and extension needs. A restructuring of the Department of Agriculture (DoA) was facilitated to ensure that planning, resource allocation, and deployment of human resources are aligned with agroecological classification of blocks and districts. During the preparation of DPO 2, reallocation of funds to agro-ecological units (AEUs), sub-administrative units under the AEZs, was also initiated.

The Program will support the further implementation of the AEZ-based practices initiated under DPO 1, strengthening farmer access to finance, seeds, technology, the market and strengthening their bargaining power. The Program will also integrate the management information systems and strengthen agro-ecologically relevant farming systems across the State. Program support will be rolled out in 16 agro-ecological management units (AEMUs) covered by 264 Krishi Bhavans in the four Pamba River Basin districts.

Objective 2.4: Strengthening the resilience of core road networks

Post 2018 floods, PWD commissioned a study to prioritize 1,600 km of select flood and landslide impacted road network for rehabilitation using resilient standards and identified 800 km of road network requiring climate resilient reconstruction. Out of the central and southern cluster about 173 km were located in Pamba River Basin area which was impacted most. Other than the resilient infrastructure program, 7000 km of Core Road Network (CRN) was identified and updated through a scientific assessment by PWD Maintenance Wing and was notified in early 2020. Currently, a web and GIS based Road Maintenance Management System (RMMS) with a climate module is being established which is expected to be operational in 2021. Going forward, RMMS shall guide sector planning and budgeting of CRN. A new contracting model for long term maintenance of CRN to resilient standards has also been developed and sanctioned in 2020.

The initial plan is to roll out these 7-year Output and Performance based Road Contracts (OPBRC) for around 380 km of CRN.

The Program aimed to address the climate change risks, by building resilience to the CRN which included interventions on drainage systems, landslide risk mitigation to maintain enhanced resilient standards and strengthening institutional capacity and systems in finance, climate resilience, and performance-based management of contracts. The development of institutions and systems shall have a statewide coverage, and the districts along Pamba basin shall pilot integrated resilience building of the road assets.

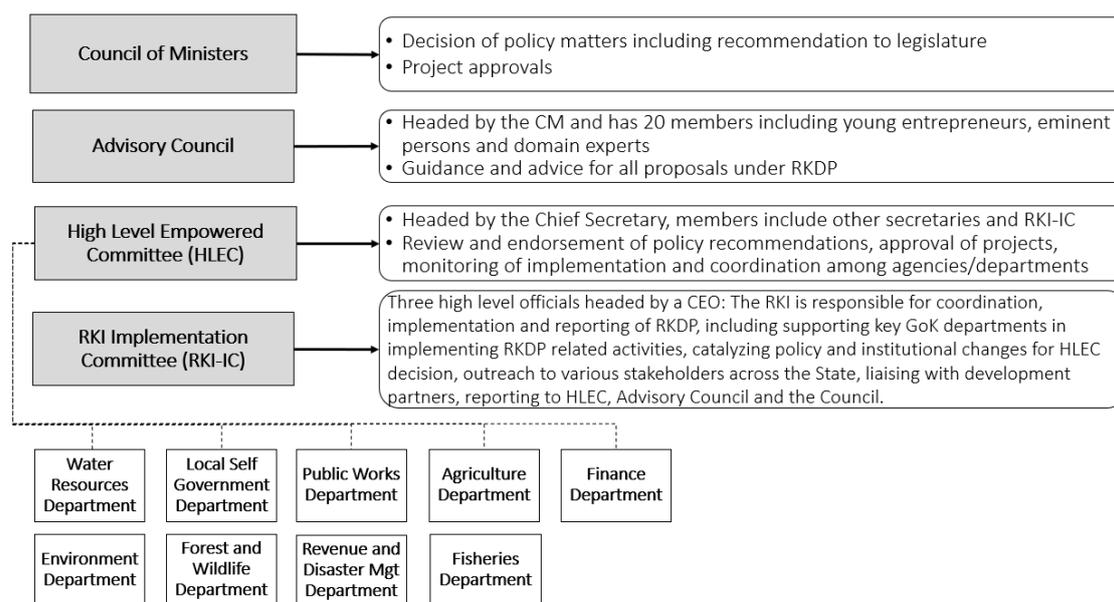
Program Disbursement Linked Indicators and Key Institution

Results Area (RA)	DLI	Program Fund Recipient
RA 1: Strengthening transversal systems for resilience	DLI 1: Fiscal sustainability of GOK to cope with disease outbreaks and natural disasters is strengthened	DoF
	DLI 2: Disaster-related adaptive safety net system of GOK is strengthened	DoF
	DLI 3: Disaster risk financing and insurance capacity of GoK and vulnerable households in the State are improved	DoR
	DLI 4: ULBs developed and sanctioned risk-informed Urban Master Plans and Priority Action Plans	LSGD
	DLI 5: Climate risk information integrated into local body DRM plans	LSGD
	DLI 6: Capacity to track and respond to zoonotic disease outbreaks of human importance are conducted in a timely manner	DoHFW
RA 2: Embedding resilience in key economic sectors	DLI 7: Integrated River Basin Management Plan is developed for Pamba Basin and implementation commenced	WRD
	DLI 8: Farmer Producer Organizations (FPOs) have increased access to new and organized markets	DoA
	DLI 9: CRN is meeting resilient standards in the Pamba Basin through climate informed investment works and long-term performance-based maintenance contracts	PWD

Institutional Arrangement

RKP will rely on the GoK systems for implementation. The key institution to coordinate implementation across departments will be the Resilient Kerala Initiative, the special vehicle that was established following 2018 floods to accelerate the long-pending policy and institutional reforms to address the risks of natural disaster and climate change and improve the State’s resilience to future shocks/ disasters. RKI is mandated to identify the state’s agenda for change by selecting key reforms and investments across sectors that can help the state move towards greater resilience, while partnering with various multilateral institutions, civil society entities and the community. RKI, through a consultative and participatory process, aims to create synergies across sectors, departments, and agencies for a comprehensive and resilient recovery and reconstruction of the state.

RKI Institutional Framework - Roles and Responsibilities



A High-Level Empowered Committee (HLEC) will act as the Steering Committee for the Program and report directly to the Council of Ministers, while an Advisory Council headed by the Chief Minister will have renowned experts and subject matter specialists to provide guidance and advice to the program.

A Project Management team within Rebuild Kerala Initiative (RKI) - Project Management Support Services (PMSS) will be responsible for implementation, coordination, monitoring and evaluation. PMSS will provide technical and management support to the RKI and participating line departments and will include their directorates, executing agencies, training institutions, partner institutions. PMSS will support them in investment planning, technical studies, policy formulation, training and capacity building, monitoring and evaluation, communication, setting up grievance redress, etc. with respect to projects funded under RKDP, including World Bank supported PforR.

Environment and Social Systems Assessment – Scope and Methodology

Scope of the ESSA

The proposed 'Resilient Kerala Program' will focus on improving the Government of Kerala's resilience against the impacts of climate change, natural disasters and disease outbreaks and is to be implemented using the Program for Results (PforR) modality. Therefore, as the PforR requirements, a detailed Environmental and Social Systems Assessment (ESSA) has been undertaken to support the program design. This ESSA aims to identify the key environmental and social (E&S) risks that may impact the achievement of the Program Development Outcomes of the operation and attempts to assess the ability of borrower's current systems and institutions to manage those risks, and recommends additional measures if needed to mitigate them.

As shared in the introductory section of this assessment, this PforR is part of a series of engagements between Government of Kerala and the World Bank that started after the 2018 floods. This ESSA is informed by, and is in continuation with, the previous borrower level studies and vulnerability assessments that have been commissioned by the Bank to assess the system performance of different sectors in the state.³ Therefore, in line with the ESSA guidance on PforR, for aspects of borrower capacities and system performance that have already been assessed and well documented in the past, limited information has been presented as part of the current assessment.

This ESSA analyzes the state systems and the prevailing systems in the sectors where investments are planned under this operation to understand the extent to which the existing institutions, systems and capacities are aligned with the 6 core principles and their Key Planning Elements:

1. Promote environmental and social sustainability in the Program design; avoid, minimize, or mitigate adverse impacts, and promote informed decision-making relating to the Program's environmental and social impacts;
2. Avoid, minimize, or mitigate adverse impacts on natural habitats and physical cultural resources resulting from the Program;
3. Protect public and worker safety against the potential risks associated with: (i) construction and/or operations of facilities or other operational practices under the Program; (ii) exposure to toxic chemicals, hazardous wastes, and other dangerous materials under the Program; and, (iii) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards;
4. Manage land acquisition and loss of access to natural resources in a way that avoids or minimizes displacement, and assist the affected people in improving, or at the minimum restoring, their livelihoods and living standards;

³ World Bank commissioned a series of studies and assessments as part of previous DPO as well as for preparation of this operation: Rapid Poverty and Social Impact Analysis (PSIA), April 2019; Social Assessment of Impact of Land Records Modernization on Vulnerable Populations of Kerala: Social Benefits, Risks and Mitigation Measures, June 2020; Inclusion of Vulnerable Groups In Disaster Relief In Kerala, IWage, September 2020

5. Give due consideration to the cultural appropriateness of, and equitable access to, Program benefits, giving special attention to the rights and interests of the Indigenous Peoples and to the needs or concerns of vulnerable groups;

6. Avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.

This assessment looks at the relevant policy-legal environment pertaining to social and environmental systems, the program implementation agencies, and their capacities to manage identified environmental and social impacts and risks associated with the Program. It also tries to understand the state / sector systems, procedures and strategies to ensure inclusion of various vulnerable groups in their regular planning and implementation roles and ensure equitable access to benefits. It also assesses the borrower's social management capacities – capability of various formal as well as support institutions like executing and training agencies, Civil Society Organisations (CSO) and Community Based Organisations (CBOs) to collectively assure accountability and transparency, community participation and ownership, equity in provisioning services and also their ability to offer a systematic redress to grievances of citizens and users.

Methodology

The ESSA was carried out by a team of environmental and social specialists from the World Bank. It primarily relied on a detailed review of secondary literature including applicable policies, Acts, Rules, Government Orders, Circulars, notifications and guidelines as well as evaluations (on institutional or scheme performance) websites, internal assessments, reports, studies. Apart from a desk review of available information, personal interviews and consultations were also held with the community and institutional stakeholders of the program. The desk review focuses on understanding the existing policy, operational procedures, institutional capacity and implementation effectiveness relevant to the activities under the Program. This also included a review of the borrowers systems for engaging with citizens, especially the most marginalized and excluded as well as their grievance redress. Some of the personal interviews were done telephonically by the E&S specialists themselves.

Owing to COVID 19 related mobility restrictions, majority of personal interviews and group consultations are being done by a team of experts and faculty members from Kerala Institute of Local Administration (KILA), an autonomous capacity building institution of the state that was commissioned by the Bank to facilitate virtual and physical consultations with state level stakeholders and those in 4 Pamba Basin districts (where most implementation/ investment are likely to occur). Guidance on organizing and conducting ESSA consultations (as per policy) as well as checklists for each sector consultation were prepared and shared with faculty from KILA. (See Annexure A) These consultations aimed to examine the roles, responsibilities and capacity of key institutional stakeholders – including nodal and statutory authorities, local bodies and community institutions.

KILA conducted a total of 11 Sectoral Consultations with departmental/ agency representatives and their teams and another 32 Community Consultations at 16 different locations (3 ULBs and 13 Gram Panchayats) covering more than 328 community members cutting across social and economic groups. These also included 8 dedicated consultations with women only and 8 consultations with poor and socially vulnerable groups. Around 156 participants in these consultations were women and members of vulnerable groups. (Annex D- Report of these Stakeholder Consultations and List of Participants).

Pamba Basin Districts	Location of Community Consultations
Alappuzha	Mannar, Pandanad and Kainakari Panchayats Alappuzha Municipality
Idukki	Peermade, Peruvanthanam, Vandiperiyar and Kumily Panchayats
Kottayam	Kooruthodu, Mundakayam and Manimala Panchayats; Changanaserri Municipality
Pathanamthitta	Ranni, Perunad and Aranmula Panchayats; Thiruvalla Municipality

The draft ESSA will be disclosed seeking feedback from interested citizens and stakeholders. A state level disclosure workshop will be organized where the assessment will be shared with the state level stakeholders to seek their comments and feedback before final appraisal. The final ESSA, after incorporating stakeholder comments, will be disclosed on the website of Rebuild Kerala Initiative, GoK as well as World Bank *InfoShop*.

In terms of the structure, this ESSA attempts to do an initial risk screening of the proposed project activities to identify potential social impacts/ risks applicable to the Program interventions. Based on this it undertakes a detailed sector-wise assessment of risk and benefit of the program investments. It then reviews the applicable national and state policy and legal framework and its adequacy for the management of environmental and social impacts of the proposed interventions. Along with this it assesses the institutional capacity for environmental and social risk management within the borrower system, including their ability to specifically address/ handle risks flagged under the core principles of PforR and identify any key gaps in the Program’s performance that need to be bridged/ mitigated. Along with the gaps identified against the Core Principles, inputs received from the stakeholder consultation process are used to assess the robustness of the program systems and the gaps therein. The risks emerging from this institutional assessment and the stakeholder consultations are then used to identify gaps in the sectoral systems and institutions and measures needed to address them. It goes on to recommend overall social actions needed to manage the risks as well as critical actions (Program Action Plans- PAPs). Along with the PAPs the report provides a brief roadmap for addressing these identified social risks and gaps, the timeframe within which these proposed actions need to be completed as well as the parties/ institutions to be responsible for getting those actions in place to avoid adverse impacts and to strengthen Program performance.

Social Risk screening of Proposed Investments

Program level Social Risk screening of Proposed Investments/ Activities

Sector	DLI	Indicator	Proposed Investments/ Activities	Social Risk Rating	Justification for rating (where applicable)
RA 1: Strengthening Transversal Systems for Resilience					
FISCAL	Fiscal sustainability of GOK to cope with disease outbreaks and natural disasters is strengthened		Debt management plan prepared and adopted	No risk or gaps	
			Priority actions in debt management plan implemented	No risks or gaps	
SOCIAL PROTECTION	Disaster-related adaptive safety net system of GOK is strengthened	Women's access to post-disaster adaptive safety net payment is enhanced	Unified Database is developed and populated with beneficiary data using clear data protection protocols.	Low	Poor, fisher-folk , women highly dependent on such safety nets during distress.
			Bank accounts for relief payments are registered under eligible female member of beneficiary households	Moderate	Risk of vulnerable HHs of other social databases getting dropped/ excluded during the process of consolidation.
			Women owned bank accounts are receiving relief payments through DBTs	Moderate	Risk of exclusion of fisher-folk, single women, poor in absence of periodic validation/ updating of databases, increased GBV risks for women account-holders
DRIF	Disaster risk financing and	Disaster risk financing and	Guidelines on payment norms, modalities, administrative rules, and monitoring	Moderate	Farmers will benefit from crop insurance, esp. since the region is

	insurance capacity of GoK and vulnerable households in the State are improved	insurance capacity of GoK and vulnerable households in the State are improved	arrangements for the crop insurance are developed and notified		vulnerable to climatic variations & other events; exclusion of women/ST farmers, tenants and sharecroppers.
			Farmers are enrolled in crop insurance in all Pamba Basin districts	Moderate	Same as above
			Institutional mechanism and implementing arrangements for disaster risk financing is adopted and notified	Low	Requisite social capacities needed to ensure inclusive approach
URBAN	ULBs developed and sanctioned risk-informed Urban Master Plans and Priority Action Plans	ULBs developed and sanctioned risk-informed Urban Master Plans and Priority Action Plans	Guidelines for risk-informed master planning prepared and notified	Moderate	Lack of recognition of peculiar vulnerabilities/ needs of women, children, migrants & poor may exclude them from master plans and its preparation process
			Four selected ULBs in Pamba Basin districts have drafted the Urban Master Plans and Priority Action Plans	Low	Enhancement on institutional/ technical capacities of ULBs to manage preparation of risk informed Master Plans; risk of exclusion of vulnerable from planning process, esp. the large and vulnerable migrant workforce in the state
			Nine ULBs are trained on Risk-Informed Urban Master Planning in Pamba districts	Low	Same as above
			Select ULBs in Pamba Basin have sanctioned Final Urban Master Plans	Low	Same as above
DRM	Local Governments	Climate risk Information	Climate models downscaled and information provided to all LSGs by KSDMA	No social risks	

	have integrated disaster and climate risk in investment planning	integrated into local DRM plans	Select LSGs in Pamba Basin have integrated climate information into local DRM Plans	Moderate	Exclusion of women & fishing communities from DRM planning process as they are most vulnerable to climate change. ULBs better equipped with data and tools to plan for community resilience
			Select LSGs have completed emergency management exercises coordinated by KSDMA, as per their DRM Plans	Low	Same as above; increased tech. capacity of ULBs to implement these DRM plans
		Capacity of GOK is enhanced in disaster and climate risk-informed urban and DRM planning	Select LSG resource persons and functionaries are trained in climate-informed DRM investment planning, DCAT, and risk-informed urban master planning	Low	Improved and informed planning to address needs of women, children, marginalized, capacitate LSGs
RA 2: Embedding Resilience in Key Economic Sectors					
HEALTH	Capacity to track and respond to zoonotic disease outbreaks of human importance are conducted in a timely manner through the enhanced One	Disease surveillance, referral care, case mgmt improved through Integrated Public Health Laboratories	Select districts have prepared comprehensive plans to operationalize integrated PH laboratories	No risk	
			Select districts have IPHL technicians who have received competency-based training in RT-PCR, molecular diagnostic techniques and culture and sensitivity and manage fully operationalized IPHLs	Moderate	Expansion of laboratory network may have land requirements or may lead to displacement of some non-titleholders; improved coverage, outreach in basin districts will benefit local community and better access for women, health and safety of technicians

	Health platform at the local level		Beneficiaries are utilizing specialized tests offered by IPHLs	Low	Same as above
		Capacity to track and respond to zoonotic disease outbreaks of human importance in a timely manner through the One Health platform enhanced at the local level	One Health coordination platform operationalized with trained and certified staff in Pamba Basin districts	Moderate	Switching to untested/ new systems may have reputational risks for the Bank, cause hesitation among communities, unless backed by strong IEC & orientation
			Select LSG and Kudumbashree members trained on Community-Based One Health Surveillance in Pamba Basin districts	Moderate	Risk of exclusion of marginalized from these new cadres of health volunteers; health and safety of volunteers and female health workforce including exposure to pandemics
			Select LSGs piloting Community-Based One Health Surveillance in Pamba Basin districts	Low	Improved collaboration with local governance institutions to lead to better health outcomes, expanded coverage in Pamba basin
			People benefiting from Community-based One Health Surveillance in Pamba Basin districts	Low	Same as above
WRM	Integrated River Basin Management Plan is developed and implemented for Pamba Basin	Integrated River Basin Management Plan developed and implemented for Pamba Basin	Integrated River Basin Management Plan developed for Pamba Basin	Moderate	Risk of exclusion of women, inland fishing communities & vulnerable from the plan preparation process; lack of equity in principles of water allocation/ distribution / tariff-pricing while deciding access to voiceless & marginalized
River Basin Conservation and Management Authority (RBCMA) made fully operational with technical and operational staff			Moderate	Need for staff with capacities around social development/ inclusion to ensure optimized	

					demand and equity-based allocations
			Critical investments identified in the Integrated River Basin Management Plan for Pamba Basin are implemented	Low	Should exclude investments carrying reputational risks or with land requirements
			Flood forecasts for Pamba basin is established in WRD; and protocols for sharing information with KSDMA are developed	Low	Improved information sharing between agencies with often overlapping mandates
			WRM Systems are interfaced with KSDMA, Departments of Agriculture, Irrigation, Public works systems and LSGs	Low	Same as above, including synergies through better inter agency coordination
			Flood forecasting systems, integrated reservoir operation systems, and integrated river basin planning systems are operationalized in Pamba Basin	Low	Improved decision making will lead to better planning & preparedness, create greater resilience among communities
AGRICULTURE	Farmer Producer Organizations (FPOs) have increased access to new and organized markets	Farmers in 16 AEU's have access to technical and financial support for AEU-wise designated crops (Number)	Integrated Agriculture Management Information System (IAMIS) is expanded to include all modules and functions	Moderate	Bigger menu of services to benefit, although risk of exclusion if information not in usable form for women, smallholders, tribals
			AEU-wise PoPs and plans are prepared for 16 AEU's in Pamba Basin	Moderate	Risk of exclusion if PoPs don't consider needs of women and marginal farmers and their economic access to such packages
			Strengthen agriculture support institutions/ programs to facilitate AEU based agriculture promotion	Moderate	Low current institutional capacities and coordination to ensure inclusion/ participation and

					outreach; overstretched extension staff
			Farmers across 16 AEU have accessed technical and financial support as per AEU plans through IAMIS	Moderate	Low off-take of services due to low awareness, risk in shifting to new systems
			Support to FPO promotion and strengthening in project AEU	Moderate	Lack of voice to women, S&M farmers in FPO leadership and management
			FPOs have increased access to new and organized markets	Moderate	Lack of participation of smallholders in selection of new markets/ commodities
			Support to SFAC for strengthening the FPO Ecosystem	Low	Network of institutions to work towards strengthening FPOs
ROAD	Core Road Network (CRN) is rehabilitated and/or maintained meeting resilient standards in Pamba Basin with sustainable asset management practices established	Core Road Network (CRN) is meeting resilient service standards in the Pamba Basin through climate informed investment works and long-term performance-based	RMMS with Climate Module is launched in partnership with KHRI Climate Cell and Forward Works Program (FWP) generated for 50 percent CRN and used in sector investment planning and budgeting	No risk	
			CRN is rehabilitated and/or maintained meeting resilient service standards in Pamba Basin through climate informed investment works and long-term performance-based maintenance contracts	Substantial	Presence of squatters or encroachers on PWD land, although assessments show availability of land for CRN, expansion and RoW; lack of community involvement in identification & prioritization of alignments; exclusion of tribal habitations situated in remote/ hilly areas during alignment selection, keeping them vulnerable to disaster events., labour influx, disruption for host communities

		maintenance contracts			
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This initial risk screening reveals that proposed program activities will have an overall positive social impact, by making programs and their planning more comprehensive and inclusive and by making investments on enhancing capacities of participating sector institutions. There are a few risks related to exclusion of vulnerable from the planning and preparation of interventions proposed under the program unless conscious efforts are made by institutions to identify their vulnerabilities and engage them. However, the state systems, existing institutional capacities, the proposed investments for augmenting capacities under the current operation are likely to ensure that social risks remain low to moderate. The program ('P') also proposes shifts to new approaches and significant changes in the present functioning, especially in agriculture, water resources, road, social protection and health sectors. Since most of these directly impact the most vulnerable, there are reputational risks to the Bank in case the associated social risks are not managed well.

There is also substantial risk of physical and economic displacement in the road sector during the process of road widening/ maintenance, the scale of which is unknown at this stage and also chances of minor displacement during the creation of public health laboratories for disease surveillance and testing.

Legal and Policy Framework for the Program

Name of law/policy	Relevant Sector/s	Relevant provisions/ features of the Act/ Policy	Relevance for Social Management in Current Operation
Governance Related			
74th Constitutional amendments	Urban, Health, WRM, Social Protection	<p>ULBs to prepare plans for economic development and social justice under Article 243 G and 243 W of Constitution. In Kerala, municipalities are devolved 18 out of 19 functions related to municipalities listed in 12th Schedule.</p> <p>The schedule delegates these functions- urban planning including town planning; regulation of land-use & construction; planning for economic & social development; roads & bridges; water supply for different purposes; public health, sanitation; fire services; urban forestry, environment; safeguarding interest of weaker sections; slum improvement and upgradation; urban poverty alleviation; amenities like parks, gardens, playgrounds; promotion of culture, education & aesthetics; burials /burial grounds; cremations/ cremation grounds; cattle pounds; prevention of cruelty to animals; registration of births /deaths; public amenities- street lighting, parking, bus stops, public conveniences; and regulation of slaughter houses & tanneries.</p>	Provides voice to the community and agency through the Ward Sabha (Ward level Assembly) and the municipalities to provide feedback on local needs and priorities for integrating into local plans and programmes/ schemes.
73rd Constitutional amendments	Health, Agriculture, Water Resource, Social Protection	<p>The Panchayati Raj Act was aimed at institutionalizing a 3-tier system of local governance at District, Block and village level for economic development & social justice. The Act lists 28 functions to be delegated to panchayats along with their functionaries and related funds/ resources. Kerala is the state with the highest number (21) of functions devolved to RLBs (out of 28 functions). These functions include internal roads, public health, water resource, agriculture and allied areas, poverty alleviation are within its mandate. The Act reserves seats for women, scheduled castes, tribes. All crucial decisions related to village development are to be ratified by Gram Sabha –village assembly of adult voting members.</p>	Provides voice to the community and agency through the Gram Sabha (Village Assembly) and the Gram Panchayat to integrated local needs and priorities into planning and implementation of govt

			programmes and schemes
Kerala Municipality Act 1994-	Urban	In line with the 74 th amendment, the Act provides for convening of Ward Sabhas, constituting Ward (Standing) Committees in municipalities ⁴ . These local institutions create opportunities for Municipality to involve citizens, inform them, disclose information on budgets, expenses and development works, citizens in turn get opportunity to participate, share their concerns, demand accountability, and provide feedback	Functions related to town planning and related functionalities are under the municipalities
Kerala Municipality (Amendment) Act 2012	Urban, Social Protection, DRM	The Kerala Municipality (Amendment) Act 2012, provides for periodic revision of property tax for their improved tax collection of municipalities	For improved resources and spending on social welfare/ protection/ disaster preparedness
Land related			
Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act (RFCTLARRA), 2013.	Roads, Health	Objective of 2013 Act is to ensure fair compensation, through resettlement and rehabilitation of those affected, puts adequate safeguards for their well-being, transparency in the process of land acquisition, including benefits for indirectly impacted -landless, enterprise owners/ vendors. Provides crucial role to Gram Sabha in approving SIA and acquiring land for public purposes. Social Impact Assessment (SIA) needs to determine area of impact, details of land to be acquired, alternate project sites, present land use classification, nature of holdings/ownership, number of families/ people to be affected. Calls for SIA in affected areas through a consultative process with LSGs. Plan has to be discussed with affected community & consent sought in Gram Sabha. Where LA involves involuntary displacement of SC/ST families, a development plan has to be prepared in consultation with LSG	Makes prior consent of landowners' requirement for LA, secures the interests of vulnerable groups including indigenous communities.

⁴ Ward Committees may consist of two or more wards (population of 3 lakhs) and the Chairman of the Committee will be one of the councillors of the Wards covered under the Ward Committee. In any case, every Municipality has Ward Sabhas headed by the elected Ward Councillor for every ward if the population of the Municipality exceeds one lakh. The Act provides that a Ward Sabha/ Committee shall consist of representatives from resident associations, neighbourhood group, from various political parties, professionals, members of various cultural organizations and educational institutions.

<p>Kerala Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Rules 2015</p>	<p>Roads, Health</p>	<p>Emphasizes social impact assessment (SIA) and resettlement planning even prior to issuance of preliminary notification and makes arrangement for R&R benefits along with compensation package.</p> <p>Provides for LSGs to nominate a representative to work closely with and monitor SIA agency; requires prior consent from PAFs, public notice to disclose SIA, encourage those excluded or with wrong details to submit rightful claims for time bound modification, SIA Management Plan to be developed within 6 months.</p> <p>Offers compensation up to 4 times the market value in rural and 2 times in urban areas, no displacement until full payment of compensation and RR benefits, valuation of structures without depreciation.</p> <p>Directs state to impose limits on area under agricultural cultivation that can be acquired.</p> <p>Provides for transparency, minimal adverse impact so that socio-economic status of PAPs doesn't fall below what it was before acquisition. In case of acquisition for urbanization 20% developed land is reserved for owners at a price equal to rate of compensation</p>	<p>Has adequate focus on landless, women, encroachers & squatters from vulnerable groups in offering resettlement & rehabilitation; undertaking SIA focused on transparency & disclosure.</p> <p>Considers single women, dependent siblings, widows, divorcees as separate family for the purpose of compensation.</p> <p>Homeless are entitled to constructed house, land for land in irrigation projects in lieu of compensation.</p>
<p>State Resettlement and Rehabilitation Policy, 2017.</p>	<p>Roads, Agriculture, WRM</p>	<p>The Government of Kerala recognizes the need to provide additional assistance to what is provided in the 2nd schedule of RFCTLAR&R Act 2013. It states that the R&R policy is applicable all land acquisition in the State and by Direct/Negotiated purchase</p> <p>It expedites /simplifies procedures of LA for public purpose by providing for direct purchase or negotiation to ensure just and reasonable compensation for land acquired, relieving owners from burden of litigation for enhanced compensation, offers space for negotiating additional package, including employment/ stake holding, infrastructural amenities as provided in 3rd schedule</p>	<p>Creates provision of negotiated settlement to ensure PAPs are able to negotiate better rates than what's available under LARR 2013 and also space to negotiate additional assistance/ amenities</p>

Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights (ROFR) Act, 2006, (including Amendment 2012)	Roads, Agriculture, WRM	Recognizes and records customary rights of forest dwellers who have been residing and depending on forest for generations for their bonafide livelihood needs; Provides for diversion of forest for meeting development/ infrastructure needs of community by felling trees and permitting land use change/ diversion, providing usufruct rights to forest produce	Secures indigenous communities residing inside forest from land alienation, recognises customary rights over land, forest resources & their development needs
Scheduled Castes and the Scheduled Tribes (Prevention of Atrocities) Act, 1989	Roads, Agriculture, WRM	Protects Scheduled Castes/ Tribes from wrongful occupation/cultivation of land owned by them or notified to be allotted to, a member of a Scheduled Caste or Tribe member or transfer of land allotted to them; Prevents against wrongful dispossession of a member of Scheduled Caste or Tribe from his land or premises or interference with enjoyment of rights over land or water, any forceful removal/causing alienation and for them to leave house, village or place of residence.	Secures property rights of vulnerable communities (SC/ST) and provides legal protection against state or private action to alienate them from land owned/ accessed by them.
Kerala Land Reforms (KLR) Act, 1962, Restriction on Transfer of Lands and Restoration of Alienated Lands (RTLRAL) Act, 1975, and Prevention of Atrocities Act, 1989	Roads, Agriculture, WRM	Under the KLR Act, 1962, Scheduled Caste (SC) and Scheduled Tribe (ST) families are eligible for 50% of lands identified as surplus by the State. RTLRAL Act, 1982 restricts land transfer by Scheduled Tribe members to non-tribal persons, and restore lands alienated to non-tribals. The Act provides for restricting transfer of lands by members of Scheduled Tribes and for restoration of possessions of lands alienated by such members and for matters connected therewith.	Provided for distribution of surplus land to landless from vulnerable communities and correcting any historical injustice in the form of alienation of their land.
Kerala Land Reforms (Amendment) Act, 1969 and Kerala Land Reforms (Tenancy) Act 1970	Roads, Agriculture, WRM	Puts an end to the feudal system and ensures rights of tenants on their land. Cash crops/ plantations were exempted from its purview, although taken up by subsequent legislations.	Recognises the right of the tiller of the land/ tenant, secures their tenancy and prevent sudden eviction of

		Restoration of land to dispossessed persons or tenant from whom resumed, allows for determination of fair rent in respect of land, if no such fair rent has been already determined through a Land Tribunal/ Land Board	tenants that have been tilling lands for certain number of years.
Kerala Compensation For Tenants Improvements Act, 1958	Roads, Agriculture, WRM	Tenant entitled to compensation for every spend on land and asset improvements and is entitled to compensation for improvements which were made by him, his predecessor-in-interest or by any person not in occupation at the time of the eviction who derived title from either of them at the time of returning the land to its owners. Every tenant to whom such compensation is due shall be entitled to remain in possession until payment of compensation. Such improvements will include building structures, works, trees, standing crops/ plantations also need to be compensated by the evictee or the landowner.	Acknowledges the rights of socially vulnerable, economically weak tenants and investments made by them over the period of their tenancy towards improvement of those lands and the need for them to be compensated at the time of ownership transfer.
Malabar Tenancy Amendment Act, 1954 (Applicable over Kerala)		The Act prohibits eviction of tenants, who have had possession of the land for more than 6 years. Every tenant of a plantation shall have fixity of tenure in respect of his holding and shall not be evicted. If in any one of the six agricultural years following such eviction, the landlord, who has obtained such eviction fails, without reasonable excuse to use a major portion of the lands, for the purpose for which eviction was obtained, or transfers it to any person on any kind of lease or mortgage with possession, the tenant shall be entitled to sue for restoration of the possession of all the lands from which s/he was evicted and to hold them with all the rights and subject to all the liabilities of a tenant.	This, along with other legal instruments on tenancy, provide security to tenants/ tillers against forced eviction from the tenement (especially in case of long duration plantations) and recognises the association of tiller with their land.
Gender and Inclusion Related			

The sexual harassment of women at workplace (Prevention, Prohibition, and Redressal) Act 2013	Cross-cutting, corporate requirement	Protects women workers from sexual harassment and abuse of power at their workplace and provides for constituting Internal Complaints Committee to look into complaints of sexual harassment in every public and private office with 10 or more workers, including women workers. Provides guidance on redressal against such complaints, including its internal investigation in a time bound manner and encourages women's economic participation in the formal economy.	Recognises the need for legal protection of women workers against abuse, exploitation in all government institutions as well as private firms/agencies contracted by the program.
Kerala Policy on Women upgraded to Gender Equality and Women's Empowerment(GEWE)⁵ Policy 2014	Cross-cutting, corporate requirement	To strengthen gender equality and women's empowerment in the State, it recognizes the gender biases in society which have skewed the distribution of development benefits, gender indicators and recognises the need to work with men on behaviour change to improve gender outcomes. The policy establishes an accountability framework to monitor gender-informed development projects in the State. It advocates for preparation of Gender Action Plans (GAP) by each department to ensure that gender outputs and indicators are identified, integrated in organisational outcomes, results tracked, monitored and periodically reported by each state agency.	Creates systems for engendering development impacts and mainstreaming gender in the functioning of public systems across departments.
Kerala State Policy for People with Disabilities- PwDs, 2015	Cross-cutting, corporate requirement	One of the few states of the country that recognises the necessity and inevitability of including disability dimensions in its development agenda, programmes and development plans of the State. Provides for separate budgetary allocation for managing disability.	Relevant to operation to safeguard the vulnerable against exploitation and discrimination and ensure their inclusion in schemes and programmes.
National Legal Services Authority Act, 1987	Cross-cutting, corporate requirement	Free Legal Aid to vulnerable sections of the society for creating legal awareness by spreading legal literacy and organizing legal aid clinics in Panchayats to provide free legal services, training community level para-legal	Provides a system of legal redress on basic rights over and above the grievance systems in

⁵ <https://kerala.gov.in/documents/10180/46696/Gender%20Equality%20and%20Womens%20Employment%20Policy>

		workers to help vulnerable groups in accessing legal aid, knowing their rights and entitlements and negotiating. Better with the power structures.	place at the state, department and LSG levels.
Kerala Vayojana Nayam or the Old aged Policy, 2013	Cross-cutting, corporate requirement	This state policy provides for a State Old Age Council under Chairmanship of Minister of Social Justice and District Old Age Councils under District Collectors. It calls for making scheme/project specific Action Plans for welfare of senior citizens, ensures protection & welfare of citizens above age of 60, especially elderly women by providing better social, economic conditions and healthy life to Senior Citizens. The policy directs all departments to ensure better social conditions, legal aid, protection from abuse, help desk for elderly under Kerala Social Security Mission. It also promises better healthcare, free medicines / consultations, mobile clinics, geriatric wards and palliative care in hospitals as high priority.	Provides social protection and safety against discrimination to this vulnerable constituency in the state.
Street Vendors (Protection of Livelihood and Regulation of Street Vending) Act, 2014	Urban, DRM, Social Protection	Protects rights of urban street vendors & regulates street vending. It provides for survey & certification of street vendors to legalise their right and protect them from sudden eviction or relocation; provides for rights and obligations of street vendors, designation of vending spots as per street vending plans; organize their capacity building to raise awareness. It sets up a Town Vending Committee-TVC to declare no-vending zones for public purposes, relocate vendors from such areas after giving notice, entitle them to new area for carrying out vending as determined by local authority and TVC.	Gives legal protection and safety against economic displacement and un-notified relocation to street vendors
Labour Laws			
Building and Other Construction Workers' Welfare Cess Act, 1996	Corporate requirement, relevant for sectors with investments-roads, health, agri and WRM	regulate employment, working conditions of construction workers and provide for their safety, health and welfare, constitute Welfare Boards in every State to provide and monitor social security schemes and welfare measures targeting them. applicable to all establishments with 10 or more workers, have to register themselves and pay a cess on cost of construction for use by the state for labour welfare. It also warrants employers to provide safety measures at construction sites like canteens, first-aid, and accommodation for non-local	Measures in place for welfare of labourers, relevant for sectors that involve investments and engagement of construction workers.

		workers.	
Child Labour (Prohibition and Regulation) Act, 1986	Corporate requirement	To protect the interest of children below 14 years so they are not employed in certain occupations, regulate their working conditions in certain employments.	Measures to prevent child and bonded or forced labour and provide legal safeguard against their deployment, relevant for investment sectors engaging laborers/workers.
Contract Labour (Regulation & Abolition) Act, 1970, Bonded Labour System (Abolition) Act, 1976	Corporate requirement	To regulate the employment of contract labour in certain establishments and to provide for its abolition in certain circumstances	
Equal Remuneration Act, 1976, Workmen's Compensation Act, 1923 and 2009, Personal Injuries (Compensation Insurance) Act, 1963, The Minimum Wages Act, 1948, Workmen's Compensation Act, 1923, Maternity Benefit Act, 1961	Corporate requirement	Provide equal remuneration to men & women workers, prevent discrimination against women in matters of employment, employers to compensate workman's spouse / dependent sons, daughter in case of injury at workplace and mandatory worker insurance by employers against such liability	It prevents gender based discrimination in employment and provides for labour insurance/social assistance against any eventuality/ accident.
Kerala Plantations Labour Act, 1951	Corporate requirement	An Act to provide for health & welfare of plantation workers, to regulate their working conditions; provide access to education, housing, regulation of working hours, prohibition of child labour and employment of women in night shifts.	Prevents discrimination and ensures improved working conditions for different category of agri workers.

Kerala Labour Welfare Fund Act, 1975/ Kerala Payment of Subsistence Allowance Act, 1972	Corporate requirement	Provide for constitution of a labour welfare fund to finance welfare activities for labourers in the state including implementing specific schemes targeting them including provision of subsistence allowance to the employees in certain establishments during the period of their suspension or suspension of operations	Ensure social assistance and safety net to the workers in the state.
Inter-State Migrant Workmen (Regulation of Employment And Conditions of Service) Act, 1979	Corporate requirement	To regulate the work conditions of migrant workers from other states and is applicable to establishments employing 5 or more migrant workers; provides for certain facilities like housing, medical aid, travelling expenses from home up to the establishment and back.	To prevent unfair wages and exploitation at the hands of middlemen, especially in sectors employing outsiders. Also relevant since state has highest proportion of migrant labourers
Grievance Redress/ Citizens Engagement			
Right to Information Act, 2005	Cross-cutting, corporate requirement	Empowers citizens to demand information on functioning of public systems if it impacts their lives or is of public interest. Offers rights-based framework under which citizens get a legal tool with which to demand accountability and explanation from all/any public authorities; designates a Public Information Officer in all public offices to provide info; creates State /Central Information Commissions (statutory) to look into appeals regarding unsatisfactory information provided to citizens or unclear interest in demanding information.	Ensures transparency and accountability in the govt operations and citizen's access to public information.
Kerala State Right to Service Act, 2012	corporate requirement, Cross-cutting,	To provide effective, time-bound delivery of services to the public, redress of grievances to citizens by making government servants liable in case of default. State has notified more than 90 public services covering Departments of SC, ST development/ finance, agriculture, PWD, Road transport, LSGD, Co-ops, health and family welfare, social justice etc- services like scholarships, incentive grant, loans, distress funds, caste certificates, approval of building plans, valuation of structures, water sewerage connection, water quality testing; registration of societies. Also provides for a 2-tiered appellate system to file appeals in case grievances are unattended.	Government systems are made accountable, aimed at providing agreed quality of service as defined by the act. Aimed at increased accountability and transparency in govt functioning across most

			departments, offering good governance.
Kerala Municipality (Preparation of Citizen Charter) Rules 2000	Cross-cutting, corporate requirement	All municipalities and panchayats are to publish their Citizens Charter every year describing services to be rendered to its residents, conditions of such service and their stipulated timeframe. Some of these include birth/ death/ marriage/ property registration, enrolment in social security schemes, public works.	Promotes transparency in the delivery of core functions of urban and rural local governments
Roads Related			
Kerala Highway Protection Act, 1999	Roads, PWD	Act for protection, regulation of highways development and also to prevent encroachment or its use for purposes adversely affecting traffic safety. Creates regional highway authorities to prepare DPR for new highways, realignment or improvement including survey, land acquisition, diversion or closure of existing highways; remove encroachments or cause them to be removed. Where land is required for a new highway or other purposes, authority may acquire such land, by free surrender/ purchase by negotiation with owners as prescribed by LA Act, 1894	Provides for road and traffic safety of citizens and creates a due process by which to procure land for repair and construction of new highways
Kerala Road Safety Authority Act, 2007		Constitutes a Road Safety Authority for implementing road safety programmes and creates a Road Safety Fund. It advises GoK on road safety policies/ standards and their enforcement procedures; formulates and implement schemes and programmes on road safety; co-ordinates the functions of related agencies/ departments; creates District Councils to exercise powers & functions that Authority may delegate It also administers the fund using it to implement road safety programmes, purchase and installation of safety equipments and devices; conduct safety audits and studies.	Works for enhancing safety of commuters and citizens by conducting periodic assessments and filling safety gaps; creates IEC/ awareness on road safety.
Kerala Road & Bridge Maintenance Policy		Call for quick turn-around in maintenance and road safety measures to reduce accidents and fatalities conduct of road safety and road quality audits, puts in place a call centre to provide grievance redressal and better services to road users.	Provides for time-bound repair to reduce inconvenience; helplines to address grievances

Kerala Road Development Policy 2009-21		Provides for stakeholder participation and transparency to ensure that program has due support and ownership. Aims to create variety of forums to enable participation; LSGs, transport operators, road user groups, departments, interested parties to be consulted during planning and implementation- including for setting tariffs, developing investment criteria, bidding procedures, development plans; Physical -fiscal progress of works & rules, procedures should be made available to public.	Aims at participation and information sharing in key decisions around road projects and while planning alignments.
Agriculture related			
National Agricultural Policy, 2000		Aims at growth of Indian agriculture, strengthen rural infrastructure, incentivise agriculture, create employment, improve living standard of farmers, agricultural workers, discourage urban migration, prepare farmers for opening up of farm sector, ensuring food and nutritional security; input management reform, institutional restructuring	Looks at interest of S&M farmers and landless labourers, inclusive and timely access to farm inputs and machinery
National Policy for farmers, 2007		Looks at improved farm viability to increase incomes; better, affordable access to services & inputs like- seed, irrigation, power, machinery/ implement, fertilizers, weather advisories, agricultural practices and credit. For first time includes tribals /persons engaged in shifting cultivation or collection, sale of minor forest produce in the category of farmers.	Broadens the definition of farmers to extend benefit and aims at access to wide ranging farm related services for farmers.
Kerala Agricultural Development Policy, 2015	Agriculture, WRM	A comprehensive state policy covering all aspects of agri. Sector-development of land, water and soil resource, farm & farmer distress, farmer welfare, need for re-aligning agri institutions and human resource, FPO promotion, access to services, inputs, insurance, credit. Calls for aquifer management, water conservation; capacity development of KVKs/ Krishi Bhawan/ extn staff; offering small farmers a say in policy matters, provision of farmer pension / welfare fund; promoting ICT for better farmer database and info services around markets, prices, forecasts; need-based ICT training to youth, women, marginal farmer groups; FPOs administration by farmers based on internal democracy, equality, equity and solidarity; encourage custom hiring, increased flow of incentives, credit and financing to farmers including small & marginal, improving farm income.	Secures the needs of small and marginal farmers, ensures inclusion and equity in the governance of FPOs and capacity enhancement of related institutions/ individuals to deliver on the promises made by the state policy.

Urban related			
Urban Policy And Action Plan For Kerala, 2002⁶	Urban , Fiscal, Road	<p>Recognises that poor urban development is mainly due to lack of proper vision & master planning and need for integrated planning; proposes Urban Regulatory Authority to encourage private sector participation in municipal services, benchmark service quality, seek affordable services, receive grievances & suggestions on urban services.</p> <p>Accepts that land needs to be used for greater good, like public facilities, hence need for land consolidation through land reconstitution/land banks/ land lease; gives govt power to reserve land for future road widening without denying landowners existing right to enjoy use till land is taken over; offers 'quid pro quo' to land owner as concessions for development and building in lieu of surrendered land.</p> <p>Regular in-service training to municipal, TCP personnel on planning, urban administration, municipal finance.</p>	<p>Offers solutions for meeting land requirement in urban areas, especially since the state has highest population density, offers oversight to ensure municipal services are inclusive and affordable.</p>
Kerala Town And Country Planning Act, 2016		<p>It provides for the promotion of planned development and regulation of growth of urban/ rural areas in the State with focus on sound spatial planning, to secure to their present and future inhabitants, necessary amenity and convenience. It calls DPC to prepare a District Plan in consultation with LSGs in the district and govt. departments and the LSGs to prepare Master Plan for spatial development of the LSG indicating how use of land and development shall be carried out;</p> <p>It mandates Municipal Corporation, Municipal Council, Town Panchayat or Village Panchayat, to prepare a master plan for area based development of the LSG, execution plans detailing implementation mechanism and schedule, projects to be executed, land pooling, use of provisions for town planning and regulate and control land use and developmental activities in the Planning Area. It does not allow use of land or development on any land, land use change against the Master Plans</p>	<p>Calls for Master Plan to be prepared through a participatory process. The Plan should indicate how development of the Area or part thereof shall be carried out and how use of land shall be regulated.</p> <p>It needs to detail how community involvement in the preparation, implementation and monitoring of Master Plan shall be ensured</p>

⁶ <https://townplanning.kerala.gov.in/2018/12/06/urban-policy/>

Water Resource related			
National Water Policy 2012		<p>Policy notes that water availability varies between regions, communities and is a potential cause of social unrest; accepts that agencies rendering water-related services don't involve local stakeholders in decision making resulting in poor, iniquitous and unreliable distribution; calls for transparent and informed decision making based on principles of equity & social justice, involving communities.</p> <p>It calls for devolution of water related functions to LSGs, underscores equitable & sustainable management of water resources, work for prevention of groundwater over-exploitation, source sustenance and quality improvement.</p> <p>Suggests strengthening Water User Associations, awareness generation for efficient, responsive planning considering social dimensions and an end to policy distinction between the water needs in rural and urban areas.</p>	<p>Recognises that communities, WUAs, local institutions are best placed for water resource planning and ensuring its equitable distribution/ allocation using transparent principles.</p>
Kerala Water Policy 2008		<p>Drafted to ensure that right of equitable access to water of every citizen is protected and enforced through appropriate legislative, policy initiatives; aims to create enabling environment for equitable, sustainable and productive management of water resources. It recognises that present LSG capacity for integrated planning and implementation is limited and aims to address unclear water entitlements to create productive efficiency and transparency through participatory conservation and management, proposes basin level authority to manage resources.</p>	<p>Recognises the role of women in conservation of resources and ensures active involvement of women in management and protection and aims to mainstream gender concerns.</p>
Kerala Ground Water (Control and Regulation) Act, 2002	WRM, Agri	<p>Creates a State Ground Water Authority to regulate and control development of ground water in public interest⁷ with representation from LSGs, vulnerable communities, citizens and women and notifies areas for control and regulation of ground water by granting permits for extraction and use.</p>	<p>Creates an authority with inclusive membership to regulate and manage groundwater.</p>

⁷ <https://www.elaw.org/content/india-kerala-ground-water-control-and-regulation-act-2002>

<p>Kerala State Irrigation Act 2003 (as amended in 2006)</p>		<p>It consolidates laws relating to irrigation management, water distribution, levy of betterment and water cess on lands benefited; provides for entrusting construction & maintenance of irrigation systems to local authorities, farmers co-operatives, with govt entitled to levy annual irrigation cess on such lands. Authorises govt to promote Water Users' Association (WUA) to prepare and implement water schedules, regulate use, estimate demand, collect irrigation cess/ betterment levy and resolve disputes; WUA to conduct social audit at the end of each crop season, to assess equity in distribution, increase in production & productivity; water use efficiency, increase in cultivated areas, expenditures. Findings are to be disclosed to all members listing benefits accrued and funds spent.</p>	<p>Promotes community participation in management of irrigation and regulation of distribution by the user groups, provision of social audit to ensure accountability in its functioning.</p>
<p>Kerala River Basin Conservation and Management Authority Bill, 2020.</p>	<p>WRM</p>	<p>Accepts that there is an urgent need to conserve and regulate water resources as there is no regulatory mechanism or law to ensure judicious, equitable and sustainable management, allocation and utilization of water resources. This regulatory authority provides for determining distribution of water resources, implement water tariffs and criteria to levy water charges after consulting users, prepare and monitor integrated river basin master plans for each river system, develop, maintain a comprehensive hydro-meteorological information data base; fix the quota of water allocation/distribution following principles of equitable distribution-every landholder in the command area shall be given quota based on the extent and nature of land in the command area.</p>	<p>Provides for 'Basin Management Committees' with representation of elected representatives, LSGs, deptts, NGO/CBO in respective river basins; authority to fix quota of water allocation at project, sub-basin, basin level on principles of equitable distribution in command area; ensure that principle of "tail to head" irrigation is implemented with lands at tail-end (usually marginalized lands and</p>

			landowners) given water first.
DRM related			
Kerala State Disaster Management Policy 2010		Institutes structures and systems to minimise disaster related human, property and livelihood losses for poor, vulnerable by strengthening capacities and resilience of vulnerable community, especially women; capacitates administrative and community level systems for pre and post disaster interventions through awareness generation and capacity building; Designates Kerala Disaster Management Authority- KSDMA to function as apex decision-making body to facilitate, co-ordinate, monitor all disaster related activities, & District Disaster Management Authority as district planning, coordinating, implementing bodies for disaster management. Emphasis on imparting training to various departments, implementation agencies, NGOs & community on DRM; local authorities to coordinate community-based disaster preparedness activities tailored to local needs	This community based disaster management-policy leverages existing social capital for management of disaster response and makes PRIs the frontline agency for disaster management planning and execution.
Disaster Management Act, 2005		Notified State and District Disaster Management Authorities laying down functions and responsibilities for state and district authorities. State Executive Committee of State Disaster Management Authority constituted These authorities are to evaluate preparedness at government & non-government levels to respond to any disaster; promote community education, awareness and training on disasters which the State is vulnerable to and measures needed to prevent, mitigate and respond to it.	Creates a role for communities to be involved in prevention and preparedness and recognises the need for their capacity building.
Health Sector			
State Health Policy 2019		It emphasises strengthening primary health care of the State, so that it plays a pivotal role in detection of diseases and in strengthening disease surveillance at the grass root level to prevent spread of epidemics. The policy envisages creating a public funded, free, universal health care system, bringing infant, child and maternal mortality to levels in developed countries and to increase healthy life expectancy.	Gives importance to role of local governments in disease surveillance and offering free/ affordable health services focused on the poor and vulnerable.

Summary of Relevant National, State Laws and Policies

Common, Cross Cutting Policies and Legal Instruments

- **Governance related-** Among all states, 3 decades ago Kerala undertook one of the most wide reaching changes in the functioning of its LSGs in line with the spirit of the 73rd (rural bodies) and 74th (urban bodies) amendment of the Indian constitution, bringing most subjects under the local bodies (21 /28 rural, 18/ 19 urban functions) along with their functionaries and funds (with local government getting funds allocated as separate Panchayat sector schemes and clear annual resource envelope to plan within). The state also ensures a planning process which is people-led, bottom-up and premised on consolidated local needs and priorities to prepare higher level (district or state level) plans, as against department driven plans.
- **Land Management related-** India has one of the most progressive LA laws and its provisions are well aligned with ESS5 and allows for a fairly transparent and accountable process in the identification of PAPs/ PAFs and in compensating them for any temporary or permanent loss of land, assets or livelihoods. Similarly, the State's Resettlement Policy's alignment with World Bank's policy on resettlement and rehabilitation shows that the state has a strong alignment with the latter. In the 1950-60s the state undertook a series of land reforms to redistribute land, gave surplus lands to landless and vulnerable, (especially the scheduled castes who were largely landless and backward classes), secured the rights of tenants and sharecroppers.⁸ There is adequate focus on vulnerable populations, landless from vulnerable categories in offering resettlement and rehabilitation efforts, undertaking social impact assessment, focus on transparency and information disclosure.⁹
- **Gender and Inclusion related-** The state has a host of policies for securing the interested of women and those socially vulnerable and has been the first state in the country to have a policy for the old- aged and trans-genders. The national and state policies on gender create legal protection for them against gender based violence and exploitation apart from proactively creating public systems for gender based budgeting, preparing and tracking gender based outcomes of all public agencies. On the same lines state policies call for preparing dedicated action plans targeting the old-aged and also schemes for providing improved access to healthcare, old age pensions and palliative care.
- **Labour Welfare related-** The national and state laws provide legal protection and welfare measures for construction, plantation and migrant workers, against child and forced/bonded labour, gender based discrimination in work conditions or compensations. They ensure fair working conditions and wages for labourers in farm and non- farm labour activities, set up social safety and create welfare funds to insure workers against any eventualities and also to provide for their subsistence during periods of temporary unemployment.
- **Grievance redress and Citizens Engagement related-** These policies provide a rights' based framework within which citizens and aggrieved parties are empowered to

⁸ However, due to land reforms tenancy in the state is either undisclosed or disguised.

⁹ GoK is also in the process of exploring modernization of its land records. This is likely to strengthen the legal security of tenure, help in validating land ownership claims of women and especially of tribal landowners, who have enjoyed customary land rights and have no documentary evidences to support ownership claims. It will also help get gender disaggregated land on property/ land ownership to incentivize female property ownership.

demand transparency and accountability in the functioning of public systems and in the time-bound delivery of public services, benefits and entitlements. It also encourages local governments to come up with Citizen's Charter's to promise basic services and benchmark quality of those services.

Sector specific Policies and Legal Instruments

- **Road Sector-** These policies give priority to works on road and highway repair that secure the safety and wellbeing of the citizens and commuters for which they create systems for periodic road safety audit and time-bound plans to fill safety related gaps and conduct repairs. They also recognize the need to create community awareness on road safety, consulting stakeholders during planning of projects/ alignments and setting road tariffs. They, however, don't talk about involving communities or local governments in prioritizing roads to be taken up for construction in a region.
- **Agriculture Sector-** The national and state policies pay attention to the needs and interests of small, marginal and tribal farmers and also in some cases agricultural labourers and tenants. Agriculture along with land related policies secure the tenancy rights of tillers and land leasers and secure them from sudden eviction without following the due process of law. The policies are positively inclined towards the tenants in compassionately looking at their investments in land and asset improvements, physical and financial investments in multi-year / plantations crops. They emphasize the need for efficient delivery of inputs, advisories and credit to the cultivators and acknowledge the need for capacitating institutions and extension services to deliver on this mandate. State policy also calls for creating an inclusive governance structure for FPOs. While it accepts that women's needs as farmers are often neglected, it lacks the desirable emphasis on incentivizing or promoting women in agriculture by targeting specific schemes/ benefits towards women agriculturalists.
- **Urban Development Sector-** The state urban policy recognizes the need to improve municipal services and provide higher quality benchmarks while also ensuring that they remain affordable for all, including the urban poor. It creates an authority to provide state-wide oversight and grievance redress and accepts the need to strengthen institutions and functionaries in key areas like planning, finance, etc. It provisions for alternate mechanisms to secure land for development and creating public amenities, especially in the context of the state, with its land-related constraints. The policies also give the mandate for development of master plans in a participatory manner involving community and other stakeholders, regulating the spatial and land management of the planning area in the hands of the local bodies, with some regulation from the state level agencies.
- **Water Resource Sector-** The policies recognize that local communities, local governments and user groups are best placed to plan, allocate and use their water resources and the need to provide them with a clearer mandate for water governance. They also acknowledge the need to ensure equity in water distribution and access to irrigation for all. The state policy specifically recognizes women's role in conservation, it promises their active engagement in protection and management of water resources of the state. It also provides for Participatory Irrigation Management with periodic community monitoring of these user groups/ institutions to ensure fairness and equity in their functioning.

- **Disaster Risk Management-** The sector policies accept the need for utilizing the available social capital and providing a bigger role for local communities in disaster risk preparedness as well as management. They also call for capacitating local governments and communities, including civil society, community based organisations and local governments in preparedness and for enhancing their resilience to disaster related shocks and impacts.
- **Health Sector** – The policy gives importance to the need for strengthening primary health care, so that it can play a key role in strengthening disease surveillance at the grass root level to prevent spread of epidemics. The policy envisages creating a public funded, free, universal health care system, bringing key health indicators to the levels found in developed countries. It also recognizes the vital role of local institutions in provision of health services, especially in areas like disease surveillance and offering affordable health services.

Adequacy of National and State Legal framework for Managing Social Risks

Kerala has one of the most progressing legal policy environment among Indian states. Along with national laws and policies, the state laws and policies create adequate legal safeguards for women, socially and economically vulnerable, including the poor, scheduled castes and tribes/ indigenous communities in the implementation of schemes across sectors, in preferential selection of beneficiaries for schemes.

They also provide for the social sustainability of marginalised and vulnerable population including the SC and ST, by providing for citizen engagement/ stakeholder participation across interest groups and a rights-based framework to demand accountability in the functioning of various public offices, including central and state agencies.

Apart from this, the framework proactively offers legal assistance, safety nets/ entitlements, security against resource or land alienation, protection against discrimination and proactive state support for constituencies with poor voice and agency including women, old-aged and transgenders.

Agriculture Sector

Around 52 percent of Kerala's geographical area is under cultivation. Kerala's diverse geographical landscape, comprising 5 major agro-ecological zones, is home to a wide variety of cash, staple and plantation crops like spices, cereals, fruits, vegetables, tubers, rubber, oilseeds and medicinal plants. The low-lands of Kerala are known for their sprawling paddy fields featuring cultivation of over 600 varieties of paddy, although the land under paddy in the state has reduced to just under 7 percent of the total cultivable area of the state. The hill districts are suited for spices and plantation crops. Kerala leads in the production of several commodities like small cardamom, nutmeg, pepper, natural rubber apart from cashew, ginger, tapioca and jackfruit. Export of agricultural products is the biggest contributor to states exports valued at Rs. 1,869 crore in 2017-18. Agriculture along with allied sectors animal husbandry and fisheries contribute roughly 11% of the State GDP and nearly 17.15% of the population depends on this sector for their livelihoods.

The state of Kerala has the highest percentage of small and marginal farmers (with landholding of less than 1 hectare). Unabated land fragmentation and lack of diversification has meant low viability for smallholder farmers despite a range of subsidies offered by the government in terms of fuel, power and equipments. The uptake for national and state sponsored crop insurance schemes remains abysmally low, further hiking vulnerability to climate and pest shocks. Likewise, women in Kerala hold a meagre 19 percent of operational holdings and around 14 percent of operated area, showing that the average size of their landholdings are smaller as compared to the state average.

Program Description

Considering the above scenario of the agriculture sector, the recent flood and landslide related events that have exposed the susceptibility of state's agriculture to impacts of climate change and disaster risks, this PforR operation aims to partner with the State's Department of Agriculture (DoA) in strengthening farmers' capacity to mitigate climate change, disaster and disease-outbreak related risks by working towards enhancing their resilience, shifting the paradigm of agricultural planning towards a more fine-tuned and nuanced agro-ecological zone based approach (as against the wider agro-climatic zone wise) for improving their productivity, designating and promoting crops and package of practices that are more suited to a specific agro-ecological unit (AEU)¹⁰ through a realignment of state budgets.

It will also support improving financial support and the farm advisory information services (Integrated Agriculture Management Information System - IAMIS) of the DoA by expanding the repository of services for farmers to cover areas like comprehensive farmer database, seed certification, knowledge sharing through value added information products, setting up farmers help desk system, support for mechanization and related agro-Services, Disease and Pest Management System (DPMS), timely and transparent transfer of assistance to farmers, crop insurance and Centralized Direct Benefit Transfer.

In addition, for responding to the challenge of shrinking landholdings and need for making agriculture sustainable and returns attractive, under this operation farmers will also be mobilized into Farmer Producer Organizations and Farmer Producer Companies (FPOs/ FPCs) in the 4 main districts of the Pamba Basin – Pattanamthitta, Idduki, Kottayam and Allapuzha;

¹⁰ Delineation of state into AEU is part of a mega project involving Kerala State Planning Board, National Bureau of Soil Science, Land Use Board, State Agriculture University.

support will be provided to the Department of Agriculture as well as Kerala Small Farmers Agri-business Consortium (Kerala- SFAC) for strengthening the state eco-systems for promotion and sustenance of FPOs, so that they can have improved access to new and organized markets and benefit from collective- consolidated farm operations of its members.

The type of activities proposed relate to institutional development, institutional strengthening, capacity building apart from investment planning and its management.

Expected Social Effects of the Program

The interventions chosen to be part of the RKP are based on the core principles of the Rebuild Kerala Initiative (RKI) which focuses, among other things, on a) fast, efficient, inclusive works that enhance resilience of men and women to overcome shocks or become less vulnerable to it through an inclusive process where all citizens, including members of disadvantaged communities, participate fully in those efforts; b) greater emphasis on simplification of processes and procedures, c) with commensurate efforts at enhancing capacities of implementing and support institutions, to bring about efficiency and sustainability in the functioning of public systems.

Benefits and Risks

Potential Benefits

The interventions and investments planned for the agriculture sector under RKP are likely to have positive impacts because schemes focused on crop assistance, soil and crop health, Kuttanad and new schemes pertaining to AEU are likely to improve the farm incomes of smallholders and also strengthen the capacities of institutions/workers involved in providing agriculture research and extension services in improving outreach to tribal and marginal cultivators.

The expanded IAMIS aims to offer farmer friendly ICT services, some of which like provision of information on availability of certified seeds, agri-inputs, credit, prices, pest-disease outbreak, advisories on crops and weather through digital, print media, mobile apps, use of a robust farmer database to deliver power, input and other scheme specific subsidies are likely to be particularly beneficial for small, marginal, women and tribal agriculturist (given the reasonably high internet and mobile penetration in the state), who otherwise have less access to such information and services as compared to large farmers. Similarly, steps to reorganize farmers into larger FPO collectives is also likely to improve incomes and access to farm inputs, credit, information and services for smallholders through a more formalized system.

Potential Risks

As shown in the program level screening of likely impacts, these investment also attract some potential risks related to social and economic exclusion, poor citizen and stakeholder engagement during plan or package preparation, low awareness about schemes and information packages/ advisories, apart from weak institutional and individual capacities to manage emerging social risks- although most of them are manageable through appropriate management measures.

The RKDP Master document (Resilient Recovery Policy Framework and Action Plan 2019) accepts that 'multiple government agencies are engaged in sectors like agriculture..., but they often operate in a fragmented and isolated manner, instead of taking a multisectoral and cross-institutional approach to planning, development and management ...'.¹¹ Presence of multiple

¹¹ RKDP Master Document https://rebuild.kerala.gov.in/reports/RKDP_Master%2021May2019.pdf

institutions to deliver agriculture research, extension and advisory services to the farm-gate/ farmer and their overlapping mandates makes accountability for quality and timeliness of services difficult to establish. In addition to the multiplicity of institutions working in the agriculture sector with sometimes overlapping mandates, there is also a lack of integration among various stakeholder institutions like the primary cooperative societies, the *Padashekara Samitis* (collectives created for paddy cultivators), FPOs, etc., making services challenging. In addition most of these agencies have low institutional capacities and need time to adjust to the new AEU based approach, especially considering the fact that some of the grassroot agencies involved in last mile delivery of agri related services- like Krishi Bhawans¹² and Gram Panchayats are vastly understaffed, with ever increasing/ additional mandates, including the ones provided by the current program (AEU based planning and FPO creation and promotion), which may impose long working hours on the extension staff and limit their ability to ensure inclusion and access of marginalized communities to various schemes.

In addition, there is likely risk of women and marginal farmers not being engaged during the planning of AEU-wise package of practices (PoPs), which may make these packages inaccessible, unaffordable or even unable to meet the needs of smallholders. This is especially likely to be more relevant for tribal farmers who farm on under-productive highlands/ slopes that are prone to floods as well as landslides. (Scheduled Tribes in Kerala have had a long history of land alienation and a substantial number live in wastelands within forest or on forest fringes¹³). It is also possible that the new information and farm gate services offered through the new IAMIS may be in a form that is not usable for women, other marginalized cultivators, as most information related to farm-specific entitlements and benefits is to be digitally accessed by individual farmers (or with help from Akshaya Centers- Common Service Centre kiosks). Some of the schemes and benefits that target individual cultivators may not be accessible to farmer collectives like the *Padashekara Samitis or Krishi Sanghs* (women's collectives formed under *Kudumbshree* to farm on leased lands) that are largely comprised of small and marginal farmers.

Given that small and vulnerable cultivators have a low bandwidth for risk-taking and shifting to new farm systems (AEUs) and practices informed by IAMIS (their existing practices and systems having been arrived at over generations/ seasons of testing and optimization) there is a risk of low off-take of AEU specific services due to inability to take risks or even low awareness levels. The local bodies, given the high level of confidence that they enjoy among local residents in the state, have a crucial role in connecting the target audience to these schemes and services. One of the IAMIS modules is on custom hiring of farm implements and farm mechanization, which runs the risk of excluding women from the farm operations. Studies globally show that farm mechanization largely replaces women labour related to plantation and harvesting where most women are involved. This is also reflected in the reducing female labour participation in agriculture in the state.

The risk of exclusion is high in the governance of the FPOs, where, despite the policy that promotes the participation of practicing farmers (including women¹⁴ and marginal farmers) in the management of FPOs¹⁵, the latter may lack representation in the higher leadership and management of FPOs (at the federation or regional level) and most positional roles may get

¹² The lowest office of DoA with presence in all village panchayats.

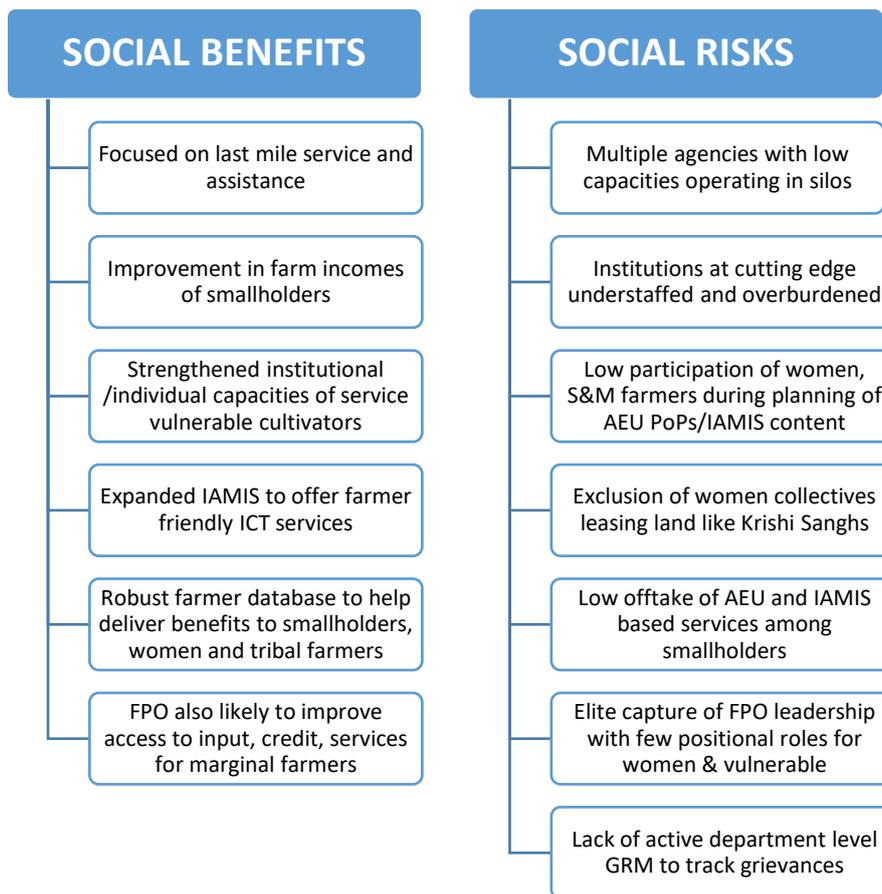
¹³ Rapid Poverty and Social Impact Analysis for The Resilient Kerala Program, World Bank 2020

¹⁴ Share of women participating in the labour force has also declined from 42 percent to 33 percent between 2004-05 and 2011-12, Periodic Labour Force Survey (PLFS) 2018-19; Female labour force participation in the agriculture sector has also come down to 19.7 percent, even though recent initiatives like Kudumbshree have arrested further decline in female labour participation.

¹⁵ FPO Working Instructions for 2019-20. Kerala SFAC.

occupied by large, influential farmers. The DoA and its support institutions don't have an active grievance redress system and seem to largely bank on state and local level grievance registration services like the Chief Ministers Public Grievance Redressal Cell, the Citizen's Call Centre (CCC), GRM of Local Self Government Department, an e-District Public Grievance system for submitting complaints online and a central toll free number of *the Karshika Vivara Sanketham* (Kerala SFAC) which farmers can use for any query or support.

The assessment shows that there are institutional gaps, risks of exclusion, low voice of women, marginal and tribal farmers in the social management of the agriculture sector. While there are systems of grievance redressal, absence of department level GRM and lack of effectiveness of state/ LSGD grievance systems in tracking and closing grievances is a challenge.



Legal Instruments, Policies and Programmes/ Schemes Legal Environment for Agriculture Sector

As presented in the section on the national and state legal and policy environment, there is adequacy of laws and policies to cover social issues related to the agriculture sector. The country has one of the most progressive laws related to Land Management and its provisions are well aligned with ESS5 (Land Acquisition, Restrictions on Land Use and Involuntary Resettlement) with a transparent process for the assessment of impacts, identification of project affected persons and households and in compensating them for any temporary or permanent loss of land, assets or livelihoods. Likewise, Kerala's own Resettlement Policy shows that it has a strong alignment with World Bank's policy on resettlement and rehabilitation and has adequate focus on vulnerable populations, landless, and encroachers and squatters from

vulnerable categories in offering resettlement and rehabilitation following due process of law and with disclosure of information at each step.

The laws related to labourers in the state not only cover the construction workers but in some case also offer protection and safety for the agriculture and plantation workers, including the migrant workers from other states who come to work as farm helps in plantations and with large landholders. These laws also offer protection against child and forced labour, gender based discrimination in work conditions or compensations and allow for fair working conditions and wages for labourers engaged in farm and non- farm labour activities.

Agriculture related national and state policies look after the needs of the small, marginal and tribal farmers and also in some cases agricultural labourers and tenants. Agriculture along with the land related policies of the state secure the tenancy rights of land leasers and secures them from eviction without following the due process of law. These policies compassionately look at the tenants investments in land and asset improvements, physical and financial investments in multi-year / plantations crops and seek a full compensation for those investments/ improvements before the land leaser/ tenant is removed from such land. These policies emphasize the need for timely and efficient delivery of inputs, advisories and credit to the cultivators, especially smallholders and acknowledge the need for capacitating institutions and extension services in this regard. The policy on FPOs also calls for creating an inclusive governance structure for FPOs¹⁶ and while accepting that women's needs as farmers often get neglected gives preference to the constitution of FPOs comprising tribal and women members- Tribal FPO and women FPO. The laws also lack the desirable emphasis on incentivizing or promoting women in agriculture by targeting specific schemes/ benefits towards women agriculturalists.

Major Sector Schemes

Rashtriya Krishi Vikas Yojana-RKVY is an umbrella programme for ensuring holistic development of agriculture and allied sectors that allows states to choose their own agriculture and allied sector development activities and priorities as per the district/state agriculture plans. It incentivizes States to increase public investment in Agriculture & allied sectors by providing flexibility and autonomy in selection, planning approval and execution of projects/programs under the scheme as per their need/ priorities and agro-climate requirements. The idea is to make farming a remunerative economic activity by strengthening the farmer's effort, risk mitigation and promoting agri-business entrepreneurship with focus on improved pre & post-harvest infrastructure, and farm innovations¹⁷

Under the scheme it is the responsibility of participating states to ensure that while selecting beneficiaries under any project of RKVY, adequate coverage of small and marginal farmers, Scheduled Castes, Scheduled Tribes and women and other weaker segments of society is ensured 'so that benefits of the scheme as a whole accrue to intended beneficiaries in accordance with guidelines.'¹⁸ In the inter-state fund allocation the scheme also provides 20 percent weightage to those with a higher percentage of small and marginal farmers.

State Extension Programmes for Extension Reforms or the Agricultural Technology Management Agency –ATMA¹⁹ is technically a part of RKVY and aims at strengthening and expanding farm extension services, making them more participatory, improve agricultural

¹⁶ Policy & Process Guidelines for Farmer Producer Organisations, 20113

¹⁷ RKVY- National Operational Guidelines for 2017-18 to 2019-20

¹⁸ Same as above

¹⁹ National Guidelines of ATMA 2018

planning and use technology to reach out to the farmers and raise their capability to derive sustainable incomes. It focuses on adopting a group approach to extension by organizing farmers as Farmer or Common Interest Groups (FIGs & CIGs) to serve them collectively as FPOs and also addressing gender concerns by mobilizing farm women into groups and training them. It provides for State and District Farmers’ Advisory Committees with representation from progressive farmers including women, smallholders and SC/ ST cultivators. The State Nodal Cell for ATMA is also supposed to have a Gender Coordinator to safeguard the interest of women farmers and ensure that at least 30 percent of resources meant for programmes and activities are allocated to women farmers or female extension worker.

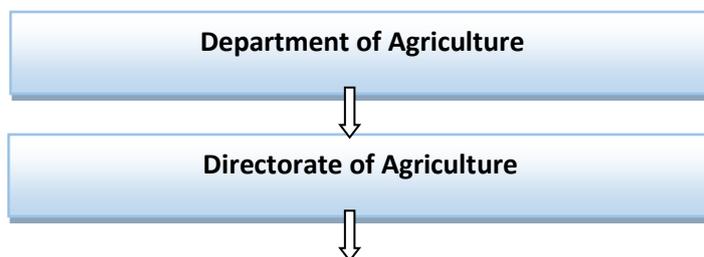
National Scheme for Promotion of Farmer Producer Organisations is part of Central government’s plan to create 10,000 farmer-producer organisations (FPOs or farmer-producer companies (FPCs) within the next few years. The scheme preamble says that “Collectivization of producers, especially small and marginal farmers, into producer organisations has emerged as one of the most effective pathways to address the many challenges of agriculture” and aims to incentivize states to constitute them.

The schemes provide attention to the needs and interests of smallholders and women in agriculture and in some cases allocate funds for small, marginal or women farmers based on their numbers in the state. Kerala SFAC plans to set up 13 FPOs in the Pamba Basin districts with FPO membership drives to be supported by Panchayats, Civil Society, SHGs and Cooperatives. The task of formation and handholding of FPOs will be entrusted to Agri Business Promoting Agencies (ABPA), which have well established credentials and proven track record in promoting FPOs.²⁰

Institutional Systems and Capacities to Manage Social Risks

This section reviews the current institutional systems and capacities in the state to implementing schemes and programmes in the agriculture sector, including those proposed to be implemented as part of the Resilient Kerala Development Programme (RKDP). It then assesses the weaknesses and strengths of this institutional frame to manage the social risks emerging from the program investments based on existing and past performance

Institutional Set up at the Directorate of Agriculture



Relevant Sections /Divisions	Key Social Responsibilities
Additional Director (Planning)	<i>Annual planning, ensuring gender & inclusion related concerns in plans</i>
Additional Director (Biogas, Farms)	<i>Create demonstration plots to encourage new farm practices/ innovations/ demonstrations</i>

²⁰ E-Tender for the Selection of Agri Business Promoting Agency (ABPA)

Additional Director (Extension)	<i>Provides outreach to small & marginal farmers through extn. Staff (ATMA), IT wing that managed IAMIS also under extn.</i>
Additional Director (Marketing)	<i>Oversees smooth functioning of agriculture markets, prevents cartelization, access to all</i>
Joint Director (Research & Trg)	<i>Training to staff & farmers through departmental institute- SAMETI & RATTC, KVKs, Farmer Field Schools and Knowledge/ Training Centres</i>

Training Institutions or agencies with Capacity building or Social mandate

Institution/ Agency	Mandate/ Functions
Krishi Vikas Kendras- KVK	<i>Acts as an Agri Knowledge and Resource Centre to undertake region specific technology assessment, demonstrations, support initiatives for improving local agricultural economy and link research with extension and farmers, esp. S&M. Capacitates farmers and extension staff with knowledge and skills on modern technologies.</i>
Kerala Agriculture University (KAU)	<i>It aims to address current and future challenges of farming community relevant to the state's agro-climatic and socio-economic condition, develop innovative extension strategies for farmers, promote sustainable production for improved livelihoods.</i>
Regional Agriculture Technology Training Centres- RATTC/Farmer Training Centres-FTC	<i>RATTCs are intended to cater to the training needs of extension personnel, while FTC train famers</i>
State Agriculture Management and Extension Training Institute (SAMETI)	<i>Nodal State institute on Agri Development. Mainly trains extension workers implementing ATMA and 17 other sub-schemes. Trains middle & lower bureaucracy on planning, appraisal, implementation, IEC participatory approaches and community development.</i>
Farmer Knowledge Centres (FKC)	<i>To provide AEU wise trainings to farmers on PoPs and related advisories on IAMIS modules</i>
FPO Academy	<i>Proposed as part of RKDP, to handhold & capacitate FIG members and leaders of the FIGs and FPOs/FPCs</i>

Community Institutions in the Sector

Community Institution	Purpose and Function
FIGs/ FPOs/ FPCs	<i>Created by the SFAC as part of the FPO collectives</i>

Padashekara Samiti or Agriculture Cooperative Societies	<i>To promote production around a specific commodity with a collective approach, usually S&M farmers will collective holding of no more than 5 hectare</i>
Krishi Sanghs and Joint Liability Groups	<i>Collective farming groups of women with 4-10 members formed under Kudumbshree</i>

Assessment of Sector Institutions

RKDP Master Document notes that grassroots institutions of the agriculture sector, especially Krishi Bhawans -- the institution at the panchayat are overburdened, affecting the utilization of human resources and performance of schemes level. They are currently overburdened with more administrative activities due to execution of multiple agri-sector schemes, as against providing farm services to the cultivators. To address it states the need to encourage a holistic approach for institutional consolidation, coordination and capacity building.²¹ Rapid assessment of the Department's institutional structure²² also shows that there are nearly 30 institutions supporting several key functions pertaining to agriculture service delivery, but are sub-optimal due to lack of clarity about organizational mandates and duplication, coordination issues between agencies, capacity gaps at different levels, multiple lines of reporting, leading to problems in effective last mile delivery.

Realising this, RKDP also advocates for an enabling institutional and policy framework with a supporting regulatory regime and adequate enforcement, especially for integrated management of agriculture and other critical sectors. Overall the sector institutions do seem to have reasonable capacity to manage the social risks emerging from the program investments.

Citizens Engagement- The sector institutions have various avenues for citizen's engagement. The State SFAC operates a Farmer's Call Centre-cum-Agricultural Information Hub to offer information services to the state farmers. While the current consortium is a small 4-5 staff office, it is in the process of being further capacitated through a Project Management Unit Consultancy Agency (PMU-CA), and as per the proposed structure proposed, it will also have Consultant-FPO, with experience of social mobilization in agriculture development projects as well as a communication specialist with experience in media and IEC, which is likely to bolster the social capacities of the SFAC and its ability to engage effectively with communities, FPO members and other stakeholders.²³

Likewise, the Farm Information Bureau provides information support to accelerate the extension and developmental activities of the department. Through the grassroots agencies that it works through- the Krishi Bhawans and Gram Panchayats- the department ensures regular engagement of communities in the preparation of agriculture plans and annual development plans of panchayats. The Agriculture Directorate as well as other support institutions have their own operational Citizens Charters that promise the citizens an assured set of services.

Grievance Redress- The department largely depends on the LSGD wide GRM for receiving feedback. The state LSGD has a very vibrant and effective system (both offline as well as online) of grievance tracking and redress. In addition, the directorate as well as Kerala SFAC operate central toll-free helpline numbers for the farmers called 'Karshika Vivara Sanketham' which

²¹ https://rebuild.kerala.gov.in/reports/RKDP_Master%2021May2019.pdf

²² Transforming Kerala Agriculture, Draft Rapid Assessment of DoA Institutional structure, World Bank 2020

²³ E-tender to select Project Monitoring Unit Consulting Agency (PMU-CA)

regularly receive grievances that are escalated to the concerned office, district and functionaries of the directorate and field offices.

Gender and Social Inclusion – As discussed in the previous sections, most agriculture schemes focus on the needs of the S&M farmers and women and state has developed systems to create a deeper penetration among the vulnerable categories of cultivators. As per the State Planning Board, during their Twelfth Five-Year Plan the state established nearly 456 farm schools and 250 Farmer Field Schools for improve outreach of schemes and to capacitate the farmers. They also provide pensions to the agriculture workers

Joint Liability Groups (JLGs- Krishi Sanghs)

Created as part of the Kudumbashree Campaign in the state, these are collective farming groups of 4-10 women members. More than 3 lakh such women farmers are actively involved in farming through 78,746 Joint Liability Groups and are cultivating more than 5 thousand acres of land. This is a substantial achievement at a time when men are increasingly moving away from cultivation and cultivable land (including paddy fields) are getting converted for other purposes. Collective farming under Kudumbashree was started in 2008 as Lease Land Farming groups with the objective of giving livelihood to women and converting fallow land into cultivable land thereby contributing to food security. But after two decades, this project has achieved more than the objectives of food security and livelihood. It has become a way for economic and social empowerment through collectivism. The project is a successful example of integration of projects and agencies/ departments. Most of these women involved in collective farming activities had past experience of farming while working as wage earners, labourers or helpers to their husbands/parents. (Source: Kerala State Planning Board)

The Kerala SFAC has a Gender Cell to support Women in Agriculture under which it is implementing a number of programmes for women with the aim of empowering women producers.²⁴ The Gender Cell collects and maintains database pertaining to women in agriculture and also offers technical and entrepreneurial guidance to women who seek such assistance from SFAC. ²⁵The consortium also promotes women-only and tribal-only FPOs so that they form collectives and take advantage of the scheme to improve incomes and lessen risks.

The FPO Working Instructions talk about inclusive membership and provide detail on how S&M farmers are to be included in decision making bodies of FPOs. So far, the state's experience of setting up FPOs has been that their leadership is largely with active, practicing farmers who secure farmers interest and also those of smallholders and has not been captured by political affiliations.

Institutional Assessment – State level systems

Citizens Engagement - Since the time of People's Plan Campaign in 1990s, Kerala has had a system wherein local bodies, functioning as strong institutions for local self governance, have increasingly relied on community engagement for responding to the needs of different social

²⁴ <http://www.sfackerala.org/services/programs/>

²⁵ As a result of the floods and landslides livelihoods of nearly 35,107 plantation workers, most of whom are women were impacted with no incomes for nearly 2 months. (PDNA Kerala Report 2018)

constituencies. This has involved strengthening systems of direct democracy by activating the village assemblies (Gram Sabhas), involving them in identifying the development needs of the community, sectoral priorities and prioritizing them during the annual plan preparation. Each local body also has a regular system of community monitoring wherein the annual performance is reviewed and scrutinized by the citizens through a process of social audit. The state also provides digital access²⁶ to its citizens 'in helping the government to become more accountable, transparent and efficient' and seeks their participation in the governance process by asking citizen to either suggest reforms, rate departments on various social accountability parameters (Visibility accessibility, responsiveness, fairness and transparency) and to participate in various topical discussion forums.

Grievance Redress -The state has a few centralized GRMs, including the Chief Minister's Public Grievance Redressal Cell, the Local Self Government Departments GRM which resolve and keep department and category wise records of grievances and the state-wide helpline Citizen's Call Centre (CCC), all these provide access for citizens to submit online or telephone based complaints.

The CM's Public Grievance Redressal has been developed to cover grievances across sectors

Chief Minister's Public Grievance Redressal

The most structured, comprehensive and formal GRM in the state is the one managed by the called the CM Public Grievance Redressal Cell. Under this all public grievances being received are provided a unique ID or a docket number with which to track the complaint These complaints are then send electronically to the respective department and to the concerned support agency or field office and official and informed about the time within which it has to be resolved. The designated office is expected to resolve the issue within a stipulated timeframe and respond to the grievance for its closure. The model is entirely ICT (information communication technology) based to that it is transparent and its tracking both by the aggrieved and the government is efficient. People can lodge their complaint from any place having internet facility. The complaints get automatically escalated if they are not resolved within the timeframe. Unresolved complaints are monitored by the Chief Minister's Office with departments through video conferencing.

Multiple search options are available for citizens to know the status of their grievance including use of Docket number or their mobile numbers- both using internet and mobile phones (sms based). If the complainant provides a mobile number, s/he is notified with the progress, as the complaint gets forwarded to different offices.

Those with no access to internet or mobile phones have the option to go to their nearest Akshaya Centre (Common Service Centre) to get their complaints registered. As per the dashboard, nearly 204,750 complaints have been received on CMO portal, of which most are related to Police/ Law and Order, Employment and Public Interest.

and departments by the citizens. A cadre of more than 1000 officials (focal points for CM PGRM) have been designated in public institutions, to provide state-wide coverage to the system. Out of more than 200,000 complaints received under it (since its creation), most have been related to government employment (34,000), law and order problems (31,000), matter of public

²⁶ <https://kerala.gov.in/discussion-forum>

interest related to LSGs and the services offered by them (13,000) apart from property and bank loan related complaints. Most of these complaints have been received directly by public offices (through designated officers) and some through the common service centres- Akshaya Centres. There is, however, limited awareness and use of CM GRM- its GRM Dashboard was last updated 2 years ago. Some departments have their own GRM, while many others receive complaints related to them through CM's grievance redressal, from where they are directed the respective department / official for corrective action.

Another slightly less structured system of 'file adalats' or file courts exists in some departments wherein all pendency in resolution of grievances or works are to be explained to the elected representatives twice a year on a case by case basis. Grievance redress Adalats (or Courts) are also held periodically at different district headquarters, attended by the ministers, and directly monitored by the Chief Ministers' Office, to resolve grievances of people directly.

GRM operated by local self government department is also equally wide ranging and covers many sectors and departments. As per available statistics, out of the 2341 grievances received by the department (period of complaints is unknown), only 1575 have been addressed and the remaining are either pending or in the process of being resolved, suggesting low efficiency and accountability of the existing system, which needs revamping or creation of a program level GRM to complement the existing mechanisms.

The state also has an effective but informal system of redress given the strong organic linkage between the LSGs and the community wherein citizens directly register their grievances (oral or through petitions) with their elected representatives (ERs). If the citizens are not satisfied with the functioning of their local bodies or if they are not being adequately accountable, citizens are entitled to register their grievances with the local body tribunals/ ombudsmen, specifically appointed to look after such grievances. Although the number of grievances received across these state level mechanisms is low, there is wide awareness about them and the advantages of using them.

Gender- Through the decade old Kudumbshree campaign Kerala was able to bring the gender issues in agriculture/ livelihoods centre-stage and use the campaign for social and economic empowerment into one for bringing about political empowerment by nurturing local leadership through these village institutions and women's collectives. The state also used the central scheme on Mahila Kisan Sashakthikaran Pariyojana (MKSP) to its advantage 'by using it to increase the visibility of women in agriculture, reducing drudgery and providing a livelihood opportunity for them to adopt sustainable and eco friendly agriculture.'²⁷

Over the period, states efforts at mainstreaming gender and inclusion related concerns have come to include policies for preparation of gender sub-plans, earmarking of development funds for implementing women specific schemes/ activities²⁸, large scale mobilization of women for their social and political empowerment as well as preparation of old aged action plans and also tribal sub-plans (TSP) for areas with tribal communities. The State also mainstreams gender related concerns through other policies and practices, including annual review of performance of five year plans and tracking gender outcomes identified in the gender sub-plans and providing reservation for women in government positions.

²⁷ <https://www.kudumbashree.org/pages/42>

²⁸ According to Gender & Child Budget for 2017-18, 11.4% of state plan budget is allocated to women & girls; for local (panchayat) plans 10% funds are earmarked for schemes specifically benefiting women.

Kerala State Planning Board has been preparing separate gender budgets as a powerful tool to ensure that development planning, budgeting and evaluation does not bypass women and girls, gender inequalities are addressed across themes and women are empowered economically, socially and politically through enabling policy and action. This is done by enhancing allocations for women’s employment and livelihoods, focus on their skill development, ensuring security and special facilities like childcare at workplace, working women’s hostels and protecting them from domestic and public violence by creating separate Nirbhaya homes.

Though the state has a higher incidence of Gender based violence, it also has higher reporting of such incidents as compared to other states. To address issues of Sexual Exploitation and Abuse (SEA) of power as well as GBV, all local governance institutions are expected to constitute Jagratha Samithies (Vigilance Cell) modeled along the State Women’s Commission to look at any cases of atrocities against women and girl child.

The State has a Women’s Cell to look into grievances of women, particularly, harassment against women, neglect, desertion, not recognizing her rights, and even family discords apart from a separate Domestic Violence Cell headed by a protection officer²⁹, Kerala also has multiple helplines and support systems including a dedicated Women helpline, and a Snehitha helpdesk³⁰- a 24-hour gender help desk that works to offer support to shelter-less and abandoned women through immediate help, shelter, counseling, motivation and legal assistance. State Women’s cell, its district level offices and Helplines (Women Helpline: 1091) have the specific mandate to look into grievances of women, related to harassment, neglect, desertion, non- recognition of their rights, etc.

Social Inclusion - The state has been promoting the interests of scheduled caste and scheduled tribe communities by specifically earmarking funds under the Tribal Sub-Plan (TSP) and Scheduled Castes Sub-Plan (SCSP) for them in districts/areas predominated by these social groups. These include specific schemes in the agriculture and livelihoods sector. Even under the RKVY since 2017-18 the states have been allocating funds under the Scheduled Caste Sub Plan (SCSP) and Tribal Sub Plan (TSP) to ensure that benefits of the scheme go directly to their intended beneficiaries- SC and STs, respectively.³¹

Program System Consistency with Core Principle

Core Principle	Social Assessment
<p>Core Principle #1: Program E&S management systems are designed to (a) promote E&S sustainability in the Program design; (b) avoid, minimize, or mitigate adverse impacts; and (c) promote informed decision-making relating to a Program’s E&S effects</p>	<p>The program is likely to operate within a legal framework that is adequate to assess and manage possible social risks and impacts emerging from these program investments. The project level screening of activities proposed for the agriculture sector shows that they do not carry any substantial risks or the institutions and prevailing systems are competent to mitigate or manage those direct and indirect impacts. The state has mature systems for citizen’s engagement, gender mainstreaming and transparency, with use of participatory approaches while planning for scheme/ sectors.</p>

²⁹ <https://kerala.gov.in/web/guest/domestic-violence>

³⁰ <https://kerala.gov.in/web/guest/snehitha-helpdesk>

³¹ Kerala also has a scheme for the resettlement of landless tribals wherein the government provides one acre of land per landless tribal family, subject to a ceiling of 5 acres

	<p>The local governments also deploy a system of annual social audit wherein performance across all sectors (including agriculture) is collectively reviewed by members of the Gram Sabha (village assembly). The state deploys competent human and financial resources to implement social management procedures, although considering the mandate of the sector, institutional assessments has shown that last mile program delivery is affected as organisations responsible for it are overburdened and understaffed and their numbers and capacities need to be augmented as part of this operation as well as outside, especially considering the fact that the program wants to change the paradigm within which agriculture is currently practiced in the Pamba Basin-using an AEU based approach to agriculture planning.</p> <p>There are responsive and functional state level GRMs that communities are well aware of, although there is a need for a more robust (and comprehensive) department specific GRM that is based on multiple mediums of complaint registration, with clear timelines, escalation mechanisms and closure procedures to make the system more accountable.</p>
<p>Core Principle #2: Program E&S management systems are designed to avoid, minimize, or mitigate adverse impacts on natural habitats and physical cultural resources resulting from the Program. Program activities that involve the significant conversion or degradation of critical natural habitats or critical physical cultural heritage are not eligible for PforR financing.</p>	<p>The operations in this sector do not support activities that may have an impact on the religious or cultural resources of communities</p>
<p>Core Principle #3: Program E&S management systems are designed to protect public and worker safety against the potential risks associated with (a) the construction and/or operation of facilities or other operational practices under the Program; (b) exposure to toxic chemicals, hazardous wastes, and otherwise dangerous materials under the Program; and (c) reconstruction or</p>	<p>The proposed investments involve working with government staff and employees who are governed by national and state laws and protected by service rules form abuse, exploitation to ensure worker safety. A majority of government functionaries in the state are women, including those involved in agriculture extension and responsible for creating outreach for programmes/schemes; the burden of expanded mandate of grassroots agriculture organisations will fall on these women extension workers, therefore, stronger enforcement of reasonable working hours and safety will need to be put in place.</p>

<p>rehabilitation of infrastructure located in areas prone to natural hazards</p>	<p>The state has large number of small & marginal farmers, and due to Kudumbshree, one of the highest number women cultivators / agriculture workers in the country. As a result, Kerala has developed a strong supporting ecosystem of policies and institutions to ensure worker and women safety. The labour laws promise added security to agricultural workers (including against accidents and injuries), and subsistence allowance during periods of temporary unemployment.</p> <p>No other investments are planned that could risk worker safety.</p>
<p>Core Principle #4: Program E&S systems manage land acquisition and loss of access to natural resources in a way that avoids or minimizes displacement and assists affected people in improving, or at the minimum restoring, their livelihoods and living standards.</p>	<p>No investments are planned that may lead to physical or economic displacement of communities or individuals - whether temporary or permanent in nature.</p>
<p>Core Principle #5: Program E&S systems give due consideration to the cultural appropriateness of, and equitable access to, Program benefits, giving special attention to the rights and interests of Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities, and to the needs or concerns of vulnerable groups.</p>	<p>The activities planned as part of this operation are aimed at increasing agriculture incomes of the small, marginal, women and tribal farmers of 4 districts in Pamba Basin. While the operation seeks a shift to a new approach and package of practices-PoPs that are more relevant to the chosen landscape, existing institutions need to ensure that adequate consultations are done and there is reasonable awareness about the new practices, so that smallholders from vulnerable communities can take informed decisions.</p> <p>The investments are also aimed at creating farmers collectives-as Farmer Producer Organisations/ Companies so that their exclusion related and economic risks could be minimised.</p> <p>The state systems, institutions and established practice will need to ensure that there is equity in distribution of program benefits, especially to women, who despite lands reforms don't have land ownership in proportion to the female population involved in agricultural sector in the state and hence get excluded from receiving farm benefits under agriculture related schemes.</p> <p>There is risk of lack of affordability of the new PoPs for the marginalised, tribal and women farmers, which the program will need to address; there is also risk of exclusion of vulnerable from decision making roles in FPOs.</p>

	The operation will exclude activities that may adversely impact cultural resources and practices of indigenous communities living in Pamba Basin, especially Iddukki.
Core Principle #6: Program E&S systems avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.	The nature of program investments is such that they are not likely to lead to or exacerbate social or resource conflicts.

Stakeholder Consultations and Disclosure

Stakeholders identified for consultations around this sector are mapped in the comprehensive stakeholder map prepared for the program. (*Annexure B*) These include departmental functionaries at the state, district, sub-district and Panchayat / Municipal levels, as also line and support agencies and training institutions. They also cover community institutions formed around areas/issues where the sector investments are likely to occur. These consultations were aimed at understanding the current chain of implementation of schemes/ projects in respective sector institutions, assess the existing social capacities and procedures adopted by them, to see how social issues related to inclusion, access, equity in benefit sharing, participation, transparency/ accountability in sectoral planning and implementation are addressed and the gaps therein. These consultations also aim at assessing from the point of view of the service providers/ duty bearers as well as communities, and service recipients the quality and inclusiveness of services, especially for the vulnerable groups- single women, SCs/ STs, small and marginal farmers, teachers, landless/ asset-less, elderly, People with Disabilities (PwDs) and migrants.

As shared in the methodology of ESSA, the sector consultations with stakeholder were facilitated by Kerala Institute of Local Administration (KILA) at the state and in the Pamba basin districts. The following key inputs have been received from these stakeholder consultations and have been used to further inform this systems assessment.

Inputs from State Consultations

- Even though political leadership attempts to dominate FPOs, their governance structure is insulated by ensuring that governing bodies are constituted only by active/ practicing farmers.
- State SFAC is in the process of establishing an FPO Academy that will work specifically to capacitate FPO leadership, its members and nurture the FPO eco-system. SFAC is also in the process of further bolstering its internal capacities by creating a PMU with added capacities on community mobilization and extension.
- FPOs also includes SHGs, Cooperatives, other types of collectives and have inclusive membership- anyone can be part of an FPO. They are mostly linked by credit and there are no specific guidelines regarding their management in terms of gender or social equity.
- The IAMIS parameters are being expanded based on the RKVY guidelines and is being made user friendly. Farmers will have the facility to enter their details and they will automatically get a list of entitlements that they are eligible for and the process by which they can be accessed.

- IAMIS is a great platform for bringing many schemes under one umbrella. It also reduced the workload of Agriculture officers (AOs) so they can pay attention to extension activities.
- If S&M farmers don't have digital access they can go to a nearby Common Service Centre /kiosk- *Akshaya Center* and ask for help to access eligibility details.
- Since most farming in Kerala is focused on homestead based, most AEU wise recommended PoPs are based on affordable technologies.
- The AOs and other extension staff should be allowed more freedom for extension work and meeting community and farmers, rather than administrative tasks they are engaged in, as S&M homestead farmers need customized, handholding support.

Inputs from Community Consultations:

- Tenants don't get the same type of benefits as the land-owning farmers and under the current system benefits are not reaching landless farmers. Tenants only receive benefits when they are associated with Joint Liability Groups such as Kudumbashree. There are issues in accessing various welfare schemes by the tenants. Therefore, there is a need to bring changes in policy so that all farmers, including landless get equally benefitted.
- Another reason for poor outreach of schemes is the heavy workload of AOs that makes visiting field and creating awareness difficult.
- FPO's are working well in select areas to ensure maximum production and profit, although they are unable to protect the interest of small and marginal farmers. They safeguard the interests of the influential, which is why there is need to create awareness among all types of farmers to better utilize the FPO structure. FPO management is also under constant stress and pressure from external entities. People need to be educated about the FPOs as many farmers are still unaware about their use and purpose.
- The Padashekara samithis (Paddy farmer's consortium) at regional level are doing the same activities as that done by the FPOs.
- IAMIS is far from being implemented in these areas, so presently flood forecasting is done by the water authority. These forecasts are effective although some farmers in Allapuzha district have little faith in them due to false alarms and too technical nature of the alert messages. In Kottayam very few farmers (around 5% large and progressive ones) currently use IAIMS for agricultural advice. Therefore, more awareness needs to be created around it and this information needs to be available to those without smartphones, through the Akshaya Centers.
- AEU based planning and PoPs are gradually becoming popular in some panchayats of Pathanamthitta district, although the farmers don't find them efficient.

The program precisely addresses these concerns of community stakeholders related to exclusion of tenants and sharecroppers by organizing them into farmers' collectives and to insulate them from denial or discrimination in delivery of services. The operation also aims to strengthen the eco-system around FPOs to insulate them from pressures and ensure equity in benefit sharing. Capacity development of staff proposed under the program will help in addressing the issue of making information services more comprehensible and simpler for the vulnerable producers.

Lack of awareness about the AEU wise packages and exclusion of tenants, smallholders from schemes and FPOs, which were some issues raised by women and vulnerable groups, are also

being addressed by enhanced social capacities of implementing agencies. This will help to improve service outreach, increase awareness, and ensure their membership in FPOs.

The draft ESSA report will be disclosed on the website of Resilient Kerala Initiative (RKI- RKDP) and on the World Bank external website for comments and feedback and will be finalized after incorporating the suggestions received from the stakeholders.

Gaps and Recommendations

1. The assessment of social systems shows that the capacities of relevant sector institutions and those responsible for social management in the state are good, except for the fact that there is a need for better coordination between sector institutions for social management. The borrowers /RKDPs own internal assessments have alluded to the overlap and duplication of functions of multiple sectoral agencies that leads to sub-optimal efficiency and poor accountability. It recognizes the need to reorganizing these institutions to create better synergies and clearer accountability. Recognising this gap, it has also been made an investment area for the agriculture sector (*Strengthen agriculture support institutions to facilitate AEU based agriculture promotion*). As part of this effort, there will be a need for revamped system of agriculture extension, which capacitates its women extension workers, to work more closely with women farmers³² and other vulnerable farmers in creating awareness, ensuring their participation in planning and in the selection of AEU-wise packages.
2. One of the key social risks is related to exclusion of women, smallholders, tenants/ sharecroppers from vulnerable communities from a) accessing and using IAMIS, b) deciding and using AEU-wise PoPs, c) occupying decision-making roles in the FPOs promoted by the project. While the program systems and institutions will work to proactively ensure their inclusion in various activities, the monitoring systems will need to track the extent of their access to IAMIS and its related services, their off-take of AEU based packages, overall proportion of membership and leadership from vulnerable sections in the new FPOs (including possibility of organizing women only or tribal only FPOs) promoted by the program- to ensure that benefits are equitably distributed across gender, social and economic groups. Departmental capacities to manage these exclusion risks need to be augmented through greater sensitization and capacity building of field staff and extension workers.
3. There is a need for a stronger department or program level Grievance Redress System that complements the other district or state wise GRMs in place. This will ensure closer scrutiny and tracking of complaints, refining the sector strategies planned under the operation and fixing accountability for actions. This will also ensure better tracking of outreach of investments and services planned for the sector and help in making the program services, practices and packages more accessible.

³² Considering that women headed households in Kerala (at 22 percent) are double the national average

Water Resource Management

Kerala is blessed with rich endowment of water resources. It has a high average annual precipitation (3,000 mm), has 44 small and medium rivers, several lakes and ponds, a vast network of stream and estuaries, springs and wetlands. However, this system of water resources varies both spatially and temporally, resulting in occasional floods and droughts. Within the same year, seasonal variation in precipitation can be high as bulk of the rainfall is received from southwest monsoon, between June to September and some from northeast monsoon, October to December. Approximately 90% of rainfall occurs during six monsoon months with heavy discharges in all rivers and frequent flooding and landslides.

During the August 2018 flooding, irrigation canals and drains became heavily silted, embankments collapsed, and Water Harvesting Structures (WHS) like cross drains, sluice gates, weirs, check dams, diversion channels, etc., were damaged on the upstream and urban drainage systems in the downstream blocking flow of flood waters with heavy sediment load, damaging public and private assets. While no major damage was reported on large and medium dams, nearly 200 storage ponds and 70 minor dams were damaged.

The Kerala post disaster needs assessment (PDNA)³³, recommended that recovery activities could include integrated water resources management (IWRM) embedded in Kerala's sustainable development planning. With IWRM in place it is possible to make proper plans for water safety and water security, based on actual and planned land-use, resulting in multiple basin plans. The integrated basin plans need to be based on sufficient and reliable data and should break inter-sectoral barriers to establish an integrated framework for coordination, identify best practices that create a healthy river ecosystem that is beneficial to communities, and economies.

Program Description

The floods of 2018 and 2019 highlighted the need for more efficient water resource management in the state, especially in the disaster prone areas, by working on issues of dam safety and their improved operational performance, stronger flood management procedures that are informed by technically robust and streamlined Water Resource Information System (WRIS) for its use as an effective decision support tool. The disaster assessment also brought out the need for a more integrated and compact water governance developed at the river basin level for integrated reservoir operations, better inter-agency information sharing for greater community resilience.

Appreciating the need for using the river basin as a hydrological unit for planning and governance, and responding to the need for greater resilience, shown by the recent floods and landslides, and underlined by RKDP³⁴, the Resilient Kerala PforR operation aims to bring together relevant stakeholders to support the development of integrated, river basin level management plans for the Pamba Basin to maximize the economic and social benefits derived from water resources available in a river basin in an equitable manner. It also plans to support the creation of an institution, a Basin Level Conservation and Management Authority, to support the operationalisation of these basin level plans so that they can respond to the diverse needs and challenges of basin level governance by bringing together different stakeholders.

This will also involve improving the technical capacities at the basin level to develop better system for flood forecast, reservoir management, basin level planning and smoother

³³ Kerala Post Disaster Needs Assessment Floods and Landslides - August 2018

³⁴ RKDP Master Document https://rebuild.kerala.gov.in/reports/RKDP_Master%2021May2019.pdf

information flow between key agencies functioning in the basin, apart from creating a command and control centre to support the Basin level Authority. These proposed interventions are likely to enhance the collective resilience of the local communities by reducing their present vulnerability to events like floods.

Expected Social Effects of the Program

The sector interventions chosen to be part of RKP are based on the principles of Rebuild Kerala Initiative (RKI) which aims at fast, efficient, inclusive works that enhance capacities of men and women to overcome shocks or become resilient, through an inclusive (and technologically sound process) involving disadvantaged communities; putting greater emphasis on simplification of processes and procedures, creating new or bolstering the capacities of existing implementing and support institutions, to improve efficiency and sustainability in the functioning of public systems and their outcomes.

The type of activities proposed for this sector relate to institutional development and strengthening through setting up of the management authority, capacity building of staff, apart from investment planning and its management around river basin.

Benefits and Risks

Potential Social Benefits

If prepared through active participation of community and other institutional stakeholders, the River Basin Management Plans offer social and economic benefits, while ensuring the conservation and sustenance of basin level water resources. They also allow for equitable allocation of water resources to different sectors and competing demands with primacy in allocation to vulnerable, preventing conflict over limited water resources.

The River Basin Authority will regulate the conservation and judicious use of water resources in the basin, enhance water availability³⁵ for wider distribution as well as ensure equitable allocation of water resources. As per policy the authority will ensure allocation to every landowner in the command area, irrespective of the size and nature of land holdings including to the small and marginal farmers, including provision of irrigation for those at the tail-end (usually marginalized lands and landowners) of an irrigation system on priority.

Potential Social Risks

As shown in the program level screening of likely impacts, WRM related investment are also likely to attract social risks that are largely related to exclusion of vulnerable communities from the process of planning or decision making, presence of multiple institutions with low capacities to deliver on their social mandate of equity and sustainability, poor inter-agency coordination to ensure planned outcomes and accountability.

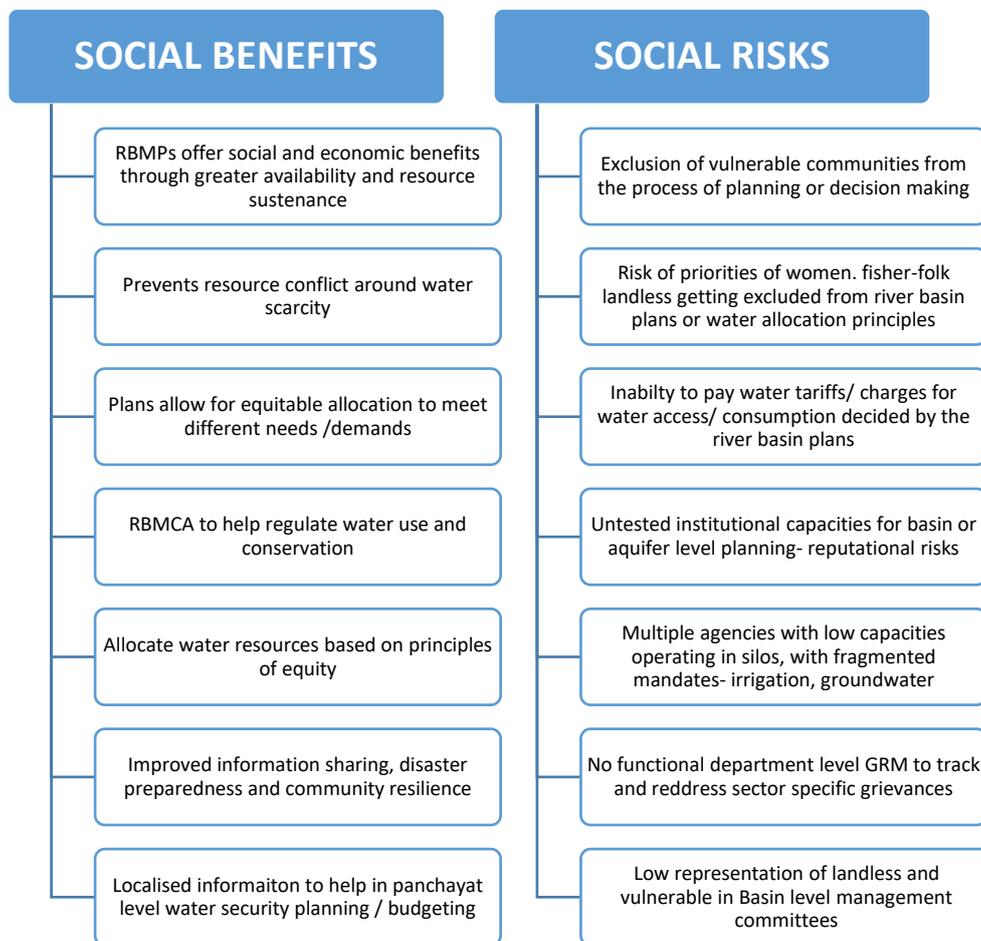
River basin level or even aquifer level planning has never been tried in the state in the past- it is new, unprecedented and may have impacts on water availability to the poor and marginal, including indigenous communities living in the Pamba Basin. This will have reputational risks if adequate systems for safeguard are not deployed as part of the operation. This is especially relevant considering the fact that water resource department has so far only been involved in dam, canal and flood management and has never worked on deciding water allocation

³⁵ Poor land management and heavy siltation of water bodies, water harvesting structures before and during the floods have reduced absolute water availability in recent years.

principles or budgeting or looking at issues of equity in water distribution. Being a greenfield, this will require additional capacities to manage potential social risks and impacts.

The RKDP Master document (Resilient Recovery Policy Framework and Action Plan 2019) accepts that ‘multiple government agencies are engaged in sectors like... water..., but they often operate in a fragmented and isolated manner, instead of taking a multi-sectoral and cross-institutional approach to planning and management ...’.³⁶ The mandate of managing water resources of the state gets divided among the irrigation department, ground water department and the directorate of water resources

There are risks of exclusion of the vulnerable communities, including women, fishing and tribal communities, from the process of river basin planning, which may result in their needs and priorities not getting reflected in the plan preparation, including deciding principles of water allocation/ distribution, decisions around levying of water charges or tariffs across users. In addition, being a technical agency the department and its support institutions have low capacities around social development and management to ensure optimal allocations across constituencies and sectors based on principles of equity and fairness as spelt out by Kerala river basin conservation and management bill, 2020 and promised by Kerala State Water Policy, 2008. Since WRD has a limited citizen interface, it does not have a dedicated and functional grievance redress mechanisms and depends on the statewide and local government level grievance services for receiving and redressing complaints.



³⁶ RKDP Master Document https://rebuild.kerala.gov.in/reports/RKDP_Master%2021May2019.pdf

Legal Instruments, Policies and Programmes/ Schemes

Legal Environment for Water Resource Sector

The national and state policies related to the water sector recognize that local communities, local governments and user groups are best placed to plan, allocate and use water resources - for water governance.³⁷ They also acknowledge the need to ensure equity in water distribution. The state policy recognizes women's role in conservation and seeks their active engagement in its protection and management. The state Participatory Irrigation Management (PIM) policy seeks periodic social audits to ensure fairness and equity in the functioning of Water User Association's (WUAs).

Principles of equity are strongly reflected in Kerala's Water Policy and works towards creating an environment for equitable, sustainable and productive management of water resources, advancing the role of LSGs and recognizing that women are best placed to conserve and plan their water resources. The irrigation act and river basin bills also call for entrusting maintenance of irrigation systems to local authorities, farmer's co-operatives/WUAs and to regulate use, estimate demand, collect tariff and resolve disputes; the regulatory authority provides for fixing water quota for different needs/ sectors (from the basin) following principles of equitable distribution with every landholder in the command area entitled to water.

Major Sector Schemes

Pradhan Mantri Krishi Sinchayee Yojana - The PMKSY has been formulated by combining some erstwhile schemes like the Accelerated Irrigation Benefit Programme, Water for every farm (Har Khet ko Pani), Per Drop more Crop and Watershed Development. It aims to provide assured irrigation to every farm by creating new minor irrigation sources, repair and restoration of existing ones including watershed development, integration of water sources and their efficient use by deploying appropriate/ new technologies.³⁸

The scheme also aims at the development of Command areas and strengthening the distribution network from source to farm through enhanced water efficiency for higher productivity and preparation of District and State irrigation plans for source sustainability and efficient use. The scheme intends to do this by encouraging community irrigation through registered user groups/FPOs/NGOs/CBOs and promotes farmer oriented activities like capacity building, training and exposure visits, demonstrations, farm schools, skill development in efficient water and crop management practices to promote conservation.

National Hydrology Project (NHP) is a national scheme that aims to improve the extent, quality and accessibility of water resources information and to strengthen the capacity of targeted water resources management institutions responsible for surface and groundwater planning and management, including river basin organizations. The beneficiaries of the scheme are targeted to be farming communities benefiting by improved water management; rural and urban water and power users, populations affected by floods or droughts, poor rural agriculture dependent communities receiving improved irrigation water supply as a result of better accessibility to water resources information.

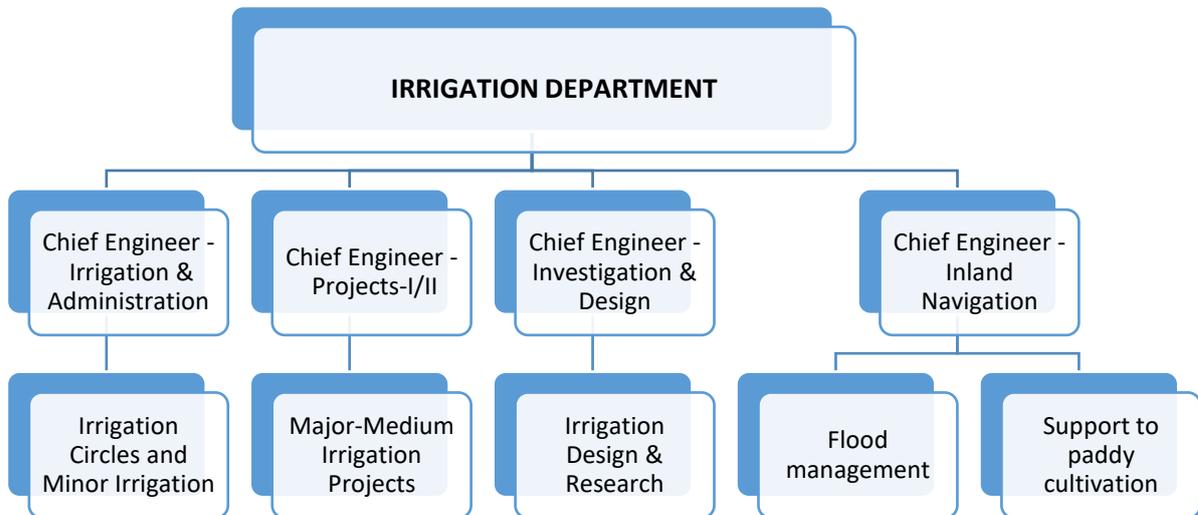
Institutional Systems and Capacities to Manage Social Risks

From the point of view of the interventions proposed under the PforR operation, department of water resources in Kerala is divided into 2 divisions- a) the Irrigation Department, which

³⁷ Disaster risk related policies also call for capacitating local governments and communities, including CSOs/CBOs in preparedness and for enhancing their resilience to adverse impacts.

³⁸ Operational Guidelines of Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)

works towards sustainable development, maintenance of quality and efficient management of the state’s water resources and providing assured irrigation to facilitate sustainable agriculture development and food security³⁹; b) Ground Water Directorate, formed as a nodal agency for groundwater investigation and construction of groundwater abstraction structures, conservation and management of groundwater resources and its monitoring⁴⁰



Institution ⁴¹	Activities relevant to social management
Irrigation Department	<ul style="list-style-type: none"> • Provide Irrigation, flood control facilities, including prevention of breach & erosion, water conservation. • Command Area Development to utilize the additional irrigation potential created through better distribution & mgmt, achieving higher agricultural production and farm incomes. • Capacitate farmers and staff on participatory irrigation, systems of rotational irrigation for equality of access. • Preparation of emergency action plans for dams, disaster management plan, dam security. • Dam rehabilitation and improvement
Ground Water Department	<ul style="list-style-type: none"> • Control and regulate groundwater development for equitable distribution to all sections of society. • Conducting mass awareness programmes on groundwater conservation; management and water quality issues for public, school children, officials and elected representatives, • Addressing complaints around over-exploitation of groundwater, addressing related disputes

³⁹ <http://www.irrigation.kerala.gov.in/>

⁴⁰ <http://groundwater.kerala.gov.in/>

⁴¹ The sector/ department also has other institutions like Kerala State Electricity Board (KSEB)- responsible for large dams, KWA/ Jalnidhi- Responsible for drinking water supply, Irrigation Design and Research Board (IDRB)- responsible for research and design of dams/canals/drainages, and Centre for Water Resources Development and Management (CWRDM)- departmental technical training institute and of course RBCMA, which is proposed to be operationalised through the current support.

- | | |
|--|--|
| | <ul style="list-style-type: none">• Secure sustainable availability of groundwater and its augmentation by constructing recharge pit/ structures/ wells. |
|--|--|

Assessment of Sector Institutions

Largely being a technical agency with limited public interface, the department has low capacities on social management. Where required, for example, during design and planning of new minor- irrigation systems, the department takes the services of NGOs, LSGs, along with other relevant departments and elected leaders to seek people’s feedback, develop baselines, organize stakeholder consultations or tell them about benefits of new structures/ systems and seek community ownership or participation. Till 2012 the state had a Command Area Development Authority (CADA), which mobilized communities for the creation of water user associations (as part of Participatory Irrigation Management- PIM) and ensuring equity and access to water at the level of field drains/ channels where WUAs were created. Now under the Jal Shakti Mission the department has started forming WUAs on a small scale.^{42 43}

The Internal Proposal for Restructuring of WRD, (2019)⁴⁴ recognizes that most development decisions today are multi-disciplinary in nature involving economic, social and environmental dimensions and Integrated Water Resources Management (IWRM), the key responsibility of the department needs to be a “process which promotes co-ordinated development and management of water, land and related resources in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems”. The proposal accepts that for preparing effective river basin plans the institution will need to bolster capacities around- a) visioning and development of Basin management and water allocation plans, b) participation and co-ordination for fostering information sharing and exchange- although the revised structure does not seem to respond to the needs around increased social participation and mainstreaming principles of equity and transparency in the planning process.

Reinforcing this, the RKDP Master Document notes that the State’s progressive Water Policy has not been fully adopted ‘and its implementation is faced with many challenges. There are institutional inadequacies due to the way agencies are created and structured for managing water. The multiplicity of line agencies engaged in water sector are operating largely in isolation in sectoral (irrigation, drinking water supply, industrial water supply) and fragmented manner without taking cognizance of the interaction between resources (groundwater, surface water) and sectors (irrigation, municipal water supply, hydropower, environment)... The approach of the agencies is largely ‘supply oriented’, with no attention being paid to water demand management’.⁴⁵

Citizens Engagement- As discussed earlier the capacities of the department are more technical than social, largely because the department has traditionally been an engineering department with less public dealing, other than for water distribution under participatory irrigation. The

⁴² A time-bound, national campaign implemented by the National Ministry in India’s most water-stressed districts for water conservation and water resource management.

⁴³ The proposed RBCMA is likely to have 3 key units related to Operations Management, Planning and Design and Knowledge Management to look at, among other things, optimized water allocation plans, water use efficiency monitoring, disaster risk reduction and response, integrated basin planning which are expected to require social capacities.

⁴⁴ Draft Restructuring Proposal Kerala WRD, 2019

⁴⁵ RKDP Master Document https://rebuild.kerala.gov.in/reports/RKDP_Master%2021May2019.pdf

irrigation department has a Citizens Charter⁴⁶ which commits to provide irrigation to farmers, maintaining structures, supply water as per seasonal schedules, take up flood control measures, issue timely licenses and services as notified under the State’s Right to Services Act.⁴⁷ Hinting at low community capacities, the RKDP document also notes that the department has ‘Inadequate analysis of water availability and use patterns...required for proper water resources planning and management.’

In recent times there has been an effort to make the working of the department more citizen-friendly, which is brought out by initiatives to expand the WRIS to collect data on water availability, water demand, real-time dam positions/ water levels, apart from the standard hydrological and meteorological data for the benefit of community, and also attempts to create simple to understand dashboards for presenting these data, so that they are in a usable format for citizens.

Grievance Redressal- While one of the core functions of the department is also to receive complaints related to groundwater abstraction and distribution, it does not have a functional departmental level GRM and depends largely on state level GRM for receiving complaints and grievances from individuals and institutions. In some cases, the complaints received by the local government related to WRM are passed on to the respective Executive Engineers/ Field Offices for redressal. This is usually an informal and unstructured system, with no tracking of individual grievances. The department is now in the process of creating a digital space on its website ([Citizens Corner | Irrigation-Kerala \(irrigation-kerala.org\)](http://irrigation-kerala.org)) for citizens to register their grievances and share their feedback.

Gender and Social Inclusion- As analysed in the previous sections the sector institutions (irrigation, groundwater) have low capacities to understand issues around gender and social inclusion and largely bank on local governments and civil society for mobilization, providing trainings to staff and community members on community minor and micro-irrigation projects or on water budgeting/ audits. The low capacity of these institutions is overcome by the state level institutions, and an enabling policy regime that ensures appropriate handling of social risks and adverse impacts. However, as a practice the department commissions an Environment and Social Due Diligence (ESDD) before initiating any new dam based irrigation project.

Institutional Assessment – State level systems

As seen in the detailed assessment of the state level institutions in the section on Agriculture, they offer adequate social safeguards, by ensuring citizen’s engagement at various levels, providing a state wide system of grievance redress, securing the interest of women and ensuring their inclusion in schemes and programmes on priority, providing for their protection from exploitation and abuse. *(Kindly refer to state level institutional assessment in the chapter on Agriculture sector for more details)*

Program System Consistency with Core Principle

Core Principle	Social Assessment
Core Principle #1: Program E&S management systems are	The sector institutions/ departments have low social capacities primarily owing to their technical focus and

⁴⁶ [Citizen's Charter \(kerala.gov.in\)](http://kerala.gov.in)

⁴⁷ The department has notified 6 services under the Kerala Right to Services Act related to permission for water abstraction, no objection for irrigation projects and permission for works across water bodies and rivers/ canals

<p>designed to (a) promote E&S sustainability in the Program design; (b) avoid, minimize, or mitigate adverse impacts; and (c) promote informed decision-making relating to a Program's E&S effects</p>	<p>limited community interface. With the need to work on issues of equity in water distribution and closely working to reach WRIS information to the community for their increased resilience and preparedness, their social capacities will need to be bolstered, especially in the new RBCMA that is being proposed as part of the program investments.</p> <p>Considering the potential risks which are low to moderate, the state level institutions/ systems are mature and with added capacities can handle these social risks and impacts, citizen's engagement and participatory approaches for river basin planning and transparency through disclosures and information sharing.</p> <p>Although the state has an effective but common GRM, the department needs a dedicated and comprehensive GRM to ensure a more efficient redress of complaints.</p>
<p>Core Principle #2: Program E&S management systems are designed to avoid, minimize, or mitigate adverse impacts on natural habitats and physical cultural resources resulting from the Program. Program activities that involve the significant conversion or degradation of critical natural habitats or critical physical cultural heritage are not eligible for PforR financing.</p>	<p>The operations in this sector do not support activities that may have an impact on the religious or cultural resources of communities</p>
<p>Core Principle #3: Program E&S management systems are designed to protect public and worker safety against the potential risks associated with (a) the construction and/or operation of facilities or other operational practices under the Program; (b) exposure to toxic chemicals, hazardous wastes, and otherwise dangerous materials under the Program; and (c) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards</p>	<p>The project workers in case of operations in this sector will involve public servants of the irrigation department, IDRIB and also some contracted staff in the RBCMA and PMU that is proposed to be created during the operational phase. As there is no investment on physical works, labour involved is not expected. The public servants are protected by the service rules as well as national and states laws from abuse and exploitation.</p> <p>The operation will need to ensure fair working conditions for contracted workers deployed in RBCMA.</p>
<p>Core Principle #4: Program E&S systems manage land acquisition and loss of access to natural</p>	<p>No investments are planned that may lead to physical or economic displacement of communities or individuals - whether temporary or permanent in nature.</p>

<p>resources in a way that avoids or minimizes displacement and assists affected people in improving, or at the minimum restoring, their livelihoods and living standards.</p>	
<p>Core Principle #5: Program E&S systems give due consideration to the cultural appropriateness of, and equitable access to, Program benefits, giving special attention to the rights and interests of Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities, and to the needs or concerns of vulnerable groups.</p>	<p>The activities planned for this sector are for improved information generation and analysis of water resources, so that it can be used by communities for water distribution/ allocation within the community as well as between competing sectors, while ensuring equity as per state policies. They also intend to ensure timely information on water levels/ dam positions, flood forecasts so that impacted communities, especially vulnerable have improved resilience and are better prepared to face the disasters, through the creation of a more coordinated institutional and technical arrangement for information generation and distribution.</p> <p>If prepared through a participatory process, the river basin plans could respond to the needs and priorities of the dependent communities, including women and even the landless. For this department institutions will need to bolster their social capacities by engaging agencies or partnering with local NGOs/ CSO, CBOs like Kudumbshree and LSGs to capture people’s needs and include them in the basin level plans.</p> <p>State systems & established practices are expected to ensure transparency and accountability in preparation of RBP and WRIS</p> <p>There is however risk of exclusion of vulnerable inland fishing communities & women from basin level planning process, which may lead to non- application of the principles of equity in the allocation decided for <i>inter se</i> distribution of basin level water resources or in fixing of tariff/ cess for water users, making it unaffordable for the marginalised.</p>
<p>Core Principle #6: Program E&S systems avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.</p>	<p>While water resources of the Pamba Basin are contested between governments of Kerala and Tamil Nadu (under litigation), program investments are aimed at improved resource utilisation and efficiency and are not creating additional demands on the water resources; hence are not likely to lead to or exacerbate social or resource conflicts / disputes.</p>

Stakeholder Consultations and Disclosure

Stakeholders identified for consultations around this sector are mapped in the comprehensive stakeholder map prepared for the program. (*Annexure B*) These include departmental

functionaries at the state, district, sub-district and Panchayat / Municipal levels, as also line and support agencies and training institutions. They also cover user groups and community institutions formed around areas/issues where the sector investments are likely to occur. These consultations are aimed at understanding the current chain of implementation of schemes/projects in these respective sector institutions, assess the existing social capacities and procedures adopted by them, to see how social issues related to inclusion, access, equity in benefit sharing, participation, transparency/ accountability in sectoral planning and implementation are addressed by them and the gaps that exist therein. These consultations also aim at assessing from the point of view of the service providers/ duty bearers as well as communities, user –groups and service recipients the quality and inclusiveness of services, especially for the vulnerable groups- single women, small and marginal farmers, SHG members, fisherfolks, SCs/ STs, landless/ asset-less, elderly, People with Disabilities (PWDs) and migrants.

As shared in the methodology of ESSA, consultations with stakeholder were facilitated by Kerala Institute of Local Administration (KILA) at the state and in the Pamba basin districts. The following key inputs have been received from these stakeholder consultations and have been used to further inform this systems assessment.

Inputs from State Consultations

- Currently under the WRIS the hydrological and meteorological data is being collected along with data on water availability and demand. A policy decision still needs to be taken if data on water availability and demand will be accessible to public or not. Technically, it is possible to provide this data at the basin, LSG as well as watershed level, so that farmers and water user associations can utilize it for internal allocations.
- Aim of the WRIS is to make information on dam position available on a real-time basis for the community, and towards making this information pictographic so that common people can understand.
- Department has very limited internal capacities for community engagement. It banks on LSGs and NGOs for it. Usually it needs their services for drawing the baseline for minor irrigation works.
- Don't have a separate GRM, people use the LSGD one or the centralized one (CM-PGC) which is more structured and systematic.
- Department does not have a very clear cut mandate. Nowadays, even LSGs are permitted to construct minor and medium irrigation systems/ works.
- River basin planning is a recent feature. Earlier approach was based on piecemeal strategies, wherein local issues were addressed rather than addressing issues at river basin as a whole. Basin management related discussions were generally done with people's representatives and did not involve the community, including no discussion with small, marginal farmers or tail-end users.
- Currently technical studies are going on to develop a comprehensive river management plan for Pamba and detailed consultations with communities are in the pipeline, which will explore providing early flood warnings.
- Capacity building involving all stakeholders is required for developing a comprehensive strategy to safeguard the interest of SC/ST communities and a potential agency to lead this capacity building initiative is the irrigation department.
- The RB Management Authority is still in its planning phase, so currently the structure and composition are yet to be established.

- To ensure that flood forecasts and other advisories are in an understandable format and relevant for target audience, there must be a multi-disciplinary team to manage and provide diverse advisories aimed at different stakeholders.

Inputs from Community Consultations

- At present Panchayats (barring some in Iddukki district) are not involved in preparation of comprehensive Water Security Plans or Panchayat level Water Budgets, although GPs have a significant role in Pamba River Basin Planning. Before drawing up any basin level plans the bio-diversity, lifestyle and agriculture pattern of the Panchayat needs to be assessed.
- Flood forecasts and other advisories regarding disasters are made available through television and newspapers, but presently they are being provided by revenue department and not water authority; sometimes they are not in an understandable format/ language.
- Availability of water in Pamba Basin for agricultural and domestic use is inadequate; there are no measures in place to ensure access and participation in schemes for vulnerable such as landless, backward castes and small-scale farmers.
- If panchayats are given a role in river basin planning they will consider the water requirements of different constituencies - farmers, landless labourers, women and SC/ST- assessed through proper data collection and need assessment to ensure equitable allocation. Therefore, elected representatives must be capacitated on different aspect of river basin planning and management.
- To ensure objectivity and equity there is a need to ensure people's participation in planning for transparency in beneficiary selection and allocation.
- LSGIs have the most appropriate capacities to ensure participation of different social segments when implementing River Basin plans. Additionally, NGOs and CBOs should also be involved in preparation and implementation of the River Basin Plans.
- Water scarcity is experienced on highlands (tribal areas) where water tankers do not reach due to bad roads.

The limited capacities of WRD on Citizen's Engagement will be addressed through closely working with LSGIs, improved staff capacities in WRD and RBCMA on social management to ensure equity and inclusion in planning, access to services and information advisories. The issues of scarcity of drinking water in the uplands raised by vulnerable stakeholders will also get addressed as regulation and equity will be ensured during water allocation through river basin planning.

The draft ESSA report will be disclosed on the website of Resilient Kerala Initiative (RKI- RKDP) and on the World Bank external website for comments and feedback and will be finalized after incorporating the suggestions received from the stakeholders.

Gaps and Recommendations

- Since women bear a disproportionate burden of natural disasters, it will be important that women are made the primary benefactors/ recipients of the information on flood forecasts and dam positions/ water levels, especially in the habitations that are more vulnerable to floods and related events. They also need to be involved in the river basin planning process since women have a better sense of the local water demands and efforts required for water conservation. Given the limited capacities of the sector institutions, the department should explore engaging LSGs as well as CBOs like Kudumbshree for social mobilization around river basin planning and also facilitating

dialogues with the communities so that they could provide a voice to women and other marginalized constituencies in the Pamba Basin.

- The department and the RBCMA has limited experience of community engagement and hence needs to develop requisite capacities to manage social risks and impacts. It will also need to develop close working relationship with local bodies to ensure inclusion of the interest of different constituencies and participation of communities in river basin planning. The newly constituted authority also needs to have capacities on a) social development – to ensure gender mainstreaming, participation/ inclusion and accountability, b) information education communication (IEC) - to ensure access to WRIS information in an accessible form to communities, especially the tribal and fishing communities that the most vulnerable. The recruitment in the authority needs to ensure equal representation of men and women, placement of statutory gender and labour/safeguards, among other things, to ensure fair working conditions for the project workers/ staff.
- There is a need for a stronger department or program level grievance redress system that complements the other district or state wise GRMs in place. This will ensure closer scrutiny and tracking of complaints, refining the sector strategies planned under the operation and fixing accountability for actions. This will also ensure better tracking of outreach of investments and services planned for the sector and help in making the program services more accessible and inclusive.

Road Sector

Total road length in Kerala in 2017-18 is 2, 73,113.30 km- consisting of 1782 km of National Highway (NH), 4341 km of State Highway (SH) roads and 27,470 km of Major District Roads (MDR). The road traffic is growing at an average rate of 12 to 14 per cent every year, creating pressure on PWD road network. Road density in Kerala is 528.8 km/100 sq. km, as against the national average of 390 km. The length of road per lakh population is 686.55 km and almost 90 per cent of the road network is single lane.

National Highways, considered to be the primary network, carry 40 percent of the total traffic, and State Highways and Major District Roads (MDRs), which form the secondary road network, carry another 40 percent. Traffic has been growing at a rate of 10 to 11 per cent every year, resulting in excessive pressure, especially since less than 10 per cent of the road network handles almost 80 per cent of the total traffic. According to State Crime Records Bureau, 4,172 deaths and 45,443 injuries were reported in Kerala in 2018 from 40,289 road accidents in Kerala caused due to driver, road, vehicle condition and weather. Road Safety being a complex issue it requires consistent, prolonged and concerted efforts from various stakeholders to achieve the goals.⁴⁸

The major road network of Kerala, though well connected, faces severe constraints due to urban sprawl and haphazard ribbon development all along the routes. The existing traffic levels at most stretches are excessive and beyond the road carrying capacity. The floods of 2018 led to heavy damages to the roads, with roads in around 12 of the 14 districts reporting landslides, earth slips, debris flow and rock falls.⁴⁹

Program Description

Groundwork for reforms related has been done by World Bank through its previous engagements in the sector, to mainstream issues of disaster and climate resilience in sustainable road asset development and management- under First Resilient Kerala Program Development Policy Operation (DPO-1), and for ensuring continuity of road sector reforms and institutional strengthening initiated under- Kerala State Transport Project- KSTP- II.

Under the current operation, one of the proposed activities is to develop protocols for and operationalise the Road Maintenance Management System (RMMS), which has been initiated under the previous DPO. This will involve development of a Mobile based application to internally support the Public Works Department (PWD) in decision making and monitoring of road works and for use by general public to seek information on road assets and submit grievances/ complaints. This will also be enhanced with additional features related to Forward Works Program (FWP) which enables citizens/ users to see the current status of roads in their vicinity as well as upcoming and recent works done. This will be done by strengthening the capacities of the departmental training institution – KHRI with the establishment of an RMMS- Cell and training of KHRI and PWD staff on climate and disaster resilient road maintenance and management.

In addition, the operation involves supporting the development (rehabilitation or maintenance) of approximately 400 kms of Core Road Network, largely comprising of Major District Roads and State Highways in the Pamba Basin. This is planned to be done through performance-based road

⁴⁸ Kerala Economic Review 2018-19 Volume I, State Planning Board

⁴⁹ RKDP Master Document https://rebuild.kerala.gov.in/reports/RKDP_Master%2021May2019.pdf

maintenance contracts that are climate informed and are of resilient service standards. These investments are expected to be using sustainable asset management practices.

The type of activities proposed relate to infrastructure development - road network creation and improvement, institutional development and strengthening- new guidelines, systems and protocols around RMMS, maintenance contracts and resilience, capacity building of PWD apart from investment planning and its management.

Road name	District	Approx Length-km
Roads under climate-resilient Core Road Network (CRN)		
Gandhinagar-Medical College... Muttappally road	Kottayam	21.95
Vadayar Chandappalam- ... Muttuchira road	Kottayam	24.70
Pathanamthitta Ayroor... Thonnamala road	Pathanamthitta	28.12
Mallapally-Komalam... TMV road	Pathanamthitta	22.65
Malamekkara Kunnathukala ... Azad Junction road	Pathanamthitta	8.6
Thattararnbalam-Michael Junction-... Pandalam	Allapuzha	21.8
Veeyapuram-Edathua... Mullakarthuruthy	Allapuzha	21.35
Roads under OPBRMC- Performance Based Road Maintenance		
Kayamkulam-Mavelikkara-Thiruvalla	Allapuzha/Pathanamthitta	31.00

Expected Social Effects of the Program

The proposed interventions are likely to enhance the resilience of structures and assets- existing as well as new ones- leading to better preparedness and response in case of future disaster events. They are also intended to introduce greater accountability in the sector institutions/ works and also enlarge their public interface by creating systems for information sharing and providing opportunities for airing grievances/ community monitoring.

Benefits and Risks

Potential Benefits

The new RMMS will incorporate climate inputs that are expected to make future roads projects more resilient, with the ability to better handle weather events like floods and landslides, preventing inconvenience to commuters. The RMMS based systems are not only expected to create a number of road safety measures in road construction, better monitoring of works and decision making to create stronger accountability, but from a community perspective, they are also expected to lead to creation of tools for citizens engagement and community oversight.

Safer roads and roadsides are likely to significantly reduce injuries, mortalities and consequent impacts on the households. Studies have shown that women disproportionately bear the burden of road accidents, by often taking up extra work, assuming greater responsibilities and performing care giving activities for family members affected by accidents and to meet the medical costs.⁵⁰

⁵⁰ https://blogs.worldbank.org/endpovertyinsouthasia/road-crashes-affect-women-and-men-differently-heres-why?CID=WBW_AL_BlogNotification_EN_EXT



Plans to create mobile applications that citizens can use to see the condition of road network (and related amenities/ facilities) around them with provisions to provide feedback and grievances on these roads to the PWD will be in this direction. From a safety and access perspective the forward works program will also provide interactive digital platforms that commuters/ citizens can use to assess the condition of roads that they plan to travel on, find out if any road repair/ maintenance work is going on, at which point and for how long it is expected to continue. This will help them take more informed decisions about routes to take.

Improved road network through expansion and better maintenance is also likely to benefit commuters through better safety provisions and greater accountability of the contractors for road maintenance. This will also entail a greater transparency in the execution of the road contracts awarded, with the ability to see the progress versus plans on a real time basis by designated officials.

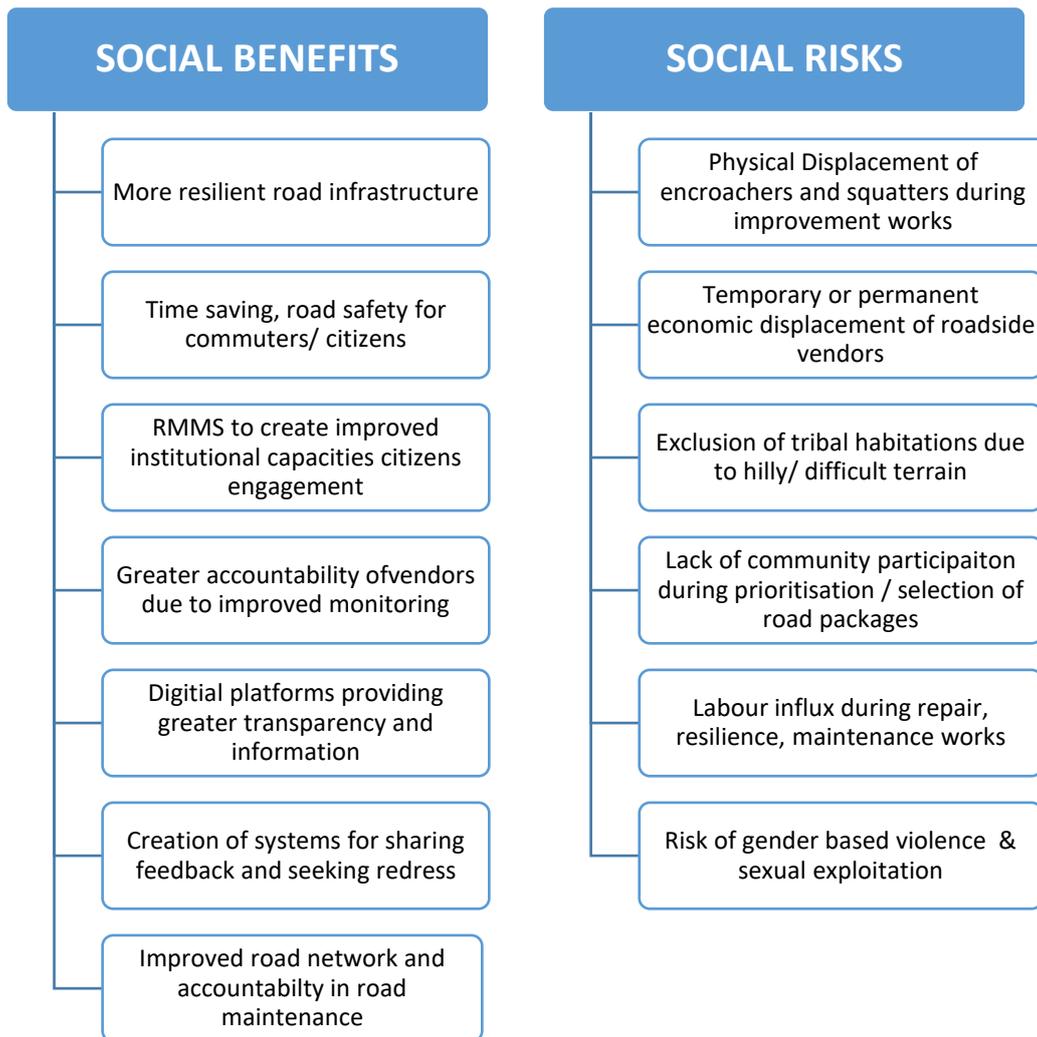
Potential Risks

As per the initial assessment, expansion and improvement of the existing core road network is not likely to require additional lands and that the existing land and RoW with the department will be used for rehabilitation and maintenance works. However, it is likely that there will be encroachments and presence of squatters along the planned alignments. This will lead to their economic displacement – temporary (for the period of construction) or more permanent in nature and hence will entail planning their relocation and rehabilitation as per Bank policies.

Usually the first priority for road construction and expansion are plain and rolling roads that are easier to develop as compared to hilly terrains that are difficult and costlier to develop. This leads to the exclusion of vulnerable communities (mostly scheduled tribes and particularly vulnerable tribal groups- PVTGs) who have settlements in such terrains. This is also because of no direct participation of communities in the selection or prioritization of such major roads.⁵¹ This is likely to keep these communities vulnerable during weather events as seen in recent years.

Large scale repair and maintenance works on nearly 400 kilometers of roads are likely to draw a large number of workers to the Pamba Basin districts. Owing to Kerala’s high dependence on non-local migrant construction workers, it may expose host/ neighbouring communities vulnerable to risks associated with labour influx, cause disruption for the host communities and also risk of gender based violence or sexual exploitation.

⁵¹ Local and internal roads come under the mandate of the LSG Department, GoK.



Legal Instruments, Policies and Programmes/ Schemes

Legal Environment for Road Sector

The national and state policies related to the road sector give priority to works related to road and highway repair that improve the safety and wellbeing of the citizens and commuters. The policies create systems for periodic road safety audits, especially for the key chainages and call for time-bound plans to fill safety related gaps and conduct repairs. They also recognize the need to create community awareness on road safety, consulting stakeholders (like LSGs, transport operators, road user groups, other departments, interested parties, etc.) during planning of projects/ alignments and setting up of road tariffs. The policies also call for creating regional highway authorities to guide land diversion or for acquiring lands. From a social perspective the policy has created a road safety authority and a safety fund to promote awareness on road safety, conducting safety audits and taking up physical work to fill gaps coming out of these recommendations. They, however, don't talk about involving communities or local governments planning roads or even in prioritizing roads to be taken up for construction in a region.

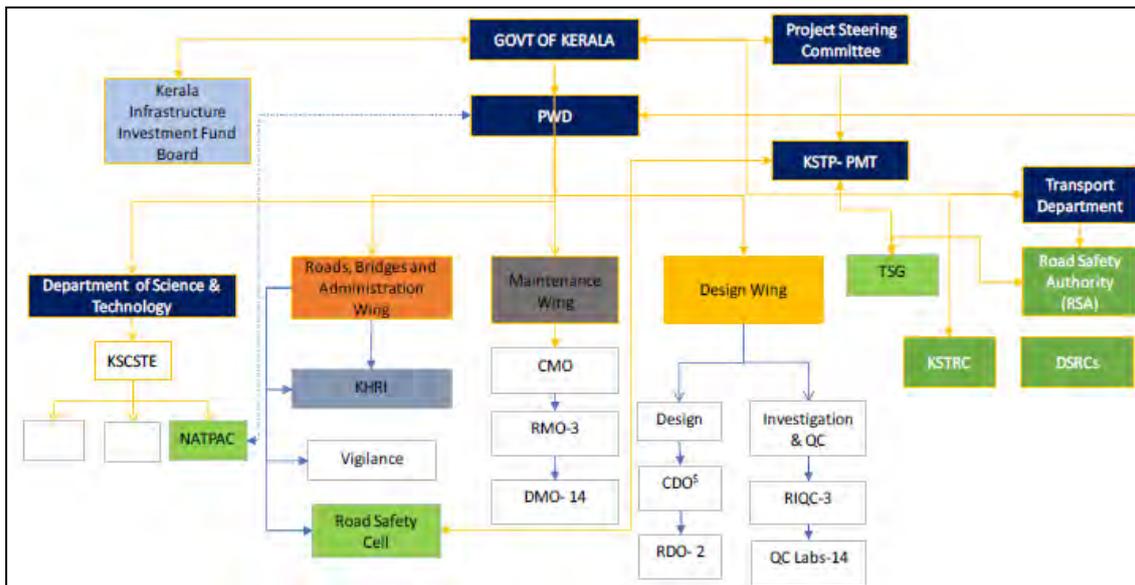
Major Sector Schemes

There are no major national schemes in the road sector that cover roads other than National Highways. There are funds like the National Bank for Agriculture and Rural Development (NABARD) managed Rural Infrastructure Development Fund (RIDF) - currently the XXVIth fund is operational) that provide funds to state governments and local self governments for construction of rural roads and bridges.

In the state, in last 2 financial years a large number of roads in the Disaster impacted areas have been funded under the Rebuild Kerala Initiative. Under Phase I of support 322 roads of length 602 kms and in Phase II 670 roads measuring 1024 kms have been identified for repair and construction and are being executed largely by the local governments.

Institutions and Capacities to Manage Social Risks

There are 2 key departmental institutions around which most of sector investments and engagements are likely to take place. For the first component on Road Maintenance and Management Systems (RMMS), within PWD the key wing anchoring the implementation of the performance based contracts will be its Maintenance Wing. Within PWD the World Bank supported Kerala State Transport Project will be the agency responsible for project management and execution of CRNs. The work related to capacity building of key staff and contractors on RMMS, establishing a Climate Change and Resilience Cell and integrating it in working of the department will be done by the departmental research and training institute called the Kerala Highway Research Institute (KHRI)⁵². Implementation of works related to maintenance and rehabilitation of the CRN will be done by the Roads, Bridges and Administration Wing of the department, within which the KHRI is located.



Institution	Functions relevant for Social Management
Public Works Department	<ul style="list-style-type: none"> Responsible for road safety and clearing all structures/obstructions on and along the road that compromise road safety

⁵² KHRI's official mandate includes applied research in the field of infrastructure development and conducts trainings for departmental stakeholders on material testing and quality improvement.

	<ul style="list-style-type: none"> • Maintenance of roads so that they are safe for commute and transportation • Address grievances of citizens regarding PWD's road assets, including their usage and conditions • Although this is not standard departmental practice, within KSTP a team of safeguards specialists ensures E&S due diligence for all major road packages/ lots tendered and mitigation/ management measures before initiating works.
Kerala Highway Research Institute	<ul style="list-style-type: none"> • Undertake trainings and capacity building of departmental stakeholders (staff and contractors/ vendors) on different issues including those related to road safety and road asset management.

Assessment of Sector Institutions

Being a technical, essentially an engineering department, PWD has historically maintained a limited citizen interface. It is only recently that functions related to RMMS have been assigned to Maintenance Wing of the department.⁵³ These functions include collecting information on all road and related assets through their Division level RMMS units, providing data centrally validated by the State RMMS Cell to the sub division level units for undertaking road maintenance works based on an Annual Road Maintenance Operation Program (ARMOP). Under RMMS there is effort to provide a step-hold for citizens to engage in the process of two-way information sharing and airing grievances.

As per RKDP,⁵⁴ the sector has inadequate capacity to meet the state's growing demand, with its scattered habitations and predominant dependence on roads for transportation.⁵⁵ This primary road network has come under increasing pressure from growing population and rapid traffic growth at around 12-14% annually. It notes that like in many other sectors road sector also faces the problem of multiple institutions lacking coordination. There are different wings for different category of roads (NH/ SH) and many Special Purpose Vehicles (SPVs) to manage road assets like KSTP, Kerala Road and the Bridges Development Corporation -KRBC, Kerala Road Fund Board-KRFB etc., leading to uncoordinated approach for asset development and management.

Citizens Engagement-This has been a recent area of attention for PWD, largely coming from the experiences gathered through the implementation of the KTSP- II. It has a Citizens Charter that declares itself to be a joint effort between PWD and its Clients/Asset Users to improve the quality of service. It calls its construction clients to demand accountability, maintenance clients to suggest improved efficiency and the asset users like commuters and road user groups to follow rules, not cause damage to road assets and structure and not engage in or help encroachments or unauthorized use of the roads.⁵⁶

There is, however, no engagement of community in planning roads and other assets. Current prioritisation of roads for construction or maintenance is based on an established departmental

⁵³ GO No 68/ PWD/2020, dated 16.10.20

⁵⁴ RKDP Master Document https://rebuild.kerala.gov.in/reports/RKDP_Master%2021May2019.pdf

⁵⁵ State roads caters to 75% of freight and 85% of passenger traffic

⁵⁶ In recent years various institutions/wings of PWD have sought to seek community participation by seeking suggestions on road safety as well as seeking involvement of local communities, NGOs, and other stakeholders in road safety projects, eliciting collaboration with CBOs and road user groups.

system, under which priority is given to roads based on current condition, future estimated traffic volume and urgency of need for repairs/ maintenance.⁵⁷

Grievance Redressal-The department has a helpline based GRM to address ‘citizen’s grievances regarding PWD assets, their usage and condition, which is essential for effective governance.’ It has a dedicated “Grievance Redressal Cell” (GRC) which looks at all complaints lodged by citizens about roads, bridges and their status/ condition. Each grievance is allotted a unique registration number and status of grievances can be tracked using this unique number. The status of grievances and pendencies are also reviewed on a monthly basis by the minister.⁵⁸ However, there is no data in the public domain on the number of grievances received and redressed by the department over given period.

Land Management- The state has a robust system for land procurement and acquisition that is in sync with the national law and World Bank E&S policy. The Kerala Highway Protection Act, 1999 also provides the newly established regional highway authorities with the authority to procure land either through acquisition or negotiation following legal prescription. The department, however, in practice does not recognize the rights of encroachers / street vendors and seeks to take legal action against roadside vendors and shopkeepers who encroach roads and sidewalks and undertake eviction against all encroachments on / alongside roads that inconvenience vehicular or pedestrian traffic and obstruct the implementation of development activities. It seeks to take help from the law enforcement agencies to remove such structures.⁵⁹ The responsibility for managing land related issues- managing acquisition and displacement is the responsibility of the revenue department of the state in close coordination with the local administration as per the prevailing national and state policies.

Gender and Social Inclusion-The department has adopted systems for ensuring adherence to Environment, Social Health and Safety (ESHS) standards in all road construction and maintenance contracts, irrespective of the funding source, whether externally aided or in-house, although in case of externally aided road packages/ lots the provisions are even more elaborate.⁶⁰ The contractor requirements include undertaking E&S due diligence, undertaking impact assessments and preparing management plans to manage risks/ adverse impacts.⁶¹ In terms of physical tasks, the standard bids for contractors seek fair labour management practices and working conditions as per ESHS and national policies, steps and facilities to ensure community and occupational safety of project workers, fairness in land procurement following prevailing national practices and due process for compensation and rehabilitation, seeking free prior informed consent from tribal/ indigenous communities in impacted project areas. In order to ensure compliance to the ESHS standards, the department provides for the contractor to furnish a performance security to dis-incentivize non-compliance. The standard bids also seek the furnishing of an undertaking or a Code of Conduct extending compliance with ESHS to contractor staff as well as sub-contractors.

⁵⁷ GO No 68/ PWD/2020, dated 16.10.20 assigning new responsibilities to Road Maintenance Wing

⁵⁸ <https://www.pwd.kerala.gov.in/Grievances>

⁵⁹ Government Order - CE Roads/General-3/2020-21 regarding ‘Eviction of Illegal Constructions and Encroachments on Roads under Public Works Department’ (rough translation)

⁶⁰ 1) Standard Bid Document For Procurement of Works Upgradation of Alappuzha-Changanassery Road into Semi Elevated Highway; 2) Output And Performance Based Road Contract (OPBRC), Bidding Documents - Contract no. KSTP/OPBRC -03 for the Maintenance of Roads under Package - 03 in Kollam, Alappuzha, Pathanamthitta Kollam-Ayoor, Kayamkulam-Mavelikkara-Thiruvalla Districts; 3) Bidding Document for Procurement of Works with Financing from KfW Bank for Rehabilitation and Up gradation of Mallapally... TMV Road (Length 23.129 km) in Pathanamthitta District

⁶¹ Alternatively, Management Strategies and Implementation Plans (MSIP) to manage ESHS risks.

Institutional Assessment – State level systems

As seen in the detailed assessment of the state level institutions in the section on Agriculture, state level institutions mandated for social management – citizens engagement, grievance redress, inclusion of vulnerable and socially excluded communities- offer adequate social safeguards, by ensuring citizen’s engagement at various levels, providing a state wide system of grievance redress, securing the interest of women and ensuring their inclusion in schemes and programmes through an enabling policy and legal architecture, thus providing for their protection from exploitation and abuse. *(Kindly refer to state level institutional assessment in the chapter on Agriculture sector for more details on state level systems)*

Program System Consistency with Core Principle

Core Principle	Social Assessment
<p>Core Principle #1: Program E&S management systems are designed to (a) promote E&S sustainability in the Program design; (b) avoid, minimize, or mitigate adverse impacts; and (c) promote informed decision-making relating to a Program’s E&S effects</p>	<p>The sector institutions/ department have low social capacities primarily owing to their technical focus. However, owing to continued engagements with the Bank in the road sector (KSTP I & II, Resilient Kerala Program Development Policy Loan)⁶² the Bank has been able to orient the organisation towards a more accountable and socially sustainable working. This is notwithstanding the fact that departmental decision making is still largely inward-looking and driven entirely by technical considerations, with no social considerations; case in point being prioritizations of roads to be selected for maintenance and repair being driven more by estimated volume of future traffic and present road condition rather than the need for reaching out to remote, inaccessible, tribal habitations.</p> <p>Considering the likely social risks related to land management and treatment of encroachments and squatters, sector/ state institutions need to be oriented to ensure fair resettlement of non-titleholders, including squatters and encroachers as per Bank policy.</p> <p>Although the department has a dedicated departmental GRM and a new upcoming digital platform based GRM (under RMMS), it needs to be more accessible and transparent in order to build the trust of citizens/ users to access them for registering grievances.</p>
<p>Core Principle #2: Program E&S management systems are designed to avoid, minimize, or mitigate adverse impacts on natural habitats and physical cultural resources resulting from the Program. Program activities that involve the significant</p>	<p>The operations in this sector do not support activities that may have an impact on the religious or cultural resources of communities.</p> <p>While works will be on existing alignments, any works of road expansion or modification in the RoW or existing roads that adversely impact or infringe on community</p>

⁶² Packages commissioned under First Resilient Kerala Program Development Policy Loan 6463-IN& 6464-IN

<p>conversion or degradation of critical natural habitats or critical physical cultural heritage are not eligible for PforR financing.</p>	<p>conserved areas/ sacred groves of indigenous communities will have to be excluded.</p>
<p>Core Principle #3: Program E&S management systems are designed to protect public and worker safety against the potential risks associated with (a) the construction and/or operation of facilities or other operational practices under the Program; (b) exposure to toxic chemicals, hazardous wastes, and otherwise dangerous materials under the Program; and (c) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards</p>	<p>The safety of workers/ labour management will be secured through effective contractor management.</p> <p>There is expected to be large scale mobilisation of non-local (inter–state) labourers for nearly 200 kms of road maintenance, repair contracts in the Pamba Basin districts. This will require development of elaborate Covid-compliant Labour Management Plans by the contractor to ensure worker and community safety.</p> <p>Labour mobilisation is also expected to pose influx related risks for host communities, especially considering that the state has dispersed, low population settlements, which further reduces the absorptive capacity of communities. Adequate measures will need to be in place, including orientation of labourers on the Worker Code of Conduct and community awareness on labour influx related risks.</p>
<p>Core Principle #4: Program E&S systems manage land acquisition and loss of access to natural resources in a way that avoids or minimizes displacement and assists affected people in improving, or at the minimum restoring, their livelihoods and living standards.</p>	<p>Although state systems for land acquisition are closely aligned with the national and bank policies, there is divergence in the treatment of encroachments and squatters. While the department in practice calls for legal action and eviction of such structures and occupants, the bank policy calls for suitable rehabilitation and compensation.</p> <p>Considering the nature of operations (PforR), all road repair and maintenance works along specific alignments requiring large scale resettlement of persons and removal of structures (impacting more than 50 PAPs) will be excluded from the list of investments.</p>
<p>Core Principle #5: Program E&S systems give due consideration to the cultural appropriateness of, and equitable access to, Program benefits, giving special attention to the rights and interests of Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities, and to the needs or concerns of vulnerable groups.</p>	<p>Roads planned for expansion and improving connectivity to tribal habitations are likely to be socially beneficial by improving access, leading to better rescue -relief to tribal communities during disaster events and hence slightly better resilience. Usually such habitations get excluded as tribal / indigenous communities live on the uplands/ hilly terrains which are the last landscapes to be picked up for road construction⁶³ owing to difficulty of road construction (costs and clearances) and convenience.</p> <p>There is risk of exclusion of tribal communities & women from prioritization of roads needing urgent expansion, restoration and maintenance as departmental systems</p>

⁶³ Of the 15 road packages selected under OPBRC works by KSTP, only 3 are for hilly terrains

	look at it from technical perspective rather than adding an inclusion lens to the decision making.
Core Principle #6: Program E&S systems avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.	The nature of program investments is such that they are not likely to lead to or exacerbate social or resource conflicts.

Stakeholder Consultations and Disclosure

Stakeholders identified for consultations around this sector are mapped in the comprehensive stakeholder map prepared for the program. (*Annexure B*) These include departmental functionaries at the state, district, sub-district and Panchayat / Municipal levels, as also line and support agencies and training institutions, apart from elected leaders, activists, Chairperson and Vice Chairperson of the CDS. They also cover user groups and community institutions formed around areas/issues where the sector investments are likely to occur. These consultations are aimed at understanding the current chain of implementation of schemes/ projects in these respective sector institutions, assess the existing social capacities and procedures adopted by them, to see how social issues related to inclusion, access, equity in benefit sharing, participation, transparency/ accountability in sectoral planning and implementation are addressed by them and the gaps that exist therein. These consultations also aim at assessing from the point of view of the service providers/ duty bearers as well as communities, user – groups and service recipients the quality and inclusiveness of services, especially for the vulnerable groups- single women, SCs/ STs, landless/ asset-less, elderly, People with Disabilities (PwDs) and migrants.

As shared in the section on ESSA methodology, consultations with stakeholder were facilitated by Kerala Institute of Local Administration (KILA) at the state and in the Pamba basin districts. The following key inputs have been received from these stakeholder consultations and have been used to further inform this systems assessment.

Inputs from State Consultations

- In most cases, when doing road widening or road construction, no land is available. Most projects are delayed due to the process of acquiring land. When land needs to be acquired PWD informs the Revenue department about the requirement, based on which land is acquired by the government and compensation paid by the state.
- Road to be repaired under RKP are usually selected by Kerala Infrastructure Investment Fund Board and PWD has no role in them. For CRN roads costing more than INR 150 million, PWD has a dedicated cell to assess social and environmental impacts, and such roads need to get approval by this cell.
- PWD does not directly hire labour for work and these works are tendered. It is the contractor’s responsibility to take measures for labour management and guiding their working conditions, including managing labour influx and their impact in terms of local distress, Gender Based Violence (GBV) and Sexual Exploitation and Abuse. PWD doesn’t include any of these issues in their norms while tendering road works.
- Although norms for occupational and worker safety are in place, there is scope for strengthening the monitoring mechanisms and guidelines related to them.

Inputs from Community Consultations

- LSGD implemented road packages (rural roads) are allowed only after Gram Sabha level consultations after which Panchayat gives approval. In case of rural roads they are given an opportunity to put forward a priority list for construction in their jurisdiction. In case of PWD roads, there is no discussion or role of GPs in prioritization of roads to be constructed. Most ULB representatives also said they were not sure about their involvement in prioritization of new road packages.
- More than public interest, technical and other considerations influence road package selections and this need to be replaced by a more democratic system. Community members are unaware of the criterion used for prioritizing roads by the PWD.
- When acquiring land for road construction the impact on factors like environmental and culturally sensitive areas, public utilities and individual livelihood are considered, but participation of local community in these consultations is minimal. Community stakeholders suggested that panchayat should be consulted before selecting road package, to ensure that roads are adequate and suited for versatile needs of the area.
- Most stakeholders were unaware if any risk screening was conducted before announcing road packages and if PWD had sufficient capacities to conduct such social screenings. Although PWD officials claimed participation of people in risk screening for development of roads and selection of packages, the community members were unaware of such instances.
- During road construction or maintenance PWD should take care that the livelihoods of nearby SC/CT and other households are not affected by road construction. The LSGs should monitor road construction in their jurisdiction and also ensure that livelihoods are not impacted during construction phase. There is a need to increase transparency in the system of road construction and use of participatory approach.
- Regarding grievance redress mechanism within the PWD, participants are not aware of any such measures and believe that there is only legal recourse through the judiciary; they suggested that PWD staff be given training on grievance redressal and general awareness be created about their GRM.

Stakeholder concerns, including those of women and vulnerable communities, related to lack of information on criterion used by PWD for prioritizing roads or use of any risk screening for road selection has been addressed by the program through adoption of RMMS and performance based contracts, which provide transparency and accountability to the system. It also gives citizens an opportunity to register grievances and offer suggestions. Capacity building of staff on land acquisition and harmonization of policies related to resettlement will also address stakeholders' concerns relating to minimal consultations during the land acquisition and resettlement process.

The draft ESSA report will be disclosed on the website of Resilient Kerala Initiative (RKI- RKDP) and on the World Bank external website for comments and feedback and will be finalized after incorporating the suggestions received from the stakeholders.

Gaps and Recommendations

1. The department uses technical parameters to assess the need for improved roads along a specific alignment, based on the present condition of the road and future vehicular traffic. There is need to have a more participatory and broad-based approaches involving wider consultation in deciding which alignments in a region need to be prioritized for maintenance based on requirements of local residents. This needs to be done by adoption

of greater transparency, through participation of local communities, who are also commuters and users, local governments, civil society/ NGOs and decision on prioritization of roads needs to be optimized using technical as well as access related parameters for screening and selection of alignments.

2. The department has a GRM but needs to be bolstered to make it more accessible and transparent. Right now the level of efficiency that the system has reached can't be assessed as the information on grievances received and redressed is not available in public. However, bolstering of this mechanism complemented by the RMMS based GRM and citizen access will significantly improve the citizen engagement of the department, make its operations more transparent as well as accountable while at the same time building the trust of citizens/ users to access them for their registering grievances.
3. Land and labour management practices of WRD need to be aligned to the Banks requirement, especially in relation to its treatment of non- titleholders (encroachments, squatters) and labour/community safety issues. In the present PforR operation due consideration will need to be given to treating such occupants as per the Bank policy, avoiding any works/ road modernization works that involve large scale economic or physical displacement of individuals and families. The PWD tender documents also need to address risks and issues related to GBV, SEA and labour influx through inclusion of related contractual obligations and mechanisms for monitoring these obligations. All road alignments or packages involving large scale resettlement of persons and removal of structures (impacting more than 50 PAPs) will be excluded from the list of investments. Social screening will be carried out to assess the scale of impact on each package to assess the resettlement related mitigation measure required for packages with low impacts (less than 50 PAPs)

Social Protection and Disaster Risk Financing

As per the multi agency Post Disaster Needs Assessment (PDNA) undertaken in August 2018, in the aftermath of floods and landslides in Kerala, total estimated loss of person-days and wage loss for female workers (casual, regular and self-employed) was INR 13,579 million. At least 3,550 Kudumbashree women entrepreneurs were adversely affected as their microenterprise units, set up using loans amounting to INR 7.80 crore suffered losses. Similarly, over 130 fishing enterprises supported by Society for Assistance to Fisherwomen (SAF) with 400 women members were affected, requiring compensation of INR 16 million.

Despite the large pool of social protection schemes implemented by the state to reduce vulnerability and exclusion following the floods, there were instances where compensatory mechanisms did not work effectively to reach out to neediest. Discussions in tribal colonies in Wayanad and Malappuram suggested that many families were not in the beneficiary list for compensatory financial aid, in other cases tribal families reported not receiving full compensation. There were SC and ST families who did not receive cash assistance due to poor understanding of norms for eligibility, bringing out the deficiencies in the safety net.

In addition, there is low awareness in the state and the country about the use of insurance as a mechanism complementary to social protection for creating risk resilience among vulnerable households. This is largely due to low literacy levels among farming communities as well as high fragmentation of landholdings.

Program Description

The proposed interventions for this sector fall into 2 categories:

- I. Social Protection- which aims to bring together entitlements and benefits provided by various national and state social protection schemes under a single roof- as a unified registry of all social security schemes. This is to be done by developing a single, harmonised state level beneficiary database⁶⁴, based on eligibility and entitlements, so that these entitlements can be delivered more efficiently- by removing errors of exclusion as well as inclusion (duplication) from the database and timely- through the system of Direct Benefit Transfer (DBT). The idea is to create a proactive and responsive registry that can be used to transfer financial aid in the immediate aftermath of an event and even in anticipation so that people are equipped with financial resources to initiate disaster response and recovery immediately-(improve post-disaster payout procedures for relief, response and reconstruction). This could also be used in case of the disease or pandemic outbreak to access health insurance provided by government schemes.
- II. Disaster Risk Finance- This is aimed at supporting the state to develop an integrated disaster risk financing strategy, financing investments in resilience and by increasing the coverage and effectiveness of agriculture insurance program in the Pamba Basin districts. In addition, this subcomponent also entails supporting state to raise resources from market to meet the post disaster funding gap for disaster response and reconstruction needs

⁶⁴ Pooled by different government agencies that have been operating their respective entitlement delivery schemes independently.

The type of activities proposed under social protection relate to institutional development and strengthening of institutions-by way of creating a social protection database of the state, piloting the delivery of entitlements to vulnerable communities, investment planning and its management through enhanced coverage of crop insurance in Pamba Basin.

Expected Social Effects of the Program

The proposed interventions are likely to enhance the efficiency of delivery of public benefits and entitlements under different social protection schemes, benefit the poor and vulnerable, who are largely targeted by such schemes. The harmonisation of entitlement and eligibility databases of the state and bringing it on a single platform is also likely to improve the inclusiveness of this database/ registry. The crop insurance schemes are also likely to improve disaster and climate resilience in agriculture, especially for the smallholders, if the accompanying eco-system becomes more responsive to the farmers.

Benefits and Risks

Potential Benefits

The program investments are likely to create improved access to entitlements and benefits under different social security schemes and also provide efficient and timely delivery of entitlements (like disability/ old-age/ widow pensions, school scholarship, medical aid, financial-aid for relief and reconstruction, including those like old-aged, PwDs who are critically dependent on social protection schemes for survival.⁶⁵ This is also likely to increase the inclusiveness of schemes, allowing for improved entitlement access to women, poor and the marginalised for whom most of these schemes are targeted.

Improved awareness among the farmers about crop insurance and its benefits as a mechanism for private/ individual risk financing, especially in Pamba Basin, which is particularly vulnerable to disaster events) and its adoption among farmers is likely to lower the overall risk of income loss due to weather and other events.⁶⁶

Potential Risks

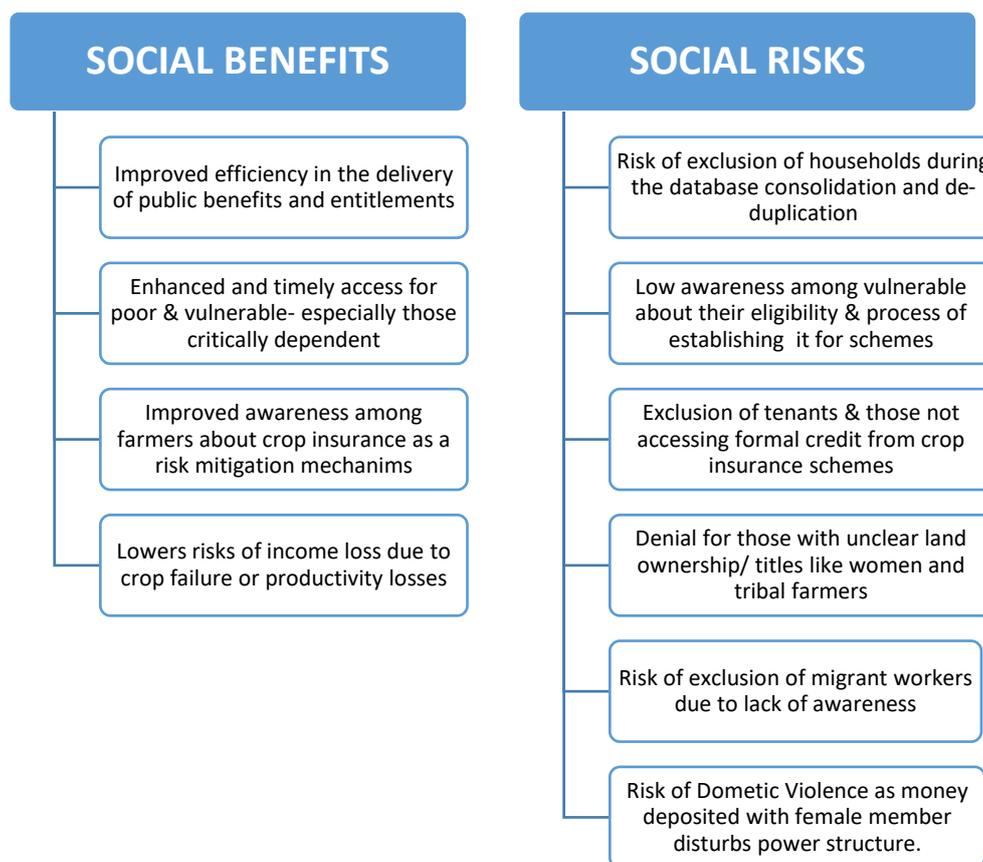
There are risks of errors of exclusion with households getting dropped during the process of unification of database/ registry. There is also very low awareness among members of vulnerable communities, migrants, especially SC & ST about their eligibility for entitlements and the process to be adopted (evidences and documents) for establishing eligibility for social protection schemes. Global precedents show that there is risk of increased gender based and intimate partner violence if benefits are transferred into the accounts of female family members as it disturbs the intra-household power structures and assigned gender roles.

This gets exacerbated in fishing communities where incidence of alcoholism and domestic abuse are already very high. There are also likely risks of exclusion of coastal fishing communities from getting disaster preparedness related social protection entitlements owing to their overall low awareness and access to public services.

⁶⁵ As a first step nearly 89 national and state schemes have been identified for convergence, harmonization under this sector investment.

⁶⁶ Under Restructured Weather Based Crop Insurance Scheme (RWBCIS), in Kharif 2018 season, 19,103 farmers were insured covering an area of 13,469ha.

The crop insurance scheme leads to the exclusion of a large number of farmers, particularly from the SC & ST due to their status as tenant or share croppers⁶⁷ and lack of unclear land titles and low awareness.⁶⁸ Most crop insurance schemes are exclusionary by design as only those who access formal institutional credit and grow specific notified crops in a region,⁶⁹ are covered, which in most cases excludes tribal and women farmers. In many instances women in agriculture lack land ownership, formal land titles or have very small land parcels, or grow non-notified crops aimed at subsistence and household food security, restricting their access to such schemes. They also exclude the landless and marginalized who access informal credit and for whom the proportionate cost of accessing insurance is very high.⁷⁰



Legal Instruments, Policies and Programmes/ Schemes

Social Protection - Other than policies and programmes that promote inclusion in schemes and programs of the state there are no specific policies or legal instruments that create an enabling environment for improved governance of social protection schemes. Likewise there are no schemes that create a motherboard to which the program investments will be pegged. This will entail getting multiple institutions to share and converge their respective databases and schemes and bring them under a single commonly agreed umbrella nodal institution, which will then manage the unified registry.

⁶⁷ The new restructured state scheme allows farmers cultivating leased lands.

⁶⁸ Ministry of Agriculture Annual Report 2017-18- Two-thirds of farmers surveyed during audit were not aware of crop insurance schemes.

⁶⁹ Eligibility criteria for getting insurance in most crop insurance schemes

⁷⁰ The uptake of crop insurance remains less than 10% across the State- RKDP Master Document

Crop Insurance – While the national and state policies talk about creating resilience in agriculture, they lean more towards adoption of climate resilient agricultural practices and talk less about use of insurance as a measure for management of farm risks.

Major Sector Schemes

For social protection of the fisher folk, fisheries department is running a savings scheme during lean season wherein active fisher folk get regular support as welfare during May-July and this benefits approx. 2.42 active inland and marine fisher-folks. This is over and above the social protection and benefit schemes operated by the State Cooperative Federation of fisherfolks-MATSYFED, including group insurance.

There are two major schemes around crop insurance, the national scheme - Pradhan Mantri Fasal Bima Yojana (Prime Ministers Crop Insurance Scheme), and state scheme - Weather Based Crop Insurance Scheme (WBCIS). Despite the presence of both schemes, the combined present outreach is limited to less than 10 percent of the farmers⁷¹- mostly the medium and large land owners. While the national schemes covers very select crops grown in the state like paddy, banana, tapioca and plantain, the state scheme WBICS also covers farming collectives like the Padasekharams and has a larger crop coverage- paddy, arecanut, pepper, ginger, sugarcane, turmeric, cardamom, pineapple, banana and nutmeg, although this additionality covers spices and plantation crops, which are usually grown by better off farmers.⁷²

Institutional Systems and Capacities to Manage Social Risks

There is no existing institutionalized structure for the delivery of social protection schemes. However, for registry unification, the food entitlement database for the Public Distribution System (PDS) which is prepared and maintained by the Department of Food and Civil Supplies is proposed to be used as the starting point for converging all other entitlement databases.⁷³ This is because PDS is by far the most comprehensive, updated and inclusive database in any state and in Kerala has been seeded with / linked to Aadhar (the National Social Security number) in the case of more than 80 percent households. Along with the PDS, the database of Ayushman Bharat⁷⁴ (national health insurance scheme for vulnerable- which is comprehensive) will be merged as a first step towards data integration.

The unified social protection payment system under the current operation is aimed at ensuring relief payments to the bank accounts of female head of eligible families, to be piloted through the coastal fishing communities, which is expected to increase women's autonomy, their social status within family as well as their ability to decide the priorities on which these funds would be spent. On the flip-side, it is also likely to exacerbate domestic violence due to risks of changes in intra household power structure unless social capacities of the implementing agencies are augmented to handle these likely social impacts.

Department of Food and Civil Supplies (F&CS) will thus be the primary provider of database for the unified registry, while Department of Revenue (DoR) is likely to be the nodal agency for use

⁷¹ This is despite the fact that crop insurance is compulsory for those accessing institutional credit under the government scheme

⁷² GO No 15465/18 on Restructured Crop Insurance Scheme- 2018-19 Working Instructions

⁷³ The state PDS database has nearly 9 million beneficiaries.

⁷⁴ Ayushman Bharat is the National Health Protection Scheme attached of Ministry of Health and Family Welfare. Under it the Pradhan Mantri Jan Arogya Yojana (PM-JAY) has the benefit cover of ₹5 lakh per family per year. Target beneficiaries are expected to be 10 crore families belonging to poor and vulnerable population.

and maintenance of the database.⁷⁵ DoR will collect data from other agencies implementing social security schemes- like Department like Agriculture, Fisheries, KSDMA- to create a combined database of vulnerable population after mapping individual and household characteristics/ eligibilities/ asset ownership.⁷⁶ Although the detailed institutional mechanism for implementation is being developed, responsibility for updating and validation of the database is likely to be with LSGD, along with CBOs and other collectives.

In addition, Information Kerala Mission (IT Mission of GoK) and state office of National Informatics Centre- NIC are likely to provide technical support to the department of Revenue (providing software for integration of databases) and also work towards ensuring privacy and protection of this vast data that will be used by multiple institutions for delivering their respective social schemes.

For crop insurance, the primary responsibility within DoA wrest with the Krishi Bhawan, which along with the LSGD is responsible for registration, fixing of premium, policy issuance and payment of compensation, with the district officials responsible for verification of applications and compensations and oversight.

Assessment of Sector Institutions

There is no established institutional structure for the unified social protection database and is likely to be created within the department of revenue. The Department of F&CS has a very active citizens engagement as it is responsible for monthly delivery of food entitlements to the citizens (heavily subsidized food rations to the poorest and vulnerable/ destitute) and partially subsidized to less poor and those above the poverty line)- serving a majority of the state population through its ward and Panchayat level Fair Price Shops. It has a Citizens Charter, 14 notified services under the Right to Public Services and also a functional GRM to address grievance related to the functioning of Public Distribution System with provisions for online filing of complaints⁷⁷ and tracking them or submitting grievances through tele- helplines. It also operates an e-Ration Card Management Services⁷⁸ under which people can submit applications for inclusion in the PDS either directly or by using the services of Akshaya Common Service Centers.

As shared in the sector assessment on Agriculture, Krishi Bhawans as the grassroots institution is vastly overstretched and understaffed. Comptroller and Auditor General ,while evaluating the crop Insurance scheme, noted that Grievance redressal systems and monitoring mechanisms for speedy settlement of farmer’s complaints at GOI and state government levels were inadequate and observed that ‘despite provision of large amount of funds under the schemes to private insurance companies, there was no provision for audit... even though WBCIS provided for an oversight agency.... Monitoring of the schemes by GOI, state governments and implementing agencies (of the schemes) was very poor’.⁷⁹

Institutional Assessment – State level systems

As seen in the detailed assessment of state institutions in the section on Agriculture, institutions mandated for social management – citizens engagement, grievance redress, inclusion of vulnerable and socially excluded communities- offer adequate social safeguards, by ensuring

⁷⁵ This is owing to DoR being the lead agency for disaster risk management and coordination

⁷⁶ The current PDS database records information around 88 household parameters and 34 individual parameters.

⁷⁷ <http://pg.civilsupplieskerala.gov.in/>

⁷⁸ https://ecitizen.civilsupplieskerala.gov.in/index.php/c_login

⁷⁹ Ministry of Agriculture Annual Report 2017-18

citizen's engagement at various levels, providing a state wide system of grievance redress, securing the interest of women and ensuring their inclusion in schemes and programmes. (Kindly refer to state level institutional assessment in the chapter on Agriculture sector for more details)

Program System Consistency with Core Principle

Core Principle	Social Assessment
<p>Core Principle #1: Program E&S management systems are designed to (a) promote E&S sustainability in the Program design; (b) avoid, minimize, or mitigate adverse impacts; and (c) promote informed decision-making relating to a Program's E&S effects</p>	<p>The investments are aimed at better disaster preparedness by improving efficiency in delivery of public entitlements and benefits under different social security schemes and supporting risk financing in agriculture as a measure to increased resilience of farmers.</p> <p>However, the issues of exclusion of marginal, women and tribal farmers from accessing crop insurance and lack of enabling local ecosystems, including institutional capacities remains a concern and a reason for low off take. There is also risk of exclusion of fishing communities from pre-disaster safety nets and also risk of increased gender based violence entitlements are aimed to be delivered into accounts of female members of the household.</p>
<p>Core Principle #2: Program E&S management systems are designed to avoid, minimize, or mitigate adverse impacts on natural habitats and physical cultural resources resulting from the Program. Program activities that involve the significant conversion or degradation of critical natural habitats or critical physical cultural heritage are not eligible for PforR financing.</p>	<p>The operations in this sector do not support activities that may have an impact on religious or cultural resources.</p>
<p>Core Principle #3: Program E&S management systems are designed to protect public and worker safety against the potential risks associated with (a) the construction and/or operation of facilities or other operational practices under the Program; (b) exposure to toxic chemicals, hazardous wastes, and otherwise dangerous materials under the Program; and (c) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards</p>	<p>Proposed investments involve working with government staff and employees who are governed by national/ state laws and protected by service rules and policies from abuse, and exploitation.</p> <p>A majority of government functionaries in the state are women, including those involved in agriculture extension and at Krishi Bhawans responsible for creating awareness and outreach for crop insurance schemes; legal policy framework offers reasonable safeguards to ensure safe working conditions for women employees.</p>

<p>Core Principle #4: Program E&S systems manage land acquisition and loss of access to natural resources in a way that avoids or minimizes displacement and assists affected people in improving, or at the minimum restoring, their livelihoods and living standards.</p>	<p>No investments are planned that may lead to physical or economic displacement of communities or individuals - whether temporary or permanent in nature.</p>
<p>Core Principle #5: Program E&S systems give due consideration to the cultural appropriateness of, and equitable access to, Program benefits, giving special attention to the rights and interests of Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities, and to the needs or concerns of vulnerable groups.</p>	<p>Creation of a unified state level database of ‘eligible’ linked to their respective entitlements is likely to benefit the poor and vulnerable. Since this reconfiguration of social security entitlements is aimed at improved efficiency and timeliness of delivery, which is crucial for some constituencies (like old aged, PwD, children, single women) who in many cases depend on these social security schemes for food security and survival- it is likely to provide timely and improved access to schemes/benefits, including those for indigenous communities.</p> <p>Crop insurance is, however, likely to lead to exclusion of smallholders and those with unclear land titles (women and tribal producers), sharecroppers in case of national schemes and also those who don’t access credit from formal institutions. Coverage of only certain crops notified for a given region and high transaction cost of taking insurance for marginalised landholders are other reasons that dissuade farmers from treating crop insurance as a risk mitigation measure.</p>
<p>Core Principle #6: Program E&S systems avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.</p>	<p>The nature of program investments is likely to reduce vulnerability and create systems to improve their resilience during normal times and in the event of disasters and as such is not likely to lead to social conflicts.</p>

Stakeholder Consultations and Disclosure

Stakeholders identified for consultations around this sector are mapped in the comprehensive stakeholder map prepared for the program. (*Annexure B*) These include departmental functionaries at the state, district, sub-district and Panchayat / Municipal levels, as also line and support agencies and training institutions, including chairman and vice chairman of the municipalities, SHG members, PHC workers and teachers. They also cover user groups and community institutions formed around areas/issues where the sector investments are likely to occur. These consultations are aimed at understanding the current chain of implementation of schemes/ projects in these respective sector institutions, assess the existing social capacities and procedures adopted by them, to see how social issues related to inclusion, access, equity in benefit sharing, participation, transparency/ accountability in sectoral planning and implementation are addressed by them and the gaps that exist therein. These consultations

also aim at assessing from the point of view of the service providers/ duty bearers as well as communities, user –groups and service recipients the quality and inclusiveness of services, especially for the vulnerable groups- single women, SCs/ STs, landless/ asset-less, fisherfolks, elderly, People with Disabilities (PwDs), children and migrants.

As shared in the ESSA methodology, consultations with stakeholder were facilitated by Kerala Institute of Local Administration (KILA) at the state and in Pamba basin districts. The following key inputs have been received from these stakeholder consultations and have been used to further inform this systems assessment.

Inputs from State Consultations

- Department of Revenue will be the nodal for social registry, although by mandate and expertise LSGD is best placed to implement this piece in partnership with Information Kerala Mission.
- Main focus is to ensure inclusion of S&M farmers, livestock owners etc. and hence attention is needed to frequently update this database and Panchayat listings.
- Information Kerala Mission is providing software and e-governance services for the social registry and demographic data of volunteers is being mapped on a pilot basis for use during disaster events.
- The current challenge is to ensure privacy of this huge state level database. Ideally, total integration of data is not required; if the data system allows integration and is loosely coupled it will help unification and help protect data integrity. Once the state has an open data policy in place it will allow for data integrity and data protection. This will be first step towards data unification for a common social registry.
- Access and inclusion issues can only be resolved by creating larger awareness, as some like tribal and fisher folks get left behind. One solution is to ensure their regular participation in Gram Sabhas by mobilizing them through social workers/ volunteers and monitoring by Ward level working groups to ensure that no one is left behind.
- A new Fisheries Information Management System (FIMS) is being set up to centralize data on state fisher-folks. This will be updated every year and all related schemes will be moved to FIMS, which is targeted, more transparent and accountable.
- Department of Agriculture compensates for crop loss through its IAMIS portal and farmers registered on the portal are eligible for compensation against crop loss, subject to submission of documents and evidence. These are then validated by AOs.
- Under the National Food Security Act (NFSA) subsidized food-aid is provided through PDS. In the PDS database inclusion of vulnerable communities are ensured through an organic system of periodic updation.
- There is GRM at every district where a monitoring committee is constituted to see if complaints are genuine and then direct them to concerned Panchayats. GRMs are accessible to general public and most services can be accessed online either directly or through Akshaya centers, from where scheme information can also be accessed.

Inputs from Community Consultations

- Social protection benefits are currently being received by most eligible citizens, although there are some exclusion errors that get rectified from time to time. If there is any exclusion, then ward council members and civic volunteers, supported by other community members, regularly screening and validate the database to ensure inclusion of all those eligible.

- There is good coverage of pensions and PDS in Panchayats as most eligible persons and households are receiving benefits. There is scope for making the procedure to access PDS and pensions entitlements (like farmers pensions) simpler, widen access and provide grievance redress through pension adalats (pension courts), which are still in planning phase. Inclusion of people in government schemes is mostly facilitated by elected representatives, frontline workers, Kudumbashree members and ASHA workers.
- In some GPs the scheme for risk finance of fishermen is not being implemented as duty bearers are not awareness about the scheme. In some districts Fishermen Risk Finance is being implemented in the Panchayat through Kerala Fishermen's Welfare Fund Board (KFWFB).
- Crop insurance is only given when loss is caused by breakage of embankments, while in case of simple flooding, insurance is not provided and hence is considered unreliable by farmers. On a positive note, crop insurance is being utilized by some farmers, although the present system needs modification in its eligibility criteria for more farmers to receive insurance payouts.
- In some districts farmers are getting crop insurance payouts (although slightly delayed) after the process was made online-esp. for those with smartphones. The intermediaries and insurance agents benefit the most at present, therefore, it is important to increase awareness and insurance benefits so that benefits reach farmers directly. S&M farmers face a variety of risks, such as crop loss due to pests, wild animals, natural disasters and present insurance coverage is inadequate to cover these losses. The process needs to be simplified.

The errors of exclusion that stakeholders talked about will be addressed by the unified registry, which will ensure mapping of those eligible for specific entitlements. Capacity enhancement of implementing partners will ensure improved awareness among tribal and fishing communities about schemes targeting them and better crop insurance coverage for smallholders. Social recommendations around improved capacities are aimed at improved transparency in implementation of crop insurance scheme and also at addressing the concern of vulnerable groups and women related to simplification of documentation and process for establishing eligibility and accessing various social protection entitlements.

The draft ESSA report will be disclosed on the website of Resilient Kerala Initiative (RKI- RKDP) and on the World Bank external website for comments and feedback and will be finalized after incorporating the suggestions received from the stakeholders.

Gaps and Recommendations

- I. Social protection schemes are mainly accessed by those who are most vulnerable to disaster events and shocks in the society- including elderly, PwD, single women, children, patients, victims of violence and abuse, transgenders as well as fishing communities. Any transition to a new or unified system of benefit/ entitlement delivery is likely to increase the susceptibility of eligible beneficiaries to exclusion during portability⁸⁰ unless it is accompanied by strengthening capacities of participating institutions in the area of citizens engagement (for making scheme participation more inclusive and norms simpler), awareness generation (to create awareness about schemes, their eligibilities and process for accessing them) and accountability. This is

⁸⁰ Considering that old schemes like PDS still suffer from errors of exclusion, despite lot of effort being devoted nationally and individually by states to ensure inclusion of all eligible households.

crucial due to the critical dependence of many members of marginalized groups on these entitlements for basic survival and food security.

- II. As seen in the assessment above, there is a need to create an enabling and accountable eco-system around crop insurance schemes to expand awareness, eligibility and coverage of crop insurance. This will require structural changes in existing schemes to make the process of beneficiary identification more inclusive, through expansion of the eligibility criteria for receiving crop insurance. The process of delivering insurance, estimation of premium and the processing of claims esp. for S&M farmers needs to be made more transparent and timebound with strong local Panchayat and departmental oversight.
- III. **A.** While PDS has a strong and effective grievance redress system, since the unified registry may be located in the Department of Revenue, it will be important to create a strong GRM for the nodal institution managing the registry, considering the sensitive nature of entitlements handled, along with the need to maintain the integrity and privacy of the data being managed. Taking the effective elements of GRM currently being used for PDS by the state– like the use of multiple media for receiving grievances, allowing citizens to apply for entitlements directly as well as through CSCs- the new redress system will need to be simple, accessible and large scale efforts will be needed to create awareness around it, considering that a majority of state population, including the most vulnerable, will receive different entitlements through this registry.
- IV. **B.** The GRM for crop insurance also needs to be strengthened as part of the process of eco- system strengthening. Although there are centralised and toll free numbers for national crop insurance schemes, they are not well publicised and are unable to address simple farmer queries and such grievances are not tracked leading to their low credibility and low usage. A traceable, time bound system with features for escalation is required to make grievance redress around crop insurance more credible and accountable.

Fiscal Reform

As per the Post Disaster Needs Assessment done in August 2018 it was estimated that the state will require nearly 13621 crores to cover damages & losses and nearly 15,659 crores to meet the recovery needs across infrastructure sector and utilities.⁸¹ GoK has promised a Resurgent Kerala Loan Scheme (RKLS), which is an interest free loan scheme to provide immediate financial support to flood affected families, separate funds for 25 special programs under the Nava Keralam (New Kerala) Project for rebuilding the state with Rs. 2.5 billion earmarked for affected panchayats, apart from a number of schemes sanctioned under RKDP.⁸²

However, there still exists a significant funding gap that needs to be addressed apart from the need to set aside funding for disaster response, resilience and climate adaptation. This required a 'greater focus on revenue enhancement, more prudent debt management and improved quality of public expenditures.'⁸³

Program Description

The investments and activities proposed under this sector include development of a debt management plan to produce quarterly/annual debt forecasts/ updates related to debt management and undertaking a feasibility study on debt restructuring options and implementing its recommendations, considering the fiscal implications of recent natural disasters and COVID-19 pandemic

Expected Social Effects of the Program

Restructuring of the public debt and more prudent debt management planning is likely to lead to more efficient use of resources and availability of additional development resources to meet the poverty reduction needs of the state.

No adverse social impacts or risks are likely to emerge from the activities proposed as part of fiscal reform in the state.

Legal Instruments, Policies and Programmes/ Schemes

The state policies call for efficient and responsive systems for management of public finances, although they don't address social risks related to handling of public resources.

Institutional Systems and Capacities to Manage Social Risks

The department of finance will be responsible for these sector investments related to debt management planning and restructuring, although they don't have any specific/ relevant social management functions related to debt management and have no public interface- as their primary responsibilities are around financial management, budgetary planning, allocation and coordination. Since the proposed investments don't carry any likely social risks, no social management is expected to be required.

Program System Consistency with Core Principle

Core Principle	Social Assessment
Core Principle #1: Program E&S management systems are designed to (a) promote E&S sustainability in the Program design; (b) avoid, minimize, or mitigate adverse	The operations in this sector are likely to improve financial management in the state and are likely to make additional resources

⁸¹ Funding needs of Infrastructure Sector, Post-Disaster Reconstruction, PDNA August 2018

⁸² GoK had accorded Administrative Sanctions (AS) to RKDP schemes worth ₹677.92 crore by December 10, 2019.

⁸³ RKDP Master Document https://rebuild.kerala.gov.in/reports/RKDP_Master%2021May2019.pdf

<p>impacts; and (c) promote informed decision-making relating to a Program's E&S effects</p>	<p>available for poverty and vulnerability reduction, as well as building community resilience. No social risks are assessed to emerge from these investments.</p>
<p>Core Principle #2: Program E&S management systems are designed to avoid, minimize, or mitigate adverse impacts on natural habitats and physical cultural resources resulting from the Program. Program activities that involve the significant conversion or degradation of critical natural habitats or critical physical cultural heritage are not eligible for PforR financing.</p>	<p>The proposed activities don't have an impact on the religious or cultural resources of communities.</p>
<p>Core Principle #3: Program E&S management systems are designed to protect public and worker safety against the potential risks associated with (a) the construction and/or operation of facilities or other operational practices under the Program; (b) exposure to toxic chemicals, hazardous wastes, and otherwise dangerous materials under the Program; and (c) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards</p>	<p>The responsibility of steering the preparation of debt management plans will lie with staff and employees of Department of Finance who are governed by service rules and state policies. No impacts of adverse nature are assessed.</p>
<p>Core Principle #4: Program E&S systems manage land acquisition and loss of access to natural resources in a way that avoids or minimizes displacement and assists affected people in improving, or at the minimum restoring, their livelihoods and living standards.</p>	<p>No investments are planned that may lead to physical or economic displacement of communities or individuals - whether temporary or permanent in nature.</p>
<p>Core Principle #5: Program E&S systems give due consideration to the cultural appropriateness of, and equitable access to, Program benefits, giving special attention to the rights and interests of Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities, and to the needs or concerns of vulnerable groups.</p>	<p>No adverse impacts are expected on indigenous communities or effects that create risks for equity in access to public /financial resources.</p>
<p>Core Principle #6: Program E&S systems avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.</p>	<p>The nature of program investments is such that they are not likely to lead to or exacerbate social or resource conflicts.</p>

Stakeholder Consultations and Disclosure

Owing to non-likelihood of any adverse social impacts of these proposed investments, and since there are no direct or visible/ cascading community impacts no sector or community consultations were planned around fiscal reforms.

Gaps and Recommendations

None.

Health Sector

Kerala's health sector has been a model for other States with health standards comparable with those of developed countries. It has made significant gains with highest life expectancy, lowest infant and maternal mortality rate, birth rate, and death rate in the country. The state has recently launched the Aardram Mission (1 of the 4 'sub' missions under 'New Kerala Mission', which aims at achieving public health sector related Sustainable Development Goals 2030⁸⁴ in a time bound manner. It aims at People-friendly Services, re-engineering and standardizing health facilities and institutions, improving comprehensive access to health services for the vulnerable population. Government of India's flagship National Health Mission (NHM), with its 2 sub missions for Urban and Rural areas-NUHM-NRHM, provides flexible resources to tackle challenges related to communicable diseases, infrastructure creation and maintenance, training frontline health workers.

However, the state faces increasing incidences of communicable diseases like chikungunya, dengue, leptospirosis, swine flu etc. which is a major cause of concern. Health status of the marginalised communities like Scheduled Tribes, and fisherfolk is poor compared to that of general population. To tackle these, concerted and committed efforts with proper inter sectoral co-ordination is essential.⁸⁵ In order to improve the tracking and health/ disease surveillance in the state (for communicable diseases), the state is in the process of revamping the protocols and improving the outreach under the Integrated Disease Surveillance Programme (IDSP), under the NHM that aims to detect and quickly respond to disease outbreaks in the country.

The PDNA notes that the gains that state made by strengthening linkages with private sector for disease surveillance must be strengthened within the Integrated Disease Surveillance Programme (IDSP) system. More investments are needed in district health laboratories to detect flood-related diseases like leptospirosis, and health systems planning for acute events.⁸⁶

Program Description

Contributing to the state effort as part of Resilient Kerala Initiative of arresting the incidence of communicable diseases, the sector investments look at supporting the state in initiating – (1) a more comprehensive and integrated systems of health and disease surveillance (One Health)⁸⁷ to improve detection and notification of health events and disease outbreaks, (2) better collection-investigation- analysis-confirmation of data, prompt escalation and sharing of this data with state (and national) for quicker response and control.

RKP will help in strengthening Component 1 related to improved detection and notification of outbreaks and events by facilitating capacity development and involvement of panchayats (Elected Representatives-ERs) and Community Based Organisations (women's collectives like Kudumbshree) to expand health/ disease surveillance in the Pamba Basin Districts (on a pilot basis), so that communities can benefit through quicker detection and sharper response to adverse health events.

Under Component 2, the support will be to follow the lead provided through Component 1 (Community based surveillance) for faster collection, analysis and confirmation of tests/data.

⁸⁴ SDGs No. 3 on 'Good Health and Well-being'

⁸⁵ Kerala Economic Review 2018-19 Volume I, Kerala State Planning Board.

⁸⁶ Post Disaster Needs Assessment August 2018

⁸⁷ One health system aims to make disease surveillance comprehensive by detecting incidents of disease/infection transmission among animals, plants and humans and understanding their causes / causality. One Health platform will consist of district health, animal husbandry and forest officers with identified nodal points for data triangulation.

This will be done by expanding the network of Integrated Public Health Laboratories (IPHLs) in the basin districts, by setting up new laboratories, improving their infrastructure and capacities of human resource/ technicians operating them. This will increase the present network of public health laboratories in the state⁸⁸, increase footfall of patients (from the present 1400-1500 outpatients per day) and the number of tests performed by this lab network (which presently runs an average of about 11,000 lab tests daily).⁸⁹ Complementing this, these IPHLs will also be equipped with all necessary equipment and assets, staff/ technicians trained on all aspects of laboratory operations and management.

One Health Platform will be established and operationalised in districts through the creation of a coordination and information sharing mechanisms among representatives of Health (IDSP functionaries), Veterinary/ Animal Husbandry and Forest & Environment Departments for wider surveillance, joint analysis of data on human, plant and animal diseases/events in the district.
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The type of activities relates to infrastructure development – expansion of the public health laboratory network and procurement of materials, institutional development and strengthening- training and capacity building of technicians/ health staff on testing and disease surveillance along with investment planning and management.

Expected Social Effects of the Program

The proposed innovative health sector interventions are likely to improve the outreach of disease and health surveillance in the select districts, with local bodies and community institutions up-scaling the surveillance work being done on a much limited scale by the designated IDSP cadres in the district and expanding the scope of surveillance to also track and respond to zoonotic disease outbreaks. Complementing the task of wider surveillance needs a larger network of operational institutions to conduct higher number of tests among suspected patients, faster confirmation of results and quicker escalation to decision makers.

Benefits and Risks

Potential Benefits

Expansion of the network of IPHLs will lead to improved access for the served communities in the Pamba Basin districts to testing facilities at public health facilities. This will be especially beneficial for poor and vulnerable communities since the tests offered at the IPHLs are affordable and primarily free of cost, as compared to those at private labs and referral laboratories in the district. Presence of IPHLs in newer locations, with ability to test and deliver results quickly will help in reducing health expenditure for poor households in 2 ways- a) reduce travel time and transaction costs, and b) faster detection to lead to initiation of precise treatment and cost savings.

Involvement of community members (CBOs) in the process of community health and disease surveillance will create greater awareness and alertness about disease outbreaks and health events and improved collaboration with local bodies and departments relevant to

⁸⁸ At present there are 9 Public Health Labs in the State.

⁸⁹ Kerala Economic Review 2018-19 Volume I, Kerala State Planning Board.

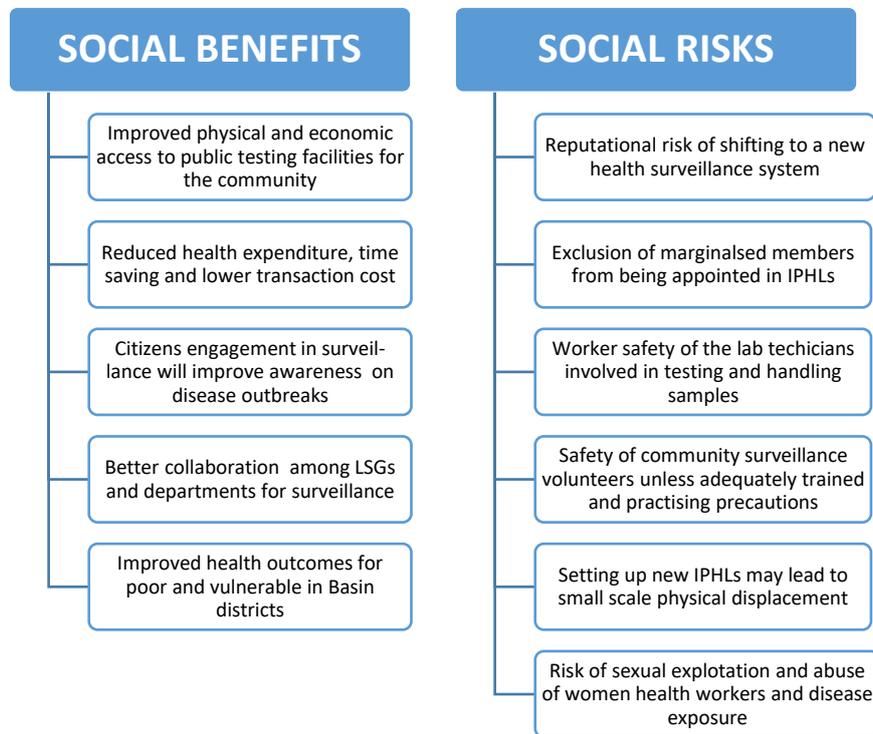
⁹⁰ Human diseases: Integrated Disease Surveillance Programme (IDSP); Animal Diseases: National Animal Disease Referral Expert System (NADRES)

operationalise One Health is expected to lead to better health outcomes and well-being for communities, especially those vulnerable and poor.

Potential Risks

The social risks associated with the project are related to the reputational risk of shifting to a new system of health surveillance and hesitation in adopting the new system unless there is strong orientation and awareness about it among the community members. There is also risk of staff from marginalized communities being excluded from being selected and recruited into the new IPHLs and also exclusion from the new community health volunteers being created for disease surveillance. In addition, there is risk of worker and community safety, especially for the technicians deployed in laboratories for testing and community members going for surveillance, unless they are adequately prepared with necessary precautions.

The space requirement for setting up new IPHLs at the district level is approximately 150 square meters. As per the health counterpart, there will be no land requirement for setting up the new labs and spaces within existing district level health institutions/ buildings or unutilized land available with the department will be used for constructing new buildings to set up these public health labs. While specific sites for locating the new IPHLs have been identified , in the case of new building there is risk that the land even though owned by the health department may not be free of encumbrances and may lead to the displacement of encroachers or squatters, even though the scale of this impact is likely to be limited in nature.



Legal Instruments, Policies and Programmes/ Schemes

Legal Environment for the Health Sector

The state policy gives importance to the need for strengthening primary health care, so that it can play a key role in strengthening disease surveillance at the grass root level to prevent spread of epidemics. The policy envisages creating a public funded, free, universal health care system, bringing key health indicators to the levels found in developed countries. It also

recognizes the vital role of local institutions in provision of health services, especially in areas like disease surveillance and offering affordable health services.

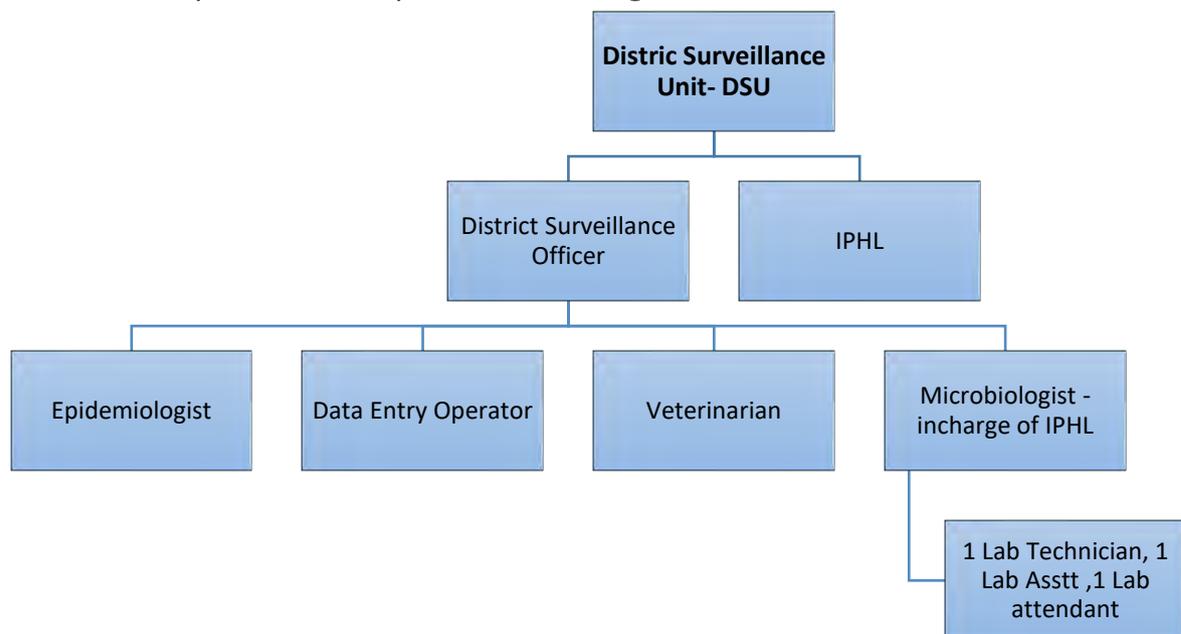
The sector laws and policies combined with the state legal instruments and policies ensure an inclusive approach towards the provision of accessible and affordable public health services to the communities. The policy as well as several social security schemes provide free healthcare to the old/ elderly, differently-abled, orphans, single women, children of female headed households as well as specific health care services to patients of certain ailments.⁹¹

Major Sector Schemes

Integrated Disease Surveillance Programme (IDSP) - The key scheme mandated with disease surveillance and maintaining IPHLs is IDSP, whose objective is to strengthen disease surveillance, by establishing a decentralized State/ District based surveillance system for epidemic prone diseases. It also aims to detect early warning signals, so that timely and effective public health actions can be initiated. This it intends to achieve through decentralization of surveillance activities, establishment of surveillance units at State and District, Training Surveillance Officers, Rapid Response Teams and Medical /Paramedical staff for surveillance, collecting, collating, analyzing and disseminating data and strengthening of public health laboratories for testing and confirmation of outbreaks.⁹²

The scheme provides for setting up Central State and District Surveillance Units (CSU, SSU, and DSU). The DSU has an IPHL attached to it in some districts and also has the provision of a District Surveillance Committee (with representation from Civil Society, local government) for monitoring the implementation of IDSP and reviewing the scheme progress.⁹³

Institutional Systems and Capacities to Manage Social Risks



⁹¹ Liver, kidney related diseases, Thalassemia, diabetes, sickle cell anemia

⁹² IDSP has a sub-scheme called 'Strengthening of Inter-sectoral coordination for prevention and control of zoonotic diseases' that aims to promote the One Health Approach.

⁹³ DO No Z-21020/107/2018-PH 15TH July 2019 of Ministry of Health & Family Welfare on 'Establishing State & Distt Surveillance Committees'

The District Surveillance Unit- DSU created under IDSP in the district comprises of the District Surveillance Officer- DSO supported by 4 contractual staff.⁹⁴ The microbiologist in the DSU is also the head of the IPHL linked to the DSU and has 3 additional contractual staff to operate the IPHLs.

Institution	Functions relevant for Social Management
State Health Department/ IDSP Cell- State Surveillance Unit	<ul style="list-style-type: none"> • Seeks involvement of LSGs in the functioning of Family Health Centres- FHCs.⁹⁵ • Post floods the department successfully mobilized & created a cadre of community health volunteers (<i>Arogyasena</i>) using community institutions like Kudumbshree to increase community participation and outreach. • Strengthening of Public Laboratories to offer quicker diagnosis and response • Capacity building of medical / paramedical staff along with health and veterinary professionals⁹⁶ on surveillance, bio-safety and rapid response. • Creation and dissemination of IEC for generating community awareness on Zoonosis
District Surveillance Unit / District Public Health Laboratories	<ul style="list-style-type: none"> • A bio-safety manual specific to these labs developed on infection management, worker safety, waste management • Monitoring the implementation of bio-safety protocols at IPHLs is part of monitoring indicators • Regular training and orientation of laboratory staff on bio-safety measures and infection control • Ensure provision of Personal Protective Equipment- Gloves/ Mask/ Apron/ Others for use by Lab personnel at site

Assessment of Sector Institutions

Health being a function delegated to the local bodies, health and LSG departments work closely together, leading to higher community participation in health planning and delivery of services.

A national review of IDSP and functioning of laboratories under it states, 'in addressing the emerging health needs of the population, health workforce is confronted by issues of shortages, skewed distribution, quality, accountability, weak capacity, work overload, inadequate growth opportunities and motivation'. A World Bank review also showed that 'the lack of adequate personnel in the State and District headquarters to ensure all units under IDSP report timely, report factually and the reports are analyzed promptly. It identified that the most critical bottlenecks included lack of dedicated staff and very low capacity, especially at district and block levels to analyze and use surveillance data for local decision and outbreak responses'.⁹⁷

Citizens Engagement – As shared above, there has been an increasing reliance on local governments, community institutions and local cadre of health volunteers (*Arogya-Sena*) for

⁹⁴ In 2010 provision for an additional position of a Veterinarian was created to look at zoonotic diseases

⁹⁵ FHCs- First referral unit in the chain of health service delivery, located in each village

⁹⁶ Program For Strengthening Inter-Sectoral Ordination For Prevention And Control Of Zoonotic Diseases:

Operational Guidelines

⁹⁷ IDSP: Human Resource- <https://idsp.nic.in/index1.php?lang=1&level=0&linkid=410&lid=3693>

enhancing awareness, outreach and disease surveillance. The preparation of district health plans under National Health Mission (NHM) also involves ensuring participation of the civil society, community representatives in the identification and prioritization of their health needs. The IDSP has also created institutions like the State and District Surveillance Committees (both of which have representation from Civil Society, local government) for monitoring the implementation of IDSP at the state and district level respectively. In the last few years there has been renewed emphasis in the scheme on using ICT to create community awareness about the importance of disease surveillance and on zoonosis.⁹⁸ The state has recently developed a mobile application called the Kerala Health Disease, to create awareness, involve community in health surveillance and for use by healthcare providers.

Grievance Redress- While the national scheme has a centralised toll free number and a call centre to receive complaints; more often alerts on suspected disease outbreaks all over the country, the state has no dedicated GRM either for the health department or state IDSP/SSU. Owing to their coordinated and close working, most community members use GRM of the local self government department (LSGD) for registering their complaints related to health services or the state level GRM- Chief Ministers Grievance Redress Management System. This remains a weak link in ensuring social accountability of the services related to health/ disease surveillance.

Land Management – There are different layouts and minimum space requirements prescribed for laboratories to be located at different levels- Panchayat/FHC, Block/ Community health Centres and District Hospitals- which are 10 sq mtrs, 90 sq mtrs and 150 sq mtrs respectively. Most IPHLs are likely to require at least 150 sq meters of space for setting up the labs.⁹⁹ The department has no powers for land acquisition or for rehabilitation of encroachers occupying the departmental land. It usually relies on the local administration/ LSGs or revenue department for any land management that needs to be done, including seeking support of local bodies for freeing their lands of encumbrances in line with LARR 2013 and the state policy on land acquisition. An initial screening of the sites required for setting up IPHLs will be done by the Health Department to assess whether the land is free of encumbrances or not. Based on this assessment, in case of latter, a request will be made to the local administration either directly or through the executing agency (usually the State Public Works Department) to get the land freed of encumbrances.

Labour Management- IDSP makes specific provisions for worker safety, especially for technicians working in the IPHLs. There are clear enforced instructions for bio-safety and infection control. All monitoring and review protocols for IPHLs necessarily talk about ensuring physical availability of bio-safety manual and biomedical waste management guidelines¹⁰⁰ in the laboratories, strict use of Personal Protective Equipment (PPE) by the lab personnel and their strict adherence.¹⁰¹ It also calls for the documentation of laboratory safety policies and procedures being adopted.

However, all staff (technicians) operating the IPHLs are on contractual employment, who are either hired directly by the State Health Society/ Authority or through recruitment firms with unsure employment conditions. While their technical qualifications and job responsibilities are

⁹⁸ Program For Strengthening Inter-Sectoral Ordination For Prevention And Control Of Zoonotic Diseases: Operational Guidelines

⁹⁹ Architectural Considerations for laboratory design, Guideline Document For Design Of BSL 2 Labs (District Hospitals, CHC And PHC) Level

¹⁰⁰ Guidelines for Management of Healthcare Waste as per Biomedical Waste Management Rules, 2016

¹⁰¹ <https://idsp.nic.in/showfile.php?lid=4020>

centrally defined by IDSP, National Centre for Disease Control (NCDC)¹⁰² their conditions of employment are left to the states to decide. As per an assessment, most of the IPHLs and DSUs are understaffed with significant vacancies across DSU for the positions of District Epidemiologists and Data Managers.¹⁰³

Gender and Social Inclusion- As shared above, state health department works towards providing free, public funded, universal health care system across the state. It also implements several social security schemes that provide free healthcare to the elderly, differently-abled, orphans, single women, children of female headed households as well as specific health care services to patients of certain ailments. Selection of beneficiaries for most health schemes is left to the frontline workers and local bodies/ elected leaders to jointly decide. A vast majority of health extension/ frontline staff consisting of ASHA (Accredited Social Health Activist) workers and ANM (Auxiliary Nursing Midwives) in the state are female, with some male multi-purpose workers.

The state has created and has been using a large pool of female community health volunteers to create outreach and awareness about health services. Considering the initial success of this model the state is likely to use it more often for delivering health services and is proposed to be used for extended disease surveillance in the current operation as well. Since most positions in IDSP are contractual and also considering the staff shortage, it is possible that recruitments do not follow the reservation criteria used for recruitment to regular government staff positions. There is also additional effort to create greater awareness among communities around IDSP and make the program more inclusive.

Institutional Assessment – State level systems

As seen in the detailed assessment of state level institutions in the section on Agriculture, they offer adequate social safeguards, by ensuring citizen’s engagement at various levels, providing a state wide system of grievance redress, securing the interest of women and ensuring their inclusion in schemes and programmes on priority, providing for their protection from exploitation and abuse. *(Kindly refer to state level institutional assessment in the chapter on Agriculture sector for more details on state level systems)*

Program System Consistency with Core Principle

Core Principle	Social Assessment
<p>Core Principle #1: Program E&S management systems are designed to (a) promote E&S sustainability in the Program design; (b) avoid, minimize, or mitigate adverse impacts; and (c) promote informed decision-making relating to a Program’s E&S effects</p>	<p>The sector investments are likely to operate within a strong sectoral and state level legal framework that ensures equity and inclusiveness in delivery of health services to its citizens.</p> <p>The applicable health institutions and systems, in collaboration with local governments, are competent to assess and manage the likely social risks. There is, however, risk of new IPHLs being understaffed to deliver on the mandate of conducting quicker and larger number of tests for effective disease surveillance. This is an institutional gap that will need to be filled through better recruitment and investments on bolstering capacities at</p>

¹⁰² Revised TORs for Contractual Staff (SSU/DSU), IDSP, National Centre for Disease Control, 2019

¹⁰³ Leptospirosis: A public health problem, SSU of IDSP, Directorate of Health Services, Kerala

	<p>the IPHLs. An assessment of reasons for higher vacant positions at the IIPHLs will need to be done to ensure competent staff that enjoy favourable work conditions. Likewise, capacities of community health volunteers also need to be enhanced before they are engaged in disease surveillance.</p> <p>While state has mature systems of citizen’s engagement and GRM, health department and the program (IDSP) do not have a dedicated functional GRM to handle program specific grievances and feedback. The nodal sector institution needs to create an accessible GRM with established procedures for submission of grievances and their redress within agreed timelines.</p>
<p>Core Principle #2: Program E&S management systems are designed to avoid, minimize, or mitigate adverse impacts on natural habitats and physical cultural resources resulting from the Program. Program activities that involve the significant conversion or degradation of critical natural habitats or critical physical cultural heritage are not eligible for PforR financing.</p>	<p>The operations in this sector do not support activities that may have an impact on the religious or cultural resources of communities</p>
<p>Core Principle #3: Program E&S management systems are designed to protect public and worker safety against the potential risks associated with (a) the construction and/or operation of facilities or other operational practices under the Program; (b) exposure to toxic chemicals, hazardous wastes, and otherwise dangerous materials under the Program; and (c) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards</p>	<p>IDSP has detailed & functional protocols to ensure worker safety in IPHLs through strict adherence to bio-safety and biomedical waste management procedures, which are regularly reviewed and reported.</p> <p>Most IDSP positions in the SSU, DSU and IPHLs are contractual whose conditions of employment are not clearly defined. Key positions in many DSUs are vacant which impact scheme performance, efficiency of the labs and overburdens existing staff.</p> <p>Engagement of large number of female frontline workers and Kudumbshree members as health volunteers is also likely to impose sexual exploitation and abuse/safety related risks unless they are made aware of risks, precautions and suitably equipped for the same.</p> <p>The sector investments may result in engagement of some labour for repair of existing buildings or construction of smaller ones to house the IPHLs. While it is not clear at this stage, this will either be executed by PWD itself or follow their norms of labour management, which are competent to ensure worker safety and labour management.</p>

<p>Core Principle #4: Program E&S systems manage land acquisition and loss of access to natural resources in a way that avoids or minimizes displacement and assists affected people in improving, or at the minimum restoring, their livelihoods and living standards.</p>	<p>No additional land will need to be acquired for the construction of the Public Health Laboratories. The department intends to use available space within existing district level health institutions like district hospitals, health clinics for creating the IPHLs. Although the space requirement is low (around 150 sq meter per lab at the district level) it is possible that these lands are not free of encumbrances and are occupied by non-titleholders.</p> <p>The likelihood of such displacement is low (may not be relevant at all sites/ locations) and if occurring will have a limited scale of impact, the department does not have the capacities to manage acquisition and will take the help of local administration. Considering the divergence in treatment of non- titleholders between the state and Bank policy the latter will need to be adhered, beginning with an initial risk screening to assess the scale and nature of impact.</p>
<p>Core Principle #5: Program E&S systems give due consideration to the cultural appropriateness of, and equitable access to, Program benefits, giving special attention to the rights and interests of Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities, and to the needs or concerns of vulnerable groups.</p>	<p>The state systems are geared to provide inclusive health services to the poor and vulnerable. The district health planning processes ensures consultation with different constituencies and representation of their needs in the final plans.</p> <p>Based on this realisation of vulnerabilities and different health related needs of social groups, state operates several social security schemes providing health benefits and free healthcare to elderly, differently-abled, orphans, single women, children of female headed households.</p> <p>Understanding the need to cover all geographies, including the underserved tribal habitations, department is expanding the IPHL network to bring services closer to the community. The state strategy of mobilising local health volunteers for improved outreach of health services and access is aimed at responding to the needs of the vulnerable. Most of these health services are primarily free of cost making them inclusive and affordable. However, there is risk of exclusion of migrant workers from accessing public health services due to their absence from state health databases and lack of valid documents to establish local identity.</p>
<p>Core Principle #6: Program E&S systems avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.</p>	<p>The nature of program investments is such that they are not likely to lead to or exacerbate social or resource conflicts.</p>

Stakeholder Consultations and Disclosure

Stakeholders identified for consultations around this sector are mapped in the comprehensive stakeholder map prepared for the program. (*Annexure B*) These include departmental functionaries at the state, district, sub-district and Panchayat / Municipal levels, as also line and support agencies and training institutions, including chairman and vice chairman of the municipalities, SHG members, PHC /ASHA workers and teachers.. They also cover user groups and community institutions formed around areas/issues where the sector investments are likely to occur. These consultations are aimed at understanding the current chain of implementation of schemes/ projects in these respective sector institutions, assess the existing social capacities and procedures adopted by them, to see how social issues related to inclusion, access, equity in benefit sharing, participation, transparency/ accountability in sectoral planning and implementation are addressed by them and the gaps that exist therein. These consultations also aim at assessing from the point of view of the service providers/ duty bearers as well as communities, user –groups and service recipients the quality and inclusiveness of services, especially for the vulnerable groups- single women, SCs/ STs, landless/ asset-less labourers, elderly, People with Disabilities (PwDs) and migrants.

As shared in the section on ESSA methodology, consultations with stakeholder were facilitated by Kerala Institute of Local Administration (KILA) at the state and in the Pamba basin districts. The following key inputs have been received from these stakeholder consultations and have been used to further inform this systems assessment.

Inputs from State Consultations

- Government facilities for testing were not charged, only private facilities, including those acquired during pandemics are charged, but these charges and the supply of testing kits were regulated by the state. There is no additional subsidy/ support for economically backward as most tests were done at public facilities free of cost, regardless of their background or income. For SC/ST areas, coastal areas and suburban area there were mobile testing clinics and Antigen testing facilities, which were also free of cost.
- For testing and treatment during the pandemic the national comprehensive insurance scheme Rashtriya Swasthya Bima Yojana (RSBY) covered the households that were insured under it. For those not covered, GoK used Comprehensive Health Insurance Agency of Kerala (CHIAK) insurance scheme- *Karunya Arogya Suraksha Padhathi* (KASP) to cover Covid treatment related expenses of the vulnerable.
- To ensure safety of workers involved in Covid/Pandemic management and testing, a series of trainings were provided on infection control/ safety and were followed up with virtual/ online trainings. The workers were also provided with infection control systems consisting of masks, sanitizer, gloves, PPE kits etc.
- During Covid a three-tier system was put in place to manage the workload of frontline health workers by organizing them in shifts. This system was based on risk and exposure, wherein work was divided into high, low and no risk categories and workers were rotated between these categories. They were also given special care if tested positive for Covid; separate treatment facilities were put in place for them.
- For ensuring inclusiveness, for example, of ST communities, expertise and networks of tribal departments were utilized and support to the community was incorporated in the Tribal Action Plan. Also for fisher-folks, department of fisheries played a major role in ensuring their inclusion by creating awareness on precautions and prevention through Coastal Action Plans. In urban area it was coordinated through Urban PHCs, which

- ensured inclusion of urban vulnerable during screening and testing; additional staff was deployed to control spread and for awareness creation.
- Women frontline workers- ASHA are also trained in disease surveillance and for reporting any unusual cases occurring under their purview to the IDSP system.

Inputs from Community Consultations

- The service is affordable and are being accessed by everyone; there are no cases of exclusion, denial or social discrimination in rendering services / treatment at public or private facilities, including those healthcare institutions providing Covid related treatment. In certain areas (of Pattanamthita and Iddukki district) where government facilities are absent, private health facilities charge a lot for testing and treatment, which is unaffordable for the poor.
- Government health insurance is available to about 60 percent of the poor and vulnerable. The present health services are transparent and affordable, but post-Covid treatment is not available.
- For making health services more suited to such pandemics, it is necessary to deploy more health workers to manage the situation. They must be given additional training to manage pandemics and disasters, take up health surveillance and to spread public awareness regarding prevention / precaution.
- Regular home visits by ASHA workers and public health inspectors are essential for identifying communicable diseases among local communities and reporting them. Considering their health risks there is a need to provide insurance cover to health workers and address concerns related to their long work shifts.

Stakeholder concerns related to limited strengthen and capacities of frontline staff to manage pandemics at community level will be addressed through enhanced capacity building and engagement of Kudumbashree members in disease surveillance. Social recommendations regarding reassessment of the working conditions of the health workers is expected to ensure more intensive engagement with the community. Concern relating to vulnerable population, about testing facilities being far from the village, will get partially addressed by program investments for expanded health laboratory network.

The draft ESSA report will be disclosed on the website of Resilient Kerala Initiative (RKI- RKDP) and on the World Bank external website for comments and feedback and will be finalized after incorporating the suggestions received from the stakeholders.

Gaps and Recommendations

1. As shared above, implementation of IDSP from the state to the lower levels is almost entirely in the hands of contractual staff hired by the state. Technical positions in many DSUs and IPHLs are vacant, leaving labs understaffed and staff overburdened. While the qualifications and job description of these positions is centrally codified and defined by the National Centre for Disease Control (NCDC), their conditions of service/ employment are not, leaving most of these contracted staff with insecure tenures and undefined terms of engagement. To ensure that DSUs and IPHLs are adequately staffed, there is a need to codify their terms of engagement, provide a reasonable security of tenure, offer periodic trainings to attract competent professionals to IDSP/ IPHLs and retain them. Additionally, since the state aims to employ a large pool of community volunteers for disease surveillance, it will be important that they are made adequately aware of likely health risks and impacts and suitably trained and equipped with necessary precautions for their personal safety.

2. The expansion of IPHLs in some districts may require health department land to be made free of encumbrances so that construction of labs could take place. This may require rehabilitation of non- titleholders (vendors, shopkeepers, squatters) who may be occupying these unutilized lands, as per Bank policy. Institutions to be engaged in clearing potential sites and lab construction will have to ensure that the processes are aligned with Bank procedures, especially in their treatment of non-titleholders, to meet Bank requirements on management of physical and economic displacement.
3. The state health department and IDSP State Surveillance Unit do not have a dedicated system of grievance redressal and largely rely on grievances coming to them through the statewide GRM or through the local governments (with which they work very closely). Given that the scheme coverage is being expanded to reach out to a larger population in the Pamba Basin, will involve a larger workforce and Community Based Organizations (CBOs) for awareness generation and surveillance, it will be necessary for the scheme to have its own dedicated and functional GRM to receive and redress grievances emerging from the program investments and to make the operations more accountable and transparent.

Urban Sector

Kerala is the state that has seen one of the fastest urbanisations, much higher than the national average. The decadal growth (2001-2011) has nearly doubled the urban population, with an annual growth rate of about 6.5 percent, as a result of which nearly 65 percent of the state's population resides in its mid-small sized cities and towns. Although municipal finances have grown significantly in past decade (at 14.5 percent CAGR), they have not kept up with the pace of urbanization. For the period 2015-21 ULBs of the state are slated to receive approx. Rs. 18,000 crores through transfers from the 14th Finance Commission, State Finance Commission as well as from national schemes on urban development and on incentivizing urban reforms- 2 ULBs receive funds under Smart City Mission-SCM and 9 under Atal Mission for Rejuvenation and Urban Transformation-AMRUT.¹⁰⁴

Kerala is one of the leading states that devolved 17 out of 18 functions to the ULBs as part of implementation of the 74th Constitutional Amendment (applicable for urban bodies), including functions related to slum improvement and upgradation, poverty alleviation, planning for economic and social development, urban and town planning as well as regulation of land use and building construction.

However, as per RKDP document, 'lack of enforcement of master plans has led to widespread urban sprawl and unmanaged construction in hazard prone areas, which has proven to be extremely dangerous and vulnerable to natural disasters such as floods of August 2018. Long delays in preparation and notification of master plans and their lack of funding also contributes to weakness of State's mid to long term planning.' The document also notes that 'most urban bodies also lack critical manpower, expertise in core functional areas like governance, financial management, engineering which restricts their capacity to better plan, prioritize, design, execute and manage municipal infrastructure'.

Program Description

RKDP's internal assessment brought out the status of its local bodies with respect to city level planning, the lack of effective long term, city level spatial/ master planning, the unplanned and unregulated development and unscientific land use in cities, which amplified the impact of the 2018 floods. Responding to these urban planning related challenges, the sector investments under the current PforR are targeting support to the state to institutionalize climate and disaster risk-informed urban master planning. This will be done by helping the state to develop clear guidelines on city/ town level master planning that are cognizant of the risks and disaster events that the city/planned area is vulnerable to and takes those risks into account while preparing the long term master plans.

After getting these guidelines approved by the state government, the program will develop training modules to build the capacities within the spatial planning units of urban local bodies as well as in the Department of Town and Country Planning (DT&CP) to guide the preparation of such draft master plans. Subsequently, select ULBs in the Pamba Basin will be identified¹⁰⁵ to pilot the preparation of such risk informed Master Plans. This will involve training city level planners (within the respective ULBs) as well as those in the Department of Town and Country Planning to guide risk-informed urban planning, preparation of risk-informed Master Plans and getting them sanctioned by the ULBs and T&CP so that they are final and ready for implementation. This will also involve modifying the existing processes under the Kerala T&CP

¹⁰⁴ RKDP Master Document https://rebuild.kerala.gov.in/reports/RKDP_Master%2021May2019.pdf

¹⁰⁵ 4 out of 18 ULBs in the Pamba Basin will be selected for developing risk informed Master Plans- 2 in flood prone or 2 in the landslide prone areas.

Act to ensure the preparation, notification and enforcement of Master plans in a time bound manner.

The type of activities proposed for the urban sector relate to institutional development and strengthening for preparation of risk informed master plans, capacity building of ULBs to support planning and its implementation.

Expected Social Effects of the Program

The urban sector investments, chosen to be part of RKP, are based on recent learnings from the adverse impact of disaster events on cities and towns and are aimed at enhanced institutional and systems capacities to respond to similar challenges in future, ensure better preparedness, avoid mistakes of the past and create more effective and resilient systems- by way of improved land use planning, better awareness of the need to carefully plan and allow settlements/ development in hazard prone areas (like upon storm water drains /run-off channels) so that future damage can be minimized. The emphasis will be on more comprehensive planning and strengthening the capacities of individuals and institutions involved in facilitating the planning process.

Benefits and Risks

Potential Benefits

The preparation of new master planning guidelines are likely to be informed by the specific risks and adverse impacts that women, urban poor, migrants, children and members of vulnerable communities are confronted with, in terms of being pushed into settlements that are in high risk and hazard prone areas and is likely to address this marginalisation in urban settlements. The improved capacities of institutions is also likely to increase the sensitivity of the planners and local bodies to consider the specific challenges faced by different social constituencies and address them in the draft guidelines by promoting vulnerability and needs assessment, participation of different social groups during the preparation of City level Master Plans and greater awareness about planning issues. Preparation of effective Master Plans and their strict enforcement (in terms of restricting land use changes against what is prescribed in Master Plans) is also likely to prevent unplanned development and secure safe spaces and amenities for all inhabitants and communities.

Potential Risks

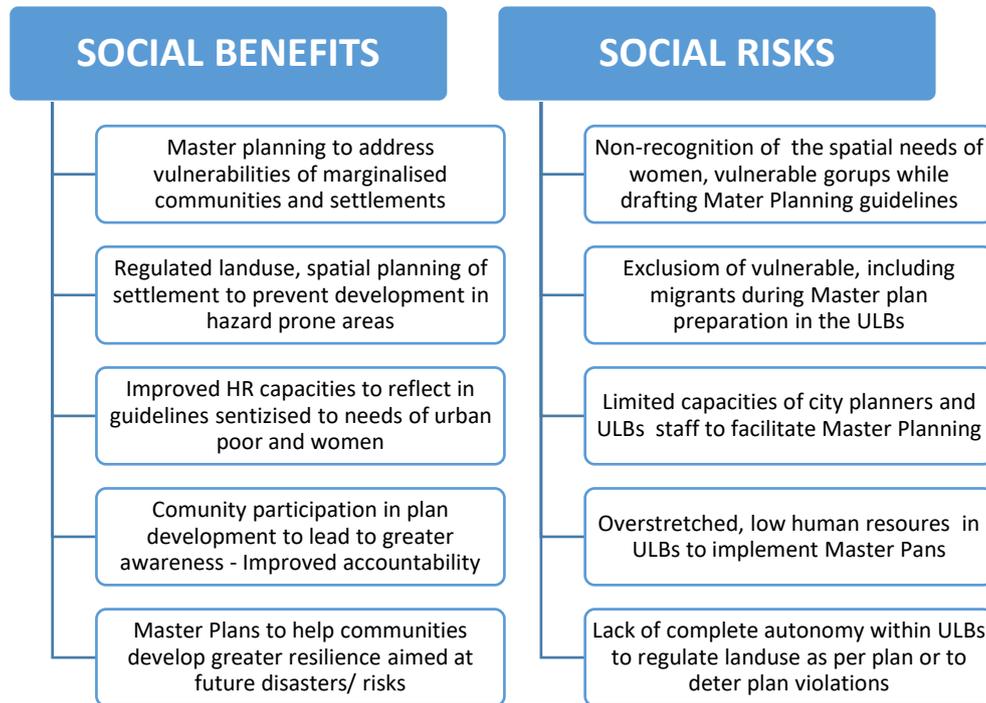
There is risk, however, that since most of the tasks related to preparation of guidelines for master planning will be led by planners who have limited social capacities, they may not recognize the vulnerabilities/ needs of women, urban poor and migrants, to incorporate them in the master planning guidelines; subsequently these constituencies may also get excluded from the process of preparation of the City level Master Plans and hence getting their needs and priorities getting included in the draft plans. This is more likely to happen in the case of migrant workers, who are usually compelled to live in peripheral locations/unsafe landscapes on city outskirts in unhygienic conditions (landfills, dump-sites).¹⁰⁶

The LSGs are overburdened, highly overstretched in provisioning basic services for its citizens and as GoK's own assessments¹⁰⁷ and outside have shown, they lack critical manpower in

¹⁰⁶ Migrant workers are a vulnerable, important and fast increasing constituency for the state- with nearly 400,000 migrants as in July 2019, up from around 300,000 in July 2018.

¹⁰⁷ RKDP Master Document

specialized areas like urban governance and planning to be able to ensure preparation of effective urban plans and sound technical, institutional capacities to implement spatial development plans. LSGs also lack the willingness to be involved in master planning, as the State Act gives the T&CP department the power to unilaterally overrule and modify master plans and propose new regulations for zoning of urban areas. The ULBs also lack the legal backing to deter violations/ deviations to land use proposed in the master plans.¹⁰⁸



Legal Instruments, Policies and Programmes/ Schemes

Legal Environment for the Urban Development Sector

The state urban policy recognizes the need to improve municipal services while also ensuring that services remain affordable for all. It creates an Urban Regulatory Authority to provide state-wide oversight, grievance redress as well as seek suggestions on urban services. It accepts that urban institutions and functionaries lack requisite capacities in planning, finance, governance, etc. It provisions for alternate mechanisms to secure land for development and creating public amenities, especially in the context of Kerala's land-related constraints.

The law also gives the mandate for development of long term master plans and medium term execution plans to ULBs, using participatory approaches involving the community and other district level stakeholders. District Planning Committee (DPC)- which finalizes and approves the districts development plans (aggregating plans of all rural and urban bodies in the district)- are made responsible for setting district level priorities related to spatial planning, use of rural and urban land and can seek consultation with CSO and professional bodies for seeking inputs. It is also made responsible for monitoring the plans and resolving inter-agency and inter-LSG conflicts.

¹⁰⁸ Janagraha: Annual Survey of India's City-Systems, 2016

The LSGs are made responsible for implementing these plans, regulating the spatial and land management related considerations of the planning area, with some regulation and oversight from the state level agencies- State Town and Country Planner .

Major Sector Schemes

Smart Cities Mission- There are no major national or state schemes in the urban sector that promote development of master plans or promote spatial planning in the cities. The Central Scheme-Smart Cities Mission partially promotes an area based approach to re-development on a limited scale (50 acres) in selected cities¹⁰⁹ by promoting mixed land use and development of area based plans for areas selected by ULB and prepared through a process of intensive consultation with the citizens.

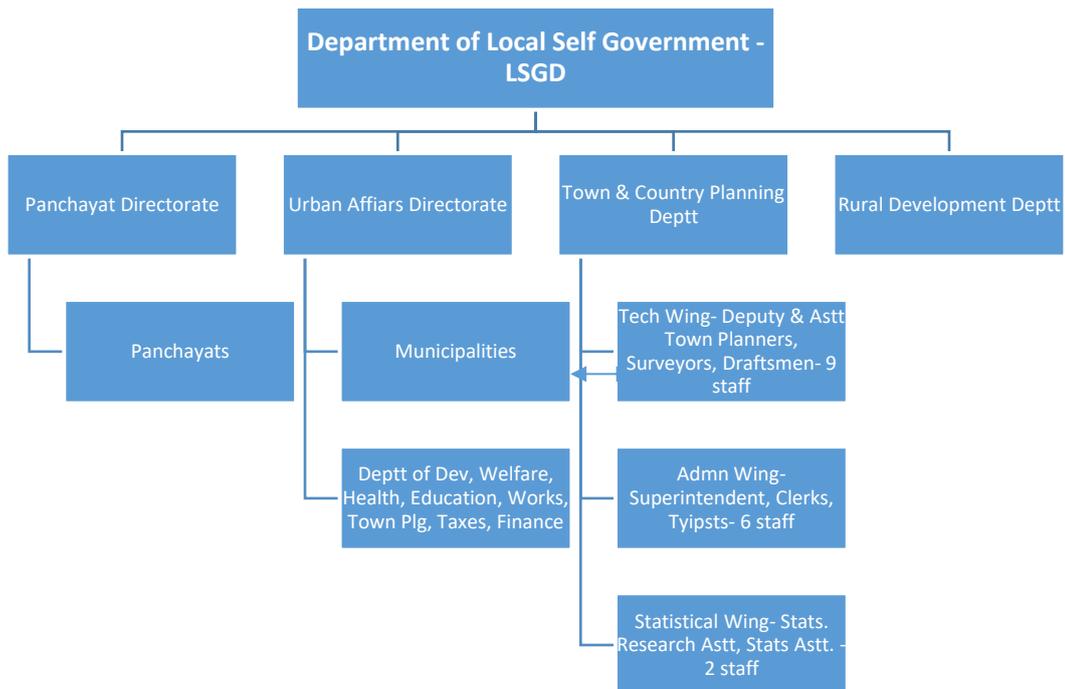
Implementation of activities and plans under the Mission, however, is not done by the ULB but takes place through an independent special purpose vehicle – a Project Management Unit (PMU) created within the municipal councils with sound capacities on social management and participatory processes and with the flexibility to use the services of civil society for social mobilization, awareness generation and securing participation. The scheme also provides for a strong citizens interface through physical forums as well digital/ social media platforms for citizens to access municipal services, provide feedback and register their grievances.¹¹⁰

Institutions and Capacities to Manage Social Risks

There are 3 key institutions that will be responsible for the program investments in the urban sector, a) the Department of Local Self Government (LSGD) that will receive support for revising the guidelines for master planning and developing training modules around the new guidelines and which will capacitate ULB functionaries on the guidelines and facilitate the preparation of Master Plans and their Execution Plans, b) Department of Town and Country Planning, which is part of LSGD and will support it in developing the revised guidelines and c) select urban local bodies located in the Pamba Basin districts that will receive support for piloting the Master Plan preparation based on the new guidelines and receiving support for capacity building of their staff.

¹⁰⁹ Among the 100 cities selected all over the country

¹¹⁰ Smart Cities: Mission Statement & Guidelines, 2015



The LSGD is divided into 2 directorates for Rural Bodies- Panchayat and Urban Bodies- Urban Affairs, apart from 2 Deptt of T&CP¹¹¹ and Rural Development. In each district there is a T&CP office housed within the district office of the urban affairs directorate, which has Administrative, Technical and Statistical wings.

Institution	Activities relevant to social management
Local Self Government Deptt/ Urban Affairs Directorate	<ul style="list-style-type: none"> Responsible for administration of all urban local bodies in the state Enables local bodies to plan for social justice, economic empowerment as well as for spatial development Undertakes capacity development of elected leaders and functionaries on integrated or sectoral planning and different aspects of local governance Provides human and financial resources required by the LSGs Implement development and social protection schemes targeting women, poor and vulnerable, including migrants Provides regulation to LSGs by setting up an Ombudsman and a Tribunal to redress grievances of citizens and other parties against local bodies
Department of Town and Country Planning¹¹²	<ul style="list-style-type: none"> Advise LSGs on planned and sustainable development of settlements Advise ULBs on functions related to regulation of land use and building construction, urban planning, slum upgradation. Preparation of Spatial Development Plans including Master Plans of cities/ towns (later GPs also added) Ensure people's participation in the preparation of Master Plans

¹¹¹ The Planning and Development Wing of T&CP department is responsible for preparation and approval of Master Plans, the Regulatory and Enforcement Wing is responsible for monitoring the sanctioned plans.

¹¹² <http://townplanning.kerala.gov.in/>

	<ul style="list-style-type: none"> • Review, sanction Master plans for final notification and execution
Urban Local Bodies	<ul style="list-style-type: none"> • Offer efficient and affordable municipal services, urban amenities to citizens • Promote citizens participation in local/ decentralized planning and their engagement in the implementation of schemes • Seek citizens inputs for improving services and address grievances • Safeguard interests of weaker sections, work for poverty alleviation and slum improvement

Assessment of Sector Institutions

Working closely with citizens, including various social and economic constituencies of the state, LSGD as well as the ULBs in Kerala have a strong public interface that is accountable and the local bodies and elected representatives enjoy the trust of the residents.¹¹³ The State inculcated a strong, institutionalized system for citizens engagement through the People’s Plan Campaign, under which all LSGIs in Kerala (ULBs and RLBs) initiated a system of decentralized participatory, bottom-up development planning, which gave them an opportunity to express their felt needs and get them prioritized for inclusion in the final local body plans. Over the years this has come to involve ward or area wise meetings to seek inputs for the local plans so that the ULBs are able to get a more granular assessment of the needs of each habitation, settlement, peoples. Over the period, this decentralized planning has come to include preparation of gender sub-plans for articulating gender specific needs, earmarking development funds to respond to them, statewide mobilization of women for their social and political empowerment under Kudumbashree, preparation of tribal sub-plans for tribal areas, Special Component Plan for the Schedule Caste and also Old-aged action plans.

Out of the 941 Gram Panchayats and 152 Block Panchayats in Kerala, 861 GPs and all block Panchayats have taken ISO 9001: 2015 quality certification, which in the context of public systems, is awarded only if the system is designed ‘such that people receive uninterrupted services by providing a public friendly and accurate front office system, computerised record keeping and an orderly office system’.¹¹⁴

As per the state’s own assessment, it has devolved all but one urban sector functions (fire services) to the ULBs, including all the 3 functions related to planning- Urban and town planning, regulation of land use and building construction and planning for economic development. However, as per the Comptroller and Auditor General’s (Central Statutory Audit Office) Report for Kerala the devolution of planning functions is still not complete, meaning that respective line departments still largely control the funds, functions and functionaries related to these subjects.¹¹⁵

As per RKDP, investment planning in the urban sector doesn’t have a long-term horizon and lack of enforcement of master plans has led to unmanaged construction in hazard prone areas. It

¹¹³ In the Annual Survey of India's City-Systems-2016, the sample ULB from Kerala, Thiruvananthapuram ranked first in terms of enjoying people’s confidence, democratizes information and creates formal platforms for citizens participation that gives them ‘a sense of ownership over the city.’

¹¹⁴ Same as above.

¹¹⁵ Janagraha: Annual Survey of India's City-Systems, 2016

also notes that 'long delays in the preparation and notification of master plans¹¹⁶ and their lack of funding, contribute to state's weakness in the area of spatial planning.¹¹⁷

Citizens Engagement- As discussed about, the department and the local bodies have sound social capacities to facilitate participation of citizens in planning, implementation as well as community monitoring of schemes. The state and its local bodies steer one of the biggest decentralized annual planning exercise in the country every year, getting the involvement of various social constituencies in this process of plan preparation. The local bodies of Kerala also nurture one of the biggest women's CBO in the country- the Kudumbshree which provides voice and agency to women of the state across social groups. The local bodies implement several social security programmes for the most vulnerable and marginalized, some of them specifically targeting specific vulnerabilities like disability, destitute, children, etc.

Most municipal services offered by local bodies provide a digital (e-governance) interface to the citizens, which allow them to apply for services, track the status of applications, provide feedback on the quality of services as well as receive the final entitlement or service digitally.¹¹⁸ The Urban Affairs Directorate and all ULBs have their own Citizens Charter assuring accountability and quality in services being rendered by the municipality.¹¹⁹ In recent years, under section 517 B(3) of the Kerala Municipality Act 1994, many local bodies have also started a process of voluntary public disclosure of information on different schemes, process of beneficiary selection or planning, budgets and expenditure by sectors-for the sake of increased transparency and accountability. Some ULBs also disclose their draft or sanctioned Master Plans on their websites.

As far as the preparation of City Master Plans are concerned, although the State T&CP Act calls for consultations with the community, CSOs, professional organisations to seek inputs for the Master Plan, as well as discussion with members of Gram Sabha/Ward Sabha/ Ward Committees in the preparation of medium term Execution Plans, owing to limited human resources and technical capacities, very limited engagement of community stakeholders actually happens during the process of Master Plan preparation.¹²⁰ Low participation of the elected representatives and citizens in this process is also because despite the mandate lying with local bodies, the Act empowers the state government/ Deptt of T&CP for review, revision, variation and revocation of Plans developed by the ULBs and make changes to the land-use proposed by the local government in their Master plan.¹²¹

Grievance Redressal- LSG department has the most effective GRM among the state departments. Many other sectors, line agencies closely working with LSGs access the GRM of LSGD and of the individual ULBs to seek redress for their grievances. GRM of the LSGD provides for the complainant to file grievance and complaints of corruption against any of the 5 wings, with grievances against T&CP accepted around 4 categories of grievances related to concurrence from Town Planning Scheme and approval granted for layout and usage of plots, against specific districts town planning offices. It also accepts grievances against urban affairs

¹¹⁶ <http://townplanning.kerala.gov.in/wp-content/uploads/2020/02/MASTER-PLAN-STATUS-FEB20.pdf>

¹¹⁷ RKDP Master Document https://rebuild.kerala.gov.in/reports/RKDP_Master%2021May2019.pdf

¹¹⁸ For example, SANKETHAM Software for LSGs to grant building permits in transparent & standardised manner - <https://buildingpermit.lsgkerala.gov.in/>

¹¹⁹ <https://lsgkerala.gov.in/index.php/en/resources/citizen-charter>, <http://www.corporationoftrivandrum.in/citizen-charter>

¹²⁰ RKDP Main Document

¹²¹ <http://townplanning.kerala.gov.in/wp-content/uploads/2020/02/Master-Plans-DTP-Schemes-Major-Statutory-provisions.pdf>

directorates for 34 different categories of grievances, including those related to land development permit, encroachment of public lands and illegal construction.¹²²

The LSGD GRM provides a distinct reference number to the complaint as well as the expected time within which the grievance is expected to be resolved. However, the state wide number

The screenshot shows a web-based 'Grievance Application Form'. At the top, it features the logos for 'For The People' and 'Digital India'. The form is divided into several sections:

- Name of Applicant in English (As in Aadhaar card):** A text input field.
- Address of Applicant:** A grid of fields including House No., House Name, Locality/Street, Post Office, District, Taluk, Village, Local Body Type, Local Body Name, and Assembly Constituency. Many of these are dropdown menus.
- Mobile Number and Aadhaar Number:** Text input fields.
- Email:** A text input field.
- Application Type:** Radio buttons for 'Grievance' (selected) and 'Complaint on Corruption'.
- Department, Subject Of Grievance, District, Office:** Dropdown menus.
- Enter your grievance in a few words (max 3000 characters, say 400 words):** A large text area.

of grievances received and redressed don't suggest that many people access this mechanism even though they may be aware of it. As per the LSG website 2238 applications have been received so far, of which 1571 have been replied to or action taken. The website does not suggest the time period for which the figures are displaced on the website.

Similarly, each ULB also has its own GRM, a quick assessment shows that most Municipal Corporations maintain their own separate GRM with differing levels of efficiency. Most ULBs use a common LSG level GRM called Soochika¹²³ for e-filing of their grievances and for tracking the status of their file/ grievance. If the aggrieved person is not satisfied with the redressal measures of the ULB or Panchayat, she/he can move the LSG Tribunal for redressal. GoK has constituted a LSG Tribunal for every district, to hear appeals or revisions filed against the decisions of Local Self Government Institutions (LSGIs) under Section 276 of State PRI Act. The state also has an office of Ombudsman LSG, where grievances related to allegations of corruption or maladministration can be filed. The Ombudsman may conduct investigations into instances of maladministration, corruption, favouritism, nepotism, lack of integrity or abuse of power against any official or elected representatives of all LSGIs (Corporations, Municipalities, Panchayats) in accordance with provisions of Kerala Panchayat Raj Act, 1994.

Department of Town and Country Planning does not have a separate GRM but uses the one created for larger LSGD department. Its Regulatory and Enforcement Wing is created precisely to look at grievances related to deviations from the approved and sanctioned master plans and unplanned land use. Under the Kerala Municipality Building Rules, 2019, any person aggrieved by the decision of the Registering Authority under sub-rule (10) can appeal to Govt. (Deptt of T&CP), which will, after examining records direct to revoke the permit or stop work or require

¹²² <https://pqlsqd.kerala.gov.in/>

¹²³ <https://soochika.lsgkerala.gov.in/Soochika/NewLogin.aspx>

to modify or demolish the construction. Any person aggrieved by this government order can go in appeal to the LSGI Tribunal.

Gender and Social Inclusion- As per the 74th Constitutional amendment that empowered local bodies, the LBs are provided the mandate to work on the following areas- ‘planning for economic development and social justice, safeguarding the interests of weaker sections of society, including handicapped and mentally retarded, slum improvement and upgradation and poverty alleviation’. About 24 percent of Total State Plan outlay for a given year is earmarked as Development Fund for allocation to local self governments, which they are free to utilize to implement their local plans. The LSGs have to mandatorily earmark 10 per cent of the General sector funds, SCP and TSP on Women Component Plan (WCP), 5 per cent for children, differently-abled, trans-genders and 5 per cent for old age and palliative care projects- about 20 percent. Against this allocation, actual expenditure of ULBs on these constituencies in 2018-19 spent was close at 17.31 percent.¹²⁴

As far as gender representation in city leadership is concerned most of the ULBs in Kerala have 50 percent of the council seats reserved for women.¹²⁵ Likewise, nearly 50 percent of staff/ employee positions in the municipalities are occupied by women. In recent years, the local bodies have been increasingly relying on Kudumbshree women and using their services for expanding their outreach, creating awareness on schemes/ programmes, involving women members in implementation, taking help of women collectives (especially the neighbourhood groups) for identification of destitute, vulnerable families, individuals and connecting them with schemes and entitlements aimed at them and strengthening local level planning and for its quality improvement.¹²⁶ Other than the intent of mainstreaming gender concerns in local governance, a reason for greater involvement of Kudumbshree women in local level planning and implementation support is also the lack of adequate human resources within the ULBs to keep delivering on this wide mandate and offering an ever increasing number of public services.

Institutional Assessment – State level systems

As seen in the detailed assessment of the state level institutions in the section on Agriculture, state systems offer adequate social safeguards, by ensuring citizen’s engagement at various levels, providing a state wide system of grievance redress, securing the interest of women, children and ensuring their inclusion in schemes and programmes, providing for their protection from exploitation and abuse. *(Kindly refer to state level institutional assessment in the chapter on Agriculture sector for more details)*

Program System Consistency with Core Principle

Core Principle	Social Assessment
Core Principle #1: Program E&S management systems are designed to (a) promote E&S sustainability in the Program design; (b) avoid, minimize, or mitigate adverse impacts; and (c) promote informed decision-	The proposed investments operate within adequate legal and regulatory framework to ensure effective social management of all risks. The state as well as LSGD have very strong framework of regulations, systems and institutions to ensure social sustainability, equity and inclusiveness in delivery of services.

¹²⁴ Kerala Economic Review 2018-19 Volume I, State Planning Board

¹²⁵ Janagraha: Annual Survey of India's City-Systems, 2016

¹²⁶ <https://thekudumbashreestory.info/index.php/what%E2%80%99s-kudumbashree/community-network/community-development-society-cds>

<p>making relating to a Program’s E&S effects</p>	<p>LSGIs form one of the strongest institutions in the state and have a rich history of associating directly with citizens for planning & implementation, although the experience of associating for spatial development or master planning has been very limited, as against that in other sectors.</p> <p>Municipal functionaries are overburdened, ULBs currently lack adequate human resource or expertise to support better town planning and development of risk informed City Master Plans. The state has been utilising the services of Kudumbshree members to fill the human resource gap and increase efficiency. Being largely dependent on state government, ULBs lack sufficient financial resources¹²⁷ to implement City Master Plans. They also lack sufficient teeth to ensure adherence to land use as defined by town plans and prevent plan violations.¹²⁸</p> <p>LSGD as well as respective ULBs have dedicated GRMs that seem to be effective in the redress of complaints, although there is scope for further increasing awareness around them and getting more citizens to access them, instead of relying on traditional methods of directly petitioning of elected representatives.</p>
<p>Core Principle #2: Program E&S management systems are designed to avoid, minimize, or mitigate adverse impacts on natural habitats and physical cultural resources resulting from the Program. Program activities that involve the significant conversion or degradation of critical natural habitats or critical physical cultural heritage are not eligible for PforR financing.</p>	<p>The operations in this sector do not support activities that may have an impact on the religious or cultural resources of communities</p>
<p>Core Principle #3: Program E&S management systems are designed to protect public and worker safety against the potential risks associated with (a) the construction and/or operation of facilities or other operational practices under the</p>	<p>The project workers in case of this sector are public servants-staff of the line department and those of the municipal bodies. These public servants are protected by the service rules as well as national and states laws on protection from abuse and exploitation.</p> <p>The operation will need to ensure fair working conditions and working hours for staff of municipal bodies that are</p>

¹²⁷ For example, in Thiruvananthapuram Municipal Corporation the Per capita expenditure was Rs.11,668 (2015-16) and the proportion of own revenue to total expenditure was 24 percent. Annual Survey of India’s City-Systems, 2016

¹²⁸ Land use regulations are spread across multiple, incongruent legislations, orders and rules. Lack of streamlined and singular land management Act/policy/regulation and weak enforcement has led to overlap of business, habitation and public infrastructure. – RKDP Master Document

<p>Program; (b) exposure to toxic chemicals, hazardous wastes, and otherwise dangerous materials under the Program; and (c) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards</p>	<p>deployed in the preparation of Master Plans, especially female staff who will be facilitating the participation of citizens in plan preparation. This is because most ULBs are understaffed and any additional mandate is likely to impact the working hours, especially of women workers.</p>
<p>Core Principle #4: Program E&S systems manage land acquisition and loss of access to natural resources in a way that avoids or minimizes displacement and assists affected people in improving, or at the minimum restoring, their livelihoods and living standards.</p>	<p>No investments are planned that may lead to physical or economic displacement of communities or individuals - whether temporary or permanent in nature.</p>
<p>Core Principle #5: Program E&S systems give due consideration to the cultural appropriateness of, and equitable access to, Program benefits, giving special attention to the rights and interests of Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities, and to the needs or concerns of vulnerable groups.</p>	<p>The activities planned for this sector are aimed at enhanced institutional capacities of urban bodies to respond to future disaster events by ensuring disaster preparedness, through creation of risk informed City Master plans and better spatial planning of urban settlements. This is intended to create resilience for urban communities and reduce their vulnerability through improved land-use planning, better community awareness on the need to plan settlements and regulate development in hazard prone areas. The investments are aimed at facilitation of Master Plans by a capacitated team of ULB staff including planners, so that the needs of urban poor and migrants, who occupy the most vulnerable areas of urban settlements, get reflected in the Master Plans.</p> <p>ULBs will need institutional strengthening (clearer mandate as well as human/ financial resources) so that they can enforce stronger regulation around land-use/ town planning and be made accountable for effective implementation of the Master Plans.</p> <p>Although there is remote chance that ULBs selected for piloting master plan preparation in the Pamba Basin will have tribal settlements or common property regimes accessed by them near or within municipal limits, an initial risk screening will be done at the time of selecting pilot ULBs for exclusion of any ULB if spatial planning is likely to adversely impact/ disturb existing settlements or resources accessed by local tribal communities</p>

	The state systems as well as LSG are expected to ensure adequate transparency and accountability in the preparation of City Master Plans to ensure equitable spread of benefits across the city and groups from improved and resilient spatial planning.
Core Principle #6: Program E&S systems avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.	The nature of program investments is such that they are not likely to lead to or exacerbate social or resource conflicts.

Stakeholder Consultations and Disclosure

Stakeholders identified for consultations around this sector are mapped in the comprehensive stakeholder map prepared for the program. (*Annexure B*) These include departmental functionaries at the state, district, sub-district and Panchayat / Municipal levels, as also line and support agencies and training institutions, including chairman and vice chairman of the municipalities, SHG members, health workers and teachers. They also cover user groups and community institutions formed around areas/issues where the sector investments are likely to occur. These consultations are aimed at understanding the current chain of implementation of schemes/ projects in these respective sector institutions, assess the existing social capacities and procedures adopted by them, to see how social issues related to inclusion, access, equity in benefit sharing, participation, transparency/ accountability in sectoral planning and implementation are addressed by them and the gaps that exist therein. These consultations also aim at assessing from the point of view of the service providers/ duty bearers as well as communities, user –groups and service recipients the quality and inclusiveness of services, especially for the vulnerable groups- single women, SCs/ STs, landless/ asset-less, elderly, People with Disabilities (PwDs) and migrants.

As shared in ESSA methodology, consultations with stakeholder were facilitated by Kerala Institute of Local Administration (KILA) at the state and in the Pamba basin districts. The following key inputs have been received from these stakeholder consultations and have been used to further inform this systems assessment.

Inputs from State Consultations

- ULBs are capable of collecting data and providing description, but they are unable to produce their own maps, technical analysis or a complete project proposal.
- Rather than vulnerable communities the focus must be on vulnerable regions in resilience based planning. More than women and other social categories, it is important to take an area based approach, so that it covers everyone in such an area.
- Risk based vulnerability assessments were part of earlier City Master Plans, wherein flood prone regions and buffer zones of 15 meters around river basins were demarcated, but not much attention was paid to their maintenance until the floods of 2018.
- Most buffer zones are under pressure due to high demand from construction industry and there is immense pressure on local authorities to monitor them and restrict development. Awareness needs to be created among public and policy makers regarding their importance to make them less vulnerable to encroachment and attempts at land grab.

- Exposure and capacity building on planning, especially risk informed planning, needs to be done. For engineers in LSGDs capacity building on planning is required. Agencies like KSDMA can be made nodal agencies for such trainings.
- Usually feedback is taken by a participatory process while developing a master plan and these include using feedback mechanisms available in the councils and wards.

Inputs from Community Consultations

- Stakeholders were not satisfied by the level of community participation in preparation of master plans in the ULBs. Most were unsure when the last master plan was prepared, approved or notified and feel there was a lack of clarity/ transparency around the process of master plan preparation in the past. In ward level meetings only annual development plans are discussed and community members have never participated in any meeting related to town master planning.
- In Thiruvalla Municipality (Pathanamthitta District) the Master Plan preparation begun in 2016 was finally completed in 2020. Consultations were held with communities and elected leaders during preparation of the Master Plan and nearly 506 suggestions and complaints were received and partially addressed. The plan is still under consideration of state government and is not yet approved or notified, even though people are satisfied by the way their needs were addressed in the plan.
- Groups like Residents Welfare Associations (RWAs), SHGs and ward sabhas must be used as a platform for seeking suggestions and discussing these plans before they are finalised.

Stakeholder recommendation on increased awareness among public and policy makers regarding regulated land use and participation of community in the process of master planning will be addressed through enhanced capacities of ULBs functionaries and elected leaders on the same. Mobilisation of existing social capital- CBOs, RWAs- will also be ensured in planning. Suggestions of women that urban infrastructure needs to be made women centric, aimed at their improved awareness and safety is addressed through social capacity building of ULB staff to understand and plan cities considering the safety and spatial needs of women.

The draft ESSA report will be disclosed on the website of Resilient Kerala Initiative (RKI- RKDP) and on the World Bank external website for comments and feedback and will be finalized after incorporating the suggestions received from the stakeholders.

Gaps and Recommendations

- The assessment of social systems shows that the capacities of relevant sector institutions and those responsible for social management in the state are good, except for the fact that there is a need to create additional capacities within ULBs on spatial planning for linking these spatial plans to district development plans and ensuring inclusion. Planners and ULB staff responsible for preparing Master planning guidelines, and subsequently for piloting the Master Plan preparation, need to be capacitated to understand the specific risks and vulnerabilities of marginalized communities, including children, so that attention can be paid to ensure that their spatial needs are well assessed in the guidelines; steps are taken to give them opportunity to articulate their needs during Master plan preparation. As pointed by GoK's internal assessments (RKDP), ULBs will also need to be given adequate human and financial resources to prepare Master Plans using a participatory process and ensure their effective implementation.
- Accountability regime in the state around city level master planning is unclear. While the law has provided ULBs the mandate to develop Master Plans that guide the long term development of the town/ city, there is poor accountability with regards to its preparation,

with no clear timelines for developing the draft, its approval by municipalities and final sanction by the T&CP department. As a result, Master Plan preparation continues for a very long period, taking away its ownership from the district/ town planners and elected leaders. While ULBs are expected to be responsible for its preparation and implementation, they are not insulated from interference in its preparation and implementation. The law allows other state institutions to recommend variations to Master Plans (in the way land use takes place) as well as power to review and revoke these plans. In addition, law does not empower ULBs to prevent violations of the plans. A stronger legal regime will help in fixing clearer accountability for preparation of time bound, risk informed Master Plans.

- LSGD and ULBS have their own dedicated grievance mechanisms in place that people are aware about and seem to be functional. However, there is limited use of these mechanisms by the general public; there is greater reliance on direct complaints to elected representatives, rather than using the formal systems. This is also because the state has far higher number of councilors for a given population as compared to other states, which makes elected representatives easily accessible to the community.¹²⁹ However, there is a need to create awareness and transition towards digital systems of grievance redress that are traceable, transparent and more accountable.

Disaster Risk Management Sector

Kerala is highly vulnerable to multiple natural and anthropogenic hazards owing to its mountainous topography and geo-hydrological features. It is also prone to climate change induced vulnerabilities owing to its location along the sea coast and a steep gradient along the Western Ghats. High density of population (at 860 people/sq km as per 2011 Census), narrow roads, relatively higher density of coastal population, are factors that increase the vulnerability of its population to disasters. Nearly 14.5 percent of the State's geographical area is susceptible to floods, 14.4 percent to landslides, 23 percent to slight drought and nearly 63.8 percent of the geographical area to moderate droughts.¹³⁰

As per the Post Disaster Needs Assessment (PDNA) 2018, the total estimated damage and loss (except losses and damages incurred by transportation, power, irrigation other infrastructure and losses by private traders and businesses) was around ₹42,425.0 crores, while the recovery needs of the various sectors of the State Economy was estimated at around ₹31,000 crores.¹³¹

Climate Change vulnerability of Kerala is high with risks of increase in mean surface temperature by 0.5 to 4.5 degrees in next 100 years, decreasing trend of precipitation based on rainfall data, and an estimated sea level rise of 1.30 mm/year.¹³²

The State lies in seismic zone III, which corresponds to Moderate Damage Risk Zone. The western flank of Western Ghats covering the eastern part of Kerala (1500 sq.kms) is one of the major landslide prone areas of the country, leading to road collapse, silting of riverbeds and damaging public and private assets every year. Its coastline is also prone to erosion, monsoon storm surges and sea level rise, while land subsidence due to tunnel erosion and soil piping has seen increase in hilly areas in recent years.¹³³ Considering these challenges the state has taken

¹²⁹ In Kerala 1 Councillor represents a population of approx 7,000 in the city, compared to this 1 Councillor in Mumbai (India's largest city) represents over 50,000 people. Annual Survey of India's City-Systems, 2016

¹³⁰ Kerala State Disaster Management Plan, 2016

¹³¹ Post Disaster Needs Assessment, Landslides and Floods, 2018

¹³² Kerala State Action Plan for Climate Change

¹³³ RKDP Master Document https://rebuild.kerala.gov.in/reports/RKDP_Master%2021May2019.pdf

a head-start in Disaster Risk Management by developing State, District and local level Disaster Risk Management (DRM) plans, developing implementation mechanism to operationalise disaster response in case of a hazard or disaster event and ensure better preparedness

Program Description

The current operation aims to build about the progress made by the state in disaster risk management by supporting the integration of climate risk information in the existing DRM plans of the local bodies. This will be done by making climate information and models available with more granular, local and usable details of a scale that it can be incorporated in the local DRM plans by the LSGs for supporting a comprehensive (disaster and climate related) risk assessment and preparation of integrated response or management plans. Currently, this climate change related information is available at a local scale but it is not being used for local level planning. The operation will support LSGs of the Pamba Basin to integrate this climate information into their DRM plans. It will also capacitate the local bodies to use the Disaster and Climate Action Tracker (DCAT) tool to assess the efficacy of their proposed climate adaptation and mitigation related activities/ investments, to ensure that they climate and DRM informed.

While over the past few years, through regular capacity building by state institutions, Kerala's LSGs have developed the capacity to prepare local DRM plans, there is a need to augment their capacities to make these DRM plans climate risk informed. For this, the operation will support GoK to select (and incentivize) some LSG of the Pamba Basin on a pilot basis, and train their concerned staff and elected representatives on preparing integrated 'climate risk informed DRM plans for their local bodies.

This will entail augmenting the capacities of local resource persons to understand climate change risks, their manifestation / impact at the local level (based on information available from the downscaled climate models), embedding climate information into local level DRM and development plans and supporting them to use DCAT to monitor co-benefits of the proposed activities. Technical assistance will also be provided to LSGD and its designated training institution for developing training modules and establishing tools, processes and systems for climate proofing of the DRM plans.

The type of activities proposed relate to institutional development and its strengthening- new guidelines, tools and protocols for preparing climate informed plans and tracking their implementation, capacity building of LSGD, ULB and KSDMA staff as well as investment planning.

Expected Social Effects of the Program

Proposed interventions are likely to enhance the preparedness and resilience of communities to disaster and climate induced risks and hazards in future. Since the local DRM plans will be informed not only by the disaster related risks but also by climate risks, both of which the state is quite vulnerable to, it will help LSG to better prepare through an integrated risk assessment and response. Sector investments will also help the LSGs to enhance their capacity to quantify co-benefits of climate change mitigation measure included in these plans and see if they are on track. This will especially have positive effect on the most poor and marginalised communities, as they are most vulnerable to climate and disaster related events.

Kerala is the first state where LSGs have prepared their local DRM plans, while other states make DRM plans upto the State and District level, as per NDMA guidelines. So far 850 LSGs of the state have prepared DRM plans. Under the current operation LSGs will be incentivized to

undertake climate-informed DRM planning and converge resources to initiate activities aimed at climate resilience across key sectors.

Benefits and Risks

Potential Benefits

Downscaling of the climate models and its availability for the local governments will help them to better understand the climate related risks and challenges (in addition to those disaster related) and hence be better prepared to address them. Availability of integrated risk assessments (that are informed by both disaster and climate related vulnerabilities) will create local capacities within LSGs to prepare better response plans for preparedness and management. This will also be particularly advantageous as adverse impacts of most disaster and climate induced events are heavily skewed towards marginalized communities which bear their brunt the most, owing to their locational disadvantage (occupying the most vulnerable and hazard prone landscapes) and their low capacity (physical, social and economic)¹³⁴ to overcome shocks induced by such adverse events. This is also because the most marginalized sections of the society (fisherfolk, small, marginal women farmers, landless, children, tribal communities) are dependent for their food and livelihood security on climate sensitive sectors like fisheries, agriculture, forestry that are highly vulnerable to climate change.¹³⁵

Most LSGs are presently trained to work with a response-centric (post-disaster) approach to disaster management.¹³⁶ Shift to a more proactive, preparedness based approach is likely to minimize physical impacts (damages) of adverse events on communities and hence resilience. Impacts of weather and disaster events get aggravated due to poor enforcement of the existing legal regime (like changes to land use or land-cover, encroachment on flood plains or drainages, shrinkage of carrying capacity of water bodies). A broader scoping of the causality for disasters will help the LSG in making more robust DRM plans that minimize future impacts on the marginalized.

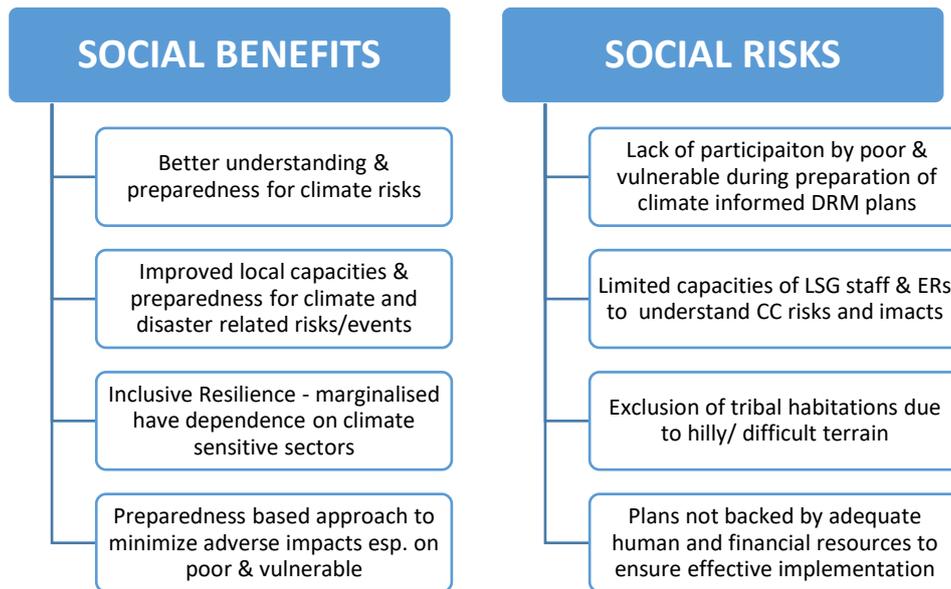
Potential Risks

The comprehensive plans are likely to address the vulnerabilities of disadvantaged communities, but there is risk of exclusion of their specific vulnerabilities during the process of preparing climate informed DRM plans. This is because of the limited current capacities of the LSGs to understand climatic issues, climate induced vulnerabilities and their bearing on local communities, especially the disadvantaged. It is also possible that the poor and vulnerable such as fishing communities (whose survival greatly depends on clear forecast of weather events/disasters) get excluded from participating in consultation process for preparation of climate informed DRM plans. If these plans are not backed by adequate financial and human resources they will be very difficult to operationalise and improve community resilience.

¹³⁴ Physical for those with disabilities, old aged, children, pregnant women; Social for single women, migrants, scheduled tribes and castes; Economic for destitute and poorest of the poor.

¹³⁵ Kerala State Action Plan on Climate Change

¹³⁶ RKDP Master Document May 2019



Legal Instruments, Policies and Programmes/ Schemes

Legal Environment for the DRM Sector

The sector policies accept the need for utilizing the available social capital and providing a bigger role for local communities in disaster risk preparedness as well as management. They realize that the local governments are best placed when it comes to preparing for and responding to disaster events. The policies call for capacitating them and the communities, including civil society, community based organisations for preparedness and for enhancing their resilience to disaster related shocks and impacts.

The state strategy for Community Based Disaster Risk Management centre-stages the community with supportive role being provided by government agencies, non-government organizations/ civil society, voluntary agencies and local community action groups, under the overall direction and supervision of District Disaster Management Authorities in the district and the Kerala State Disaster Management Authority (KSDMA) in the state. It envisages leveraging existing social capital and traditional knowledge in sustainable management of disasters for preparing Panchayat-centric community based disaster management plans.¹³⁷

In line with the National Disaster Management Act (NDMA), the state policy calls for the constitution of Village Disaster Management Committees or Task Forces (VDMCs) to reduce the risks associated with disasters and dependency on external agencies. These VDMCs are to strengthen the coping mechanism of the village to combat various magnitudes of disaster. Under this preference is to be given to capacitate the most vulnerable groups like women, children, elders and differently-abled for their rescue and evacuation.

Major Sector Schemes

There are no major national or state schemes in the DRM sector that support the preparation and implementation of DRM plans. Funds available under the NDMA as State Disaster Response Fund (SDRF) and the National Cyclone Risk Mitigation Project (NCRMP) and the State Budget are used for supporting implementation through the temporary structure provided under the

¹³⁷ Kerala State Disaster Management Policy

Act/s, and policies with the anchoring role provided by the state and district level DRM authorities (SDMA/ DDMA).

Institutions and Capacities to Manage Social Risks

Three institutions will be key recipients of investments under the DRM sector. The KSDMA and LSGD will be responsible for making the climate data available for use locally¹³⁸ and supporting LSGs to use this data. They will also be responsible for supporting the DRM planning process and train human resource at the LSG (functionaries and elected representatives) for making these DRM plans climate risk informed. In addition, Kerala Institute of Local Administration, as the state’s apex training institution is expected to support the KSDMA and Department of LSG (LSGD) in preparing these CC-DRM planning training modules with support from the latter and conducting trainings for selected LSGs of Pamba Basin¹³⁹.

KSDMA, as the nodal and coordinating agency of the state for Disaster Management comes under the department of revenue and Disaster Management. KSDMA is the administrative agency while within it there is the Kerala State Emergency Operations Centre (KSEOC) which is responsible for all technical matters related to Disaster Management. Headed by Member Secretary of the Authority, KSEOC/ KSDMA has different wings / divisions to look at different issues related to coordination with districts or DDMA, GIS lab, a Fusion Centre to undertake Hazard and Risk Vulnerability Assessments, a Capacity building cell as well as a cell to support DRM planning at different levels. A cell on Rebuild Kerala Initiative has also been recently established with capacities on social and community development, apart from other areas.¹⁴⁰

Institution	Functions relevant for Social Management
Kerala State Disaster Management Authority- KSDMA	<ul style="list-style-type: none"> • Develop DRM policies and practices for the state that integrate gender, age and disability related consideration to ensure inclusive, resilient development. • Provide funds to DDMA and LSG for undertaking participatory planning and preparedness. • Ensure that needs of vulnerable groups such as women, elderly, PwD, SCs, STs, fisherfolk and migrants are mainstreamed in local and district level DRM plans. • Coordinate with CSOs/ LSGs/ CBOs & social volunteers. • Develop and maintain a virtual cadre of DRM personnel for mainstreaming DRR across line departments. • Conduct risk assessment and share risk information with departments and relevant LSGs. • Plan and promote strategies for Community-Based Disaster Risk Management –CBDRM. • Organise training programmes for LSG functionaries and leaders, emergency response teams, social volunteers on DRM and its different aspects -land use planning, hazard risk zoning, vulnerability assessment.
Department of Local Self	<ul style="list-style-type: none"> • Build capacity of the LSGs on DRM planning.

¹³⁸ KSDMA supported research is underway on dynamically downscaling the regional climate: simulation of extreme rainfall events and their impacts over the State- <https://sdma.kerala.gov.in/downscaling-climate-change-forecast-2017/>

¹³⁹ KILA has been offering capacity building support to LSGs for climate proofing of their development plans

¹⁴⁰ <https://sdma.kerala.gov.in/office/>

Government LSGD –	<ul style="list-style-type: none"> • Ensure requisite capacities among office bearers of LSGIs such that they can address the interests of the vulnerable groups like women, elderly and children, in the wake of disaster. • Coordinate with other department and agencies. • Provide human and financial resources required by LSGs. • Provide regulation to LSGs by setting up an Ombudsman and Tribunal to redress grievances of citizens and other parties against local bodies.
Local Governments LSGs – Self	<ul style="list-style-type: none"> • Promote citizens participation in DRM planning and their engagement in operationalising these plans. • Mobilise communities and individuals (as volunteers or response teams) to ensure citizens engagement in preparedness and response. • Ensure regular training and capacity building of its cadres and elected leaders on different aspects of disaster management. • Safeguard interests of vulnerable sections; ensure identification of their vulnerabilities and appropriate strategies to respond to them during an adverse event.

Assessment of Sector Institutions

LSGD as well as the ULBs in Kerala have a rich history and a strong community interface. As a result, the local bodies and elected representatives enjoy the trust of its residents. The LSGs have been preparing decentralized local development plans using a participatory approach that is inclusive and provides an opportunity to the vulnerable and marginalized to get their needs and priorities included in these local plans.

Kerala is the first state where a successful attempt has been made to deepen ownership and sensitivity about disaster related issues and facilitate the preparation of local DRM plans. Likewise, climate sensitivity of the state’s population is also manifested by the fact that it is also the first state in the country where an attempt has been made to make a more granular and localized assessment of climate impacts and using that information to develop Local Action Plans On Climate Change-LAPCC (at the level of a Gram Panchayat cluster) on the lines of State Action Plan On Climate Change (SAPCC). Since the local bodies have been effectively engaging on a regular basis with different constituencies like women, scheduled castes and tribes and the old aged for the preparation of gender sub-plans, special component plans and tribal sub-plans apart from old-aged action plans, they have developed the capacity to assess their specific needs during the planning process, which will be useful during climate informed planning.

Citizens Engagement- LSGD and the LSGIs have sound social capacities to facilitate participation of citizens in planning, implementation as well as monitoring of plans. The state and local bodies have more than 25 year long experience of facilitating decentralized planning through the involvement of various social constituencies. The LSGI also handhold and nurture one of the biggest women’s collective - the Kudumbshree which provides voice and agency to women of the state across social groups and across sectors. These women members proactively participate in the disaster relief, preparedness and response in close coordination with the local bodies. The local bodies also implement several schemes/ programmes specifically targeting the most vulnerable and marginalized and engage with them on a regular basis. Most local bodies also have their own citizen’s charters assuring citizens of basic minimum public services. Each local body has constituted its own community institutions like the Emergency Response

Teams that spearhead the post disaster action in a Panchayat or municipality. Likewise, each Panchayat is also expected to constitute a Village Disaster Management Committee to advise the Panchayat on all related issues and coordinate local action around it.¹⁴¹

KSDMA also has experience of working with citizens through the DDMA and VDMCs. There are a number of local cadres of citizens/ volunteers that are engaged by KSDMA in disaster management. These are a) **Emergency Response Teams**- which as part of the LSG and which are trained by KSDMA to respond in case of crisis, b) **Aapada Mitra** – these are a set of community volunteers on disaster response created as part of the NDMA for the most disaster/ flood prone districts of the country. They are intensively trained and provided periodic refreshers and drills on post disaster response and relief, c) **Samoochika Sannadha Sena**- which is a common platform of volunteers and voluntary organisations created by the state¹⁴² and managed by the KSDMA. It creates a database of all civilians and organisations offering to volunteer their services in the event of a crisis in the state. d) **Kerala Volunteer Youth Action Force** -formed to prepare youth volunteers to deal with natural disasters. Nearly 2,000 youths have been trained and volunteer force has been set up in all 14 districts. KSDMA offers virtual training to these volunteers (through a mobile application) on how to respond in the event of a disaster.¹⁴³

The RKDP also recommends that the DRR plans of each department should be drawn using a participatory approach and should be sensitive to the needs of vulnerable groups such as women, the elderly, persons with disabilities, SCs, STs, fisher-folks and migrants.¹⁴⁴

Grievance Redressal- LSGD has an effective GRM that it used by citizens and users of services of many other sectors and departments to register their complaints and grievances. The LSGD GRM allows the aggrieved to file their grievances and complaints of corruption against any of its 5 wings, although the menu of complaints does not include specific complaints related to disaster management.¹⁴⁵ The LSGD GRM provides a distinct reference number to the complainant to be used for tracking the status of grievance at a later date. However, the number of grievances received and redressed is quite low (2238 applications/ grievances) considering that these are state wide numbers for a department that offers a very large number of services that affect the daily life of all citizens.

Most large municipalities (Municipal Corporations and some Councils) have their own separate GRMs. Most local bodies (both panchayats and municipalities use the common GRM created for them by the state called Soochika¹⁴⁶ for e-filing of their grievances and for tracking their status. If the aggrieved person is not satisfied with the redress, she/he can move the LSG Tribunal. The LSG Tribunal in every district hears appeals against the actions or decisions of any Local Self Government Institutions (LSGIs) under Section 276 of State Panchayati Raj Act. Kerala also has an Ombudsman for LSG, where grievances related to allegations of corruption or maladministration- favouritism, lack of integrity or abuse of power against any official or elected representatives can be filed. The Ombudsman may conduct investigations into complaints in accordance with the Kerala Panchayat Raj Act, 1994.

¹⁴¹ <https://lsgkerala.gov.in/index.php/en/resources/citizen-charter>, <http://www.corporationoftrivandrum.in/citizen-charter>

¹⁴² Vide GO (Ms) No. 1/2020/GAD dated 1-1-2020 Government

¹⁴³ <https://sannadhasena.kerala.gov.in/>

¹⁴⁴ RKDP Master Document https://rebuild.kerala.gov.in/reports/RKDP_Master%2021May2019.pdf

¹⁴⁵ <https://pqlsqd.kerala.gov.in/>

¹⁴⁶ <https://soochika.lsgkerala.gov.in/Soochika/NewLogin.aspx>

KSDMA does not have its own dedicated GRM and like in case of other agencies, most people with grievance directed at them either access the LSGD GRM or the common GRM - Soochika to direct their LSG specific grievances related to Disaster Management.

Gender and Inclusion- As per the 73rd and 74th Constitutional amendment that empowered local bodies, the LSGs are provided the mandate to work on the following areas- 'planning for economic development and social justice, safeguarding the interests of weaker sections of society, including handicapped and mentally retarded, implement beneficiary oriented schemes for SC/ ST and poverty alleviation. The 73rd amendment related to rural local bodies or panchayats specifically mentions their responsibilities as - ensuring peoples participation in development, organising relief activities during calamities, inculcating environmental awareness and motivating local action around it.

Women bear a disproportionate burden of losses during natural disasters and are usually at the forefront looking after the elderly, children and animals while at the same time assisting in rescue efforts. This risk is amplified because many households in the state are headed by women. Therefore integrating their needs in DRM planning and addressing their specific needs for shelter, safety, sanitation etc, needs to be a priority.¹⁴⁷ Likewise, the STs living in vulnerable areas of the Pamba Basin uplands and landslide/ flood prone areas as well as coastal fishing communities need to be involved in the planning and prioritization process, as they bear the brunt of climate and disaster induced events and understand the relation between natural resources, weather and climate impacts and adaptation to them better.

KSDMA has developed a women-centered strategy for preparation, response and rehabilitation that aims to incentivize participation and local leadership of women for disaster management. In recent years, the state has galvanized its large network of women Kudumbshree members for relief and rehabilitation. In the ongoing COVID crisis, the state's 26,000 strong female frontlines health workers or ASHA (Accredited Social Health Activists) became the eyes and ears of the government and are helping the state recover from the pandemic.¹⁴⁸ The authority also undertakes regular hazard and risk vulnerability assessment of regions analyzing their social, economic and environmental vulnerabilities and recommending mitigation and adaption measures, particularly for socially vulnerable groups like pregnant women, infants, disabled, sick and the elderly.

KSDMA has also developed guidance handbook for practitioners on how to mainstream disability on DRR and developing a disability inclusive DRR strategy.¹⁴⁹ KSDMA also follows the Sendai Framework which calls for 'governments to engage with relevant stakeholders, including women, children and youth, persons with disabilities, poor people, migrants, indigenous peoples, volunteers, community of practitioners and older persons in the design and implementation of DRR policies, plans and standards' and aims to 'integrate gender, age, and disability considerations in policies and practices to ensure inclusive and resilient development.'

Institutional Assessment – State level systems

As seen in the detailed assessment of the state level institutions in the section on Agriculture, state systems offer adequate social safeguards, by ensuring citizen's engagement at various levels, providing a state wide system of grievance redress, securing the interest of women,

¹⁴⁷ RKDP Master Document

¹⁴⁸ Inclusion of Vulnerable Groups in Disaster Relief in Kerala, IWAGE, Sept 2020

¹⁴⁹ Handbook on Disability and Disaster Risk Reduction, Kerala. KSDMA 2016

elderly, disabled and ensuring their inclusion in schemes and programmes. (Kindly refer to state level institutional assessment in the chapter on Agriculture sector for more details)

Program System Consistency with Core Principle

Core Principle	Social Assessment
<p>Core Principle #1: Program E&S management systems are designed to (a) promote E&S sustainability in the Program design; (b) avoid, minimize, or mitigate adverse impacts; and (c) promote informed decision-making relating to a Program's E&S effects</p>	<p>Kerala has one of the most enabling policy legal environments for DRM in the country. Recent spate of disaster events (floods and landslides) have sensitized and forced the state into action, to ensure a much more comprehensive and inclusive framework for DRM.</p> <p>LSGD and local bodies have been addressing issues of equity and inclusion in the public services that they offer to citizens and have competent systems to ensure inclusion of needs and priorities of vulnerable groups during the participatory preparation of climate risk informed DRM plans.</p> <p>In recent years LSGs have developed capacities to undertake planning around DRR issues. Nearly 850 GPs have already prepared their DRM plans, but await implementation, as they need to integrate with local development plans. The State Disaster Management Plan mandates relevant departments to allocate 10 percent of their budget for integrating DRR in their sector; however, no such allocation has happened in practice.</p> <p>From 2020-21, Kerala State Planning Board has also made integration of DRM plans with local development plans mandatory, which gives this exercise the required seriousness. Now local plans will need to include projects on DRM and mitigation, considering the susceptibility of the area to natural disasters and their existing capacity to tackle them.¹⁵⁰ However, Panchayat and municipal functionaries are already overburdened, and lack human resource or adequate expertise to support risk informed DRM planning. Being largely dependent on state government for resources, they lack sufficient financial resources to implement DRM Plans.</p> <p>LSGD and the LSGIs have dedicated GRMs that seem to be effective in the redress of complaints, although there is scope for further increasing awareness and getting more citizens to access them.</p>
<p>Core Principle #2: Program E&S management systems are designed to avoid, minimize, or mitigate adverse impacts on</p>	<p>The operations in this sector do not support activities that may have an impact on the religious or cultural resources of communities</p>

¹⁵⁰ Kerala Economic Review Volume I, 2018-19 State Planning Board

<p>natural habitats and physical cultural resources resulting from the Program. Program activities that involve the significant conversion or degradation of critical natural habitats or critical physical cultural heritage are not eligible for PforR financing.</p>	
<p>Core Principle #3: Program E&S management systems are designed to protect public and worker safety against the potential risks associated with (a) the construction and/or operation of facilities or other operational practices under the Program; (b) exposure to toxic chemicals, hazardous wastes, and otherwise dangerous materials under the Program; and (c) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards</p>	<p>The project workers in case of this sector are public servants- staff of KSDMA, local bodies. These public servants are protected by the service rules as well as national and states laws on protection from abuse and exploitation.</p> <p>Since most disaster related frontline workforce in the state comprises women- Kudumbshree members and ASHA or Anganwadi Workers, additionality of mandate will impact their working conditions and working hours, which needs to be addressed to ensure fair working conditions.</p>
<p>Core Principle #4: Program E&S systems manage land acquisition and loss of access to natural resources in a way that avoids or minimizes displacement and assists affected people in improving, or at the minimum restoring, their livelihoods and living standards.</p>	<p>No investments are planned that may lead to physical or economic displacement of communities or individuals- whether temporary or permanent in nature.</p>
<p>Core Principle #5: Program E&S systems give due consideration to the cultural appropriateness of, and equitable access to, Program benefits, giving special attention to the rights and interests of Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities, and to the needs or concerns of vulnerable groups.</p>	<p>Climate and disaster events have a disproportionately adverse impact on the marginalised, as well as those inter-sectionally vulnerable. Better assessment of climate and disaster related risks through a hazard and vulnerability risk assessment as well as its use in preparing climate informed DRM plans will increase community awareness and help in improved systems and capacities for preparedness and greater resilience, especially for the vulnerable.</p> <p>Decentralised, participatory planning processes adopted by the state, and refined over last 25 years, has led to significant attention being paid to identifying the needs of vulnerable, (through dedicated gram / ward sabhas and women sabhas to help them to articulate their priorities) an ensuring a place for them in the final development</p>

	<p>plans. All such plans have to explicitly identify investments that are directed at the welfare of different vulnerable groups- women, elderly, children, SC, ST and transgender and ensure that around 20 percent of investments are directed at them.</p> <p>LSGI will need institutional strengthening (additional human/ financial resources) to be able to assess climate risks and impacts and integrate them in local DRM and development plans.</p> <p>The state systems as well as LSG are expected to ensure adequate inclusion, transparency and accountability in preparation of climate informed DRM Plans, to ensure equitable spread of benefits and improved resilience.</p>
<p>Core Principle #6: Program E&S systems avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.</p>	<p>The nature of program investments is such that they are not likely to lead to or exacerbate social or resource conflicts.</p>

Stakeholder Consultations and Disclosure

Stakeholders identified for consultations around this sector are mapped in the comprehensive stakeholder map prepared for the program. (*Annexure B*) These include departmental functionaries at the state, district, sub-district and Panchayat / Municipal levels, as also line and support agencies and training institutions, apart from chairman and vice chairman of municipalities, SHG members, PHC workers and teachers. They also cover user groups and community institutions formed around areas/issues where the sector investments are likely to occur. These consultations are aimed at understanding the current chain of implementation of schemes/ projects in these respective sector institutions, assess the existing social capacities and procedures adopted by them, to see how social issues related to inclusion, access, equity in benefit sharing, participation, transparency/ accountability in sectoral planning and implementation are addressed by them and the gaps that exist therein. These consultations also aim at assessing from the point of view of the service providers/ duty bearers as well as communities, user –groups and service recipients the quality and inclusiveness of services, especially for the vulnerable groups- single women, SCs/ STs, landless/ asset-less, fisher folk, elderly, People with Disabilities (PwDs) and migrants.

As shared in ESSA methodology, consultations with stakeholder were facilitated by Kerala Institute of Local Administration (KILA) at the state and in Pamba basin districts. The following key inputs have been received from these stakeholder consultations and have been used to further inform this systems assessment.

Inputs from State Consultations

- If a house is destroyed during a recognized disaster, then their details are included in the list of affected families by revenue department, which is nodal for such actions, and

- their inclusion is ensured during the beneficiary listing stage by local government and a local committee is constituted for validating and overseeing payment of compensation.
- KSDMA provides specialized training to its volunteers and state response force on rescuing people with disabilities. It also has a basic grievance redressal mechanism to tackle any exclusionary actions due to political pressure.
 - The primary relief agencies are revenue and agriculture, but their limited understanding of social/ local issues means that they try to apply relief measures strictly by the book/ norms, which leads to exclusion of affected persons.
 - This is the reason why LSGD is now being given a more prominent role in disaster management. LSGs need capacity strengthening for undertaking climate informed planning and also need more frequent monitoring of these plans.

Inputs from Community Consultations

- Consecutive floods of 2018 and 2019 caused extensive damage - wide destruction of paddy causing farmers distress and unemployment. Along with crop loss there was loss of livestock -poultry, ducks and goats and damage to roads, schools and anganwadis, which are not yet repaired.
- None of the community or ward members across GPs in Alappuzha district received any formal training on disaster management, although there is a volunteer committee at the ward level for 'developing disaster resilience'. In Kottayam district some members did receive training but that was a few years ago.
- In Pathanamthitta district, some elected representatives received formal training on DRM and these inputs were utilized while developing the panchayat level DRR plans. They collected data across parameters about the GP, formed ward level rapid response teams, conducted separate gram sabhas for creating awareness and seeking feedback and identified safe havens for evacuation during disasters.
- As there are several shortcomings in the existing DRM training and planning process, it is necessary to create public awareness about DRM issues, provide resources to rapid response teams, properly training Panchayat level committees like volunteer committees and DRM Working Groups on disaster reduction and management.
- As the capacities of ULBs (leaders and functionaries) on disaster management, developing local climate change action plans and their implementation is limited, they should be formally trained by departmental agencies to address climate change issues and disaster management.

The concern of stakeholders regarding limited awareness, exposure of citizens and elected representatives to DRM issues will be addressed through capacity building of LSG staff on disaster response and preparedness and for integrating these issues in their development plans. The points raised by women and vulnerable groups about low awareness and capacities of LSGs to better handle disaster and adverse climatic events will be sought to be raised through intensive capacity building support to the local bodies and communities planned as part of the operation.

The draft ESSA report will be disclosed on the website of Resilient Kerala Initiative (RKI- RKDP) and on the World Bank external website for comments and feedback and will be finalized after incorporating the suggestions received from the stakeholders.

Gaps and Recommendations

- The KSDMA, LSGD as well as individual local bodies have reasonable social capacities to ensure that sector strategies are inclusive and equitably benefit different social groups and communities. Although the state has initiated steps in that direction, there is a need to enhance capacities for climate informed planning. This needs to be done by un-boxing the complexities related to climate change and making the staff and functionaries of LSGs understand them, so that they can then link them to specific vulnerabilities of different social groups- women, migrants, PwD, inland and coastal fishing communities etc.- and engage those with vulnerabilities during the DRM planning process. The state will also need to ensure allocation of budgets for integrating DRR in their works, so that LSGs have human and financial resources to prepare and operationalise plans for addressing climate and disaster related vulnerabilities and manage social risks.
- Although the State and Local Self Government Department (LSGD) have put emphasis on preparing climate informed plans, currently, there are no mechanisms to ensure the integration of these risk-informed DRM plans into panchayats development plans. Unless the plans are specifically linked to schemes and budgets, with clear timeframes and supported by an accountable institutional and legal framework to manage disaster response locally, it will be difficult to operationalise them. This requires a roadmap with clear assignment of roles and responsibilities to integrate CC-DRR in their respective departmental plans and link them to the local priorities / people's needs.
- LSGD and LSGI have their own dedicated or common grievance mechanisms for receiving grievances and complaints. However, looking at the numbers accessing these systems, its use by citizens seems very limited, especially considering that the department and the LSGs are responsible for providing almost all the basic public services and, as seen in other states, there are likely to be higher number of grievances if the system is used effectively. This requires a renewed effort at creating awareness about LSGD's GRM in the community and revamping it to make grievances traceable through multiple offline and online mediums, proactive disclosure of grievance redress status, their categories and assessment of how the grievances are being used for systems improvement.

Disclosure

Stakeholder Disclosure Workshops: Held through a virtual forum on 18 February 2021 and on 22 February 2021, which were convened by RKI and conducted by KILA (*Annexure E: Report of the Disclosure Workshops*).

The draft ESSA reports – Draft ESSA Summary Report (Part A), the draft ESSA Environmental Report (Part B) and the draft ESSA Social Report (Part C) were disclosed on February 8, 2021 in the RKI website. This disclosure was of the English version of the document. The draft ESSA Summary Report (Part A) was translated into local language - Malayalam – and was disclosed on February 12, 2021. Comments, suggestions and any other feedback was requested along with this website disclosure through e-mails till the 28th of February 2021. A total of 54 participants attended the first and 27 participants attended the second disclosure workshop,

which comprised department representatives, civil society, elected representatives, frontline workers and citizens.

All disclosures were well ahead of the stakeholder workshop.. As part of the invitation to the workshop, the invitees were sent all the draft ESSA Reports (Part A, Part B and Part C) for their prior reading and this also constituted disclosure. The feedback obtained during the workshop has been used to further refine and finalize the three draft ESSA reports. These final ESSA reports will be disclosed in the RKI website and also the World Bank Infoshop. Printed copies of the ESSA reports will also be made available upon request at the RKI office.

Overall Recommendations and Program Actions

Social Recommendations

1. Strengthening Capacities for Inclusive and Participatory Planning in Different Sectors

The assessment of social systems shows that while state institutions and functionaries have reasonable overall capacities for social management, many sector institutions don't have past experience of engaging with communities. The current PforR operation demands some of these institutions like WRD, PWD, Health to engage closely with communities for inclusive and participatory planning in their respective sectors. In some other sectors, like DRM and urban, existing institutions that have traditionally partnered with communities and CBOs but are now expected to undertake sub-sector level planning to make spatial planning or climate informed planning more representative and participatory in nature.

For both these new asks, the sector institutions need to strengthen their capacities to undertake a deeper assessment to identify the vulnerable constituencies of their respective sectors/ sub-sectors and ensure their participation or at least a wider consultation for inclusion of their needs in these plans. This requires strengthening of the capacities of these institutions on social management. It will also include developing specific sector strategies to strengthen the role of women, tribal and fishing communities or migrants as primary benefactors, as they are the most vulnerable to disaster/ climate/ health events and may need to be provided a distinct voice and agency through the participatory planning and decision making process.

2. Improved Capacities of Sectoral Institutions on Social Issues

Related to the above, many partnering departments will also need to bolster their capacities for citizen's engagement, gender mainstreaming, making existing services more inclusive and accessible to citizens and the vulnerable. This will include things like servicing the information needs of women farmers, tenants/ sharecroppers, fisher-folks, migrants, S&M farmers through the expanded IAMIS, reorienting the process of selecting and prioritizing road packages or package of practices, or ensuring an WRIS that can be used by the S&M farmers and landless in the river basin.

Thus supply side stakeholders in each department will need to be supported either internally or through the RKI-PMU to understand the specific social risks and vulnerabilities with regards to their sector and how they need to be addressed. In some cases it will need fresh capacities and in others augmenting existing capacities with adequate human and financial resources to deliver on the new responsibilities. For example, in Urban sector/ ULBs it will mean creating additional capacities for linking spatial plans with district development plans; augmenting capacities of LSGs to assess community level/ local impacts of climate change and building those social risks (depending on specific social groups impacted and their vulnerabilities) in the climate informed plans; tracking inclusiveness of programmes; ensuring allocation of budgets by departments for integrating social management strategies in their work.

3. Fair Working Conditions

Many of the strategies identified under different sectors require creating a wider outreach and a deeper engagement with the community using existing staff and human resources. In many sectors- urban, LSGs, agriculture and health- as per GoK's own assessment, the field level cadres are grossly understaffed and overburdened. Additional mandates like making the planning process more rigorous and participatory, undertaking vulnerability need assessment for the respective sectors to understand the constituency specific needs requires additional time and effort. Often the outreach to schemes or last mile delivery is provided by contractual staff with insecure tenures and undefined terms of engagement or by a large pool of CBO

members or community volunteers. In areas like health and disease surveillance, this could mean health and safety related risks if they are inadequately informed or not suitably trained.

In addition, most sectors, the frontline staff- extension workers in case of agriculture, ASHA/ AWW in case of health or the Kudumbshree members providing outreach in LSGs- are mostly women. This will require that departmental staff/ frontline workers engaged in the operations related to RKP have fair working conditions, reasonable working hours and measures are in place for their safety from abuse and exploitation.

4. Stronger and Dedicated Grievance Redressal Mechanism

The state has a reasonably functioning, centralized Grievance Redressal Mechanisms in place that most citizens rely on for giving feedback to departments and government agencies. Although some departments like LSGD have their own GRMs there is a need to have a more robust, accountable, transparent GRM that is specific to the current operation and its investments. One option will be to create a strong department level GRM in all participating sectors/ departments, another option is to create a central program level GRM that pans across sectors. The latter will ensure closer scrutiny and tracking of program specific grievances that will help in refining the sector strategies and fixing accountability.

This dedicated program level GRM will also ensure better tracking of inclusion, outreach and benefits and help make the services, practices and packages more accessible. Complementary efforts will be needed to ensure creation of a GRM that is simple to use and has multiple offline and online access options. It also needs to have provision for timely redress, penalty for delays, ability to track grievance status and escalate them, if required. Owing to the complex and multi-sectoral nature of the operation, it will also be important that the PMU undertakes a periodic clustering/ categorization and analysis of complaints to identify the problem areas, provide feedback to the concerned duty bearers and loop the feedback to inform the program strategies and for systems improvement.

5. Stronger legal framework for social accountability

Some of the investment areas have a legal or operative eco-system that does not provide for clear accountability. In many sectors like water, agriculture, urban development and social protection, there are multiple institutions with sometimes overlapping mandates that often makes social accountability very difficult to establish. For example, in case of agriculture insurance the operating framework (at least for the national crop insurance scheme- PMFBY) is skewed against the small and marginal farmers. Any effort to make the adoption of crop insurance wider and inclusive will need re-engineering the eco-system to remove these exclusionary eligibility criteria, expand awareness and coverage and make the system more transparent. Likewise, in case of spatial development planning or town master planning, accountability is not clear. While the LSG are made accountable for their preparation and finalization, there are no fixed timelines in the enabling policy for different stages of planning. As a result master planning continues for years, is susceptible to interference by vested interests and state level agencies, with no power in the hands of ULBs to deter plan violations. All this leads to lack of ownership of the local bodies and poor accountability. This needs a stronger legal regime or enabling environment, with clear assignment of roles and responsibilities, to help fix clearer accountability for achievement of outputs.

6. Land management:

The Program does not foresee any requirement of private lands for Program investments and most investments will mainly be on existing public or government land. However, there is gap in the land management practices of the GoK, specifically Public Works Department (PWD) in relation to their treatment of the non- titleholders (encroachers and squatters) and needs to be

aligned with the Bank’s Policy. In the present PforR operation due consideration will need to be given to treating such occupants as per the Bank policy- rehabilitating the non-titleholders that may suffer due to economic or physical displacement as a result of the road maintenance and modernization work.

Contractors and institutions to be engaged in clearing potential sites, RoWs will have to ensure that the processes are aligned with the Bank procedures, to address the institutional gap with respect to management of physical and economic displacements.

Program Exclusions

The following activities are proposed to be excluded from the current investments:

- Considering the nature of operations (PforR), any road repair and maintenance works requiring large scale physical resettlement and removal of structures (on a single alignment/ package), such that they physically impact more than 50 persons will be excluded from the list of investments.
- Any ULB master planning that is likely to impact tribal settlements or common property regimes near or within their municipal limits will be excluded from being selected as a pilot for City/ Town Master Planning, if this spatial planning is likely to adversely impact existing settlements or resources accessed by these tribal / indigenous communities.

Program Actions

Action Description	Source	DLI#	Responsibility	Timing and Tasks	Completion Measurement
Incorporating social management through plans and bid documents in civil works / investments and social safeguards and social inclusion content in training & capacity building programs for ensuring inclusiveness in sector/ resource planning and implementation	ESSA	NA	RKI-PMSS/PMU and implementing institutions anchoring participatory planning	Year 1: Capacity assessment and Preparation of ToRs for key social positions in RKI-PMU & other key sector institutions; capacity building modules finalized Year 2: Completion of recruitment and deployment, where required Year 2 onwards: regular training of functionaries on different aspects of social management.	IVA, Training completion reports, AMs
If needed set up new or strengthen existing grievance redress mechanism at state, department, local	ESSA	NA	RKI and key departments for each sector	Year 1: Assessment of existing systems & requirement for developing common GRM for RKP by the end of year 1.	IVA, AMs

levels to enhance transparency and responsiveness by enabling creation of an open log of grievances and redressal actions.				Year2: Regularly analyse and track grievances to inform the program	
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Annexure A: Checklist to Guide Discussions for ESSA Preparation- Social Disaster Risk Management-

Result Area 1: Building systems and institutional capacities for managing shocks from climate change, natural disasters and disease outbreaks

Program Activities

Description	Dept / Agency
Establish protocols for climate informed planning and tools for application [1]	LSGD, LSGIs, KSDMA
Train LSG staff on application of local DRM plans and climate proofing processes [1]LSGD, LSGIs, KSDMA	LSGD, LSGIs, KSDMA
Apply screening and planning tools for climate proofing/ smart investments in LSGIs [1,2]LSGD, LSGIs, KSDMA	LSGD, LSGIs, KSDMA

Note: 1. Institutional development (e.g. capacity building, training, institutional strengthening); 2. Investment planning and management; and 3. Infrastructure development and maintenance.

Sectoral/ Departmental Consultations¹⁵¹

- List of major Central/ State/ Panchayat sector schemes related to DRM.
- Scheme wise list of state agencies involved in planning/ implementation/ monitoring/ capacity building etc. and their key mandates vs actual roles (*broad outline needed*).
- Which agencies are responsible for ensuring a) efficient last mile delivery, b) inclusiveness of services, c) participation, d) equitable distribution of benefits, e) for accountability and transparency in delivery. (*Also list agencies not included above*)
- Please collectively reflect on how effective these agencies are in performing their roles?
- What limitations do they face? What additional support is required to enhance scheme / program performance?
- How do existing vulnerability assessments ensure inclusion of specific needs/ concerns of vulnerable HHs/ communities- coastal, hill, flood or earthquake or landslide prone areas?
- What additional steps are needed to ensure more effective and inclusive vulnerability assessment and its implementation? How could such gaps be filled? Is any screening mechanism used to inform DRR/CC planning presently? How has been the experience?

¹⁵¹ During the consultation please check if all the sectoral experts have undergone any formal training on DRR/ DRM/ CC issues or not?

- Suggestion to make them more relevant.
- Do key institutions mandated with delivering DRM/ CC trainings to ERs and LSG staff have experts/ expertise to incorporate social issues in training content? Will capacities need to be augmented – if possible, please suggest specific support/areas in which required.

Community/ Group Consultations¹⁵² (*At least 1 consultation each with women & vulnerable*)

- What main challenges/ vulnerabilities you collectively face due to CC/ Disaster events?
- Have elected leaders present in this group undergone training on CC/ DRM in the past? Who trained them, key takeaways and how were these learnings used in the subsequent planning process?
- Any shortcomings in training content, delivery or planning process that could be improved for more disaster/ climate informed socially inclusive plans? Specific suggestion on bridging these gaps and making planning more simplified, replicable and usable?

DRFI / Social Protection

Result Area 1: Building systems and institutional capacities for managing shocks from climate change, natural disasters and disease outbreaks

Program Activities

Description	Dept / Agency
Develop a unified registry for disaster assistance and social welfare benefit payments [1]	DoF, DoR, KSDMA, DoA, Fisheries
Develop guidelines on payment norms/modalities, administrative rules, and monitoring arrangements; [1]	DoF, DoR, KSDMA, DoA, Fisheries
Develop and adopt a comprehensive disaster risk finance and insurance strategy/action plan; [1]	DoF, DoR, KSDMA, DoA, Fisheries
Pilot at least two alternative risk transfer and insurance (parametric) products targeting both household/vulnerable population and the state government.[1]	DoF, DoR, KSDMA, DoA, Fisheries

Sectoral/ Departmental Consultations

- Briefly outline the state system currently used for entitlement-eligibility mapping to create a database used to target vulnerable HHs. Take specific schemes like widow/ old age pension to briefly explain how the process works in Kerala for DBT.
- What systems are in place for field level validation of this statewide database? Periodicity of this validation? (Any/ All official document outlining such protocols will be good)
- Are there any inbuilt systems to eliminate errors of exclusion and inclusion in this database? Cite if any formal/ informal systems in place to ensure inclusion of vulnerable- including role of LSGs.
- What is the role of state’s grievance redress mechanisms to ensure access of vulnerable

¹⁵² Climate change and its manifestations to be explained before initiating consultation

HHs/ individuals to such social protection/ risk finance schemes? What state support is on offer to help establish eligibility of HHs/ persons?

- What has been the state experience of disaster risk finance (fisher-folk) or crop insurance (small & marginal farmers)? How are eligibilities decided and how are the most vulnerable prioritized?
- Any specific suggestions for further reinforcing the present mechanisms, filling gaps?

Community/ Group Consultations (At least 1 dedicated consultation with vulnerable groups)

- Are all HHs/ persons in your GP/ ULB/ habitation/ area receiving entitlements like pensions for widow, old aged, disability or food aid under PDS as per their eligibility?
- Are there still eligible people/HHs found to be outside scheme coverage? Taking example of a specific scheme please explain steps taken to help them access their entitlements/ services/ public benefits? Who initiates the process of inclusion usually?
- What has been people’s experience of availing crop insurance (S&M farmers) or risk finance (fisher-folk) - experience of only relevant people needed- S&M farmers/ fisherfolk? Ease of access /barriers to access, clarity and awareness about the process.

Fiscal

Result Area 1: Building systems and institutional capacities for managing shocks from climate change, natural disasters and disease outbreaks

Program Activities

Description	Dept / Agency
Establish and staff a debt management unit to produce quarterly/annual debt forecasts/ updates and annual debt management plans; [1]	DoF
Undertake a feasibility study on debt restructuring options and implementing its recommendations, considering the fiscal implications of recent natural disasters and COVID-19 pandemic [1]	DoF

Sectoral/ Departmental Consultations

Not required. Secondary literature review and personal interviews will suffice

Community/ Group Consultations

Not required. Secondary literature review and personal interviews will suffice

Urban

Result Area 1: Building systems and institutional capacities for managing shocks from climate change, natural disasters and disease outbreaks

Program Activities

Description	Dept /Agency
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Establish systems and strengthen institutional and technical capacities of ULBs LSGD to undertake and operationalize risk-informed master planning; TCP and LSGD to support and incentivize risk-informed master planning by ULBs. [1,2]

Sectoral/ Departmental Consultations

- What is the present capacity of ULBs to undertake risk informed planning and prioritize needs independent of any guidance from LSGD staff?
- Are there any shortfalls in terms of ensuring that plans incorporate resilience related needs/ priorities of all sections of society, including women and poor/ vulnerable?
- Do you periodically assess during the planning exercise or during review of previous TCP plans/ master plans whether past plans enhanced community resilience or not?
- What additional technical capacities are needed by ULBs to independently plan for greater resilience? How can these be augmented?
- Which state training institutions are responsible for capacity building of ULBs on risk informed master planning? Do these institutions have requisite expertise to incorporate vulnerabilities and needs of different groups in their trainings?
- Do the staff/ faculty capacities need to be augmented? If possible, please suggest specific support /areas in which it is required.
- Do you use any accountability or community monitoring tools to receive community feedback? How is it looped into the planning process? Any specific example where this has been done?

Community/ Group Consultations (At least one consultation with women and urban poor)

- Are you satisfied with the way master plan preparation is undertaken in your ULB? When was it undertaken last- year of last master plan preparation and effective period
- If someone can recall the process of last master plan development- did it include consultations with communities and other institutional stakeholders or not? Where the T&CP plans approved and finally notified by the state? (Check whether consultations at ward level and/ or with specific constituencies were undertaken during previous master planning)
- Has someone present participated in the master plan preparation consultations? Did your needs/ priorities make their way into those final plans?
- What are your suggestions for ensuring that these Master Plans, while addressing issues of enhanced resilience, also respond to specific needs¹⁵³/ vulnerabilities of communities/genders/ habitations?

Health

Result Area 2: Supporting effective COVID-19 response and disease outbreak preparedness

Program Activities

Description	Dept / Agency
Plan for expanded laboratory network developed and approved; Establishment of infrastructure; Procurement of materials, chemicals, and equipment; Training of personnel.[1,3]	DoHFW, DoAH

¹⁵³ Related to public goods, services, utilities, spaces, etc

Plan for expanded Integrated Disease Surveillance Program (IDSP) for humans (including zoonotic diseases) developed and approved; piloting of system; modifications; and expansion.[1,2]	DoHFW, DoAH
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Sectoral/ Departmental Consultations

- Do you think expansion of laboratory network might entail procurement of additional land, including acquisition from private landowners? How has the department handled such land acquisitions in the past? (Any document on process adopted in any recent case will be helpful)
- How does the state ensure that testing facilities remain economically accessible/affordable to poorest & BPL? What additional state/ scheme support is being provided for COVID testing?
- What measures are in place for the occupational safety and well-being of staff/workers involved in testing & other support functions? (Some factual details of working conditions, hours of duty of staff will help understand worker well-being)
- What measures are in place for disposal of biomedical waste? How is community safety and well-being of those involved in disposal being ensured?
- Does IDSP have an expanded outreach? Does this surveillance presently cover all regions/ locations/ habitations across the district? Does IDSP specifically look at disease prevalence among the vulnerable on priority? If yes, to what extent is it put to practice? (Some evidence- MIS data etc. if available, will help)
- Which state institutions are involved in training personnel around COVID/ Pandemic/Disease outbreak preparedness? Do they ensure addition of issues around inclusion, accountability and transparency in training modules?
- Do any specific grievance redress mechanisms cover IDSP or the larger departmental one? Is there a public interface between IDSP and community? Is it needed?
- Any shortcoming, lessons or limitations (related to social issues) in better managing Covid or preparing for future outbreaks? How could these gaps be bridged?

Community/ Group Consultations *(One consultation with women and vulnerable groups)*

- Do COVID testing facilities in your locality offer affordable services for all? Any cases/ incidents where people couldn't get access to public health services and were denied it in private facilities?
- Are there any schemes to enhance economic access to health services- at both public and private facilities? Are you aware of them- how many present have availed them?
- How has been your collective experience of testing, seeking health services for COVID? How inclusive have they been? Any suggestions for making services for transparent, affordable and improving staff capacities to be more sensitive and accountable?

WRM

Result Area 3: Demonstrating integrated approach to multidimensional resilience at local level

Program Activities

Description	Dept / Agency
Develop the Pamba basin plan through capacity building support [2]	WRD

Establish flood forecasting and IROS for the Pamba basin through capacity building support [1]	WRD
Operationalize RBCMA with technical and operational staff through capacity building support (training, equipment investments) [1,3]	WRD
Establish WRM Command and Control Center through capacity building support (training, equipment investments) [1,3]	WRD
Identify critical investments in Pamba Basin [2]	WRD
Make operational flood forecasting and IROS for 4 districts in Pamba basin [1,3]	WRD
Complete 2 climate proof investment plans based on the Pamba basin plan [2]	WRD

Sectoral/ Departmental Consultations

- What was the process of river basin planning in the past? What kind of consultations and at what level? (Check extent to which communities/GPs consulted- was it a bottom up or top- down process)
- As per your assessment, did previous RBPs address differing needs, vulnerabilities of groups & landscapes in their water allocation principles? (Check whether they proactively provide access to landless, S&M producers, tail end etc.) Any Gaps? Suggestions?
- Pamba Basin has Indigenous communities-how would their needs be reflected and how information (flood forecasts/ IROS etc.) be shared with them? Suggestions?
- Which agencies anchored RBP process in the past? What kind of capacity input is needed to ensure all-encompassing plans addressing needs of different constituencies, esp. STs?
- Structure and composition of existing RB Authorities? (Social/Gender→posts & capacities)
- How do you ensure that flood forecasts, other advisories are in an understandable format and relevant for the target audience?

Community/ Group Consultations (*One consultation with S&M farmers, landless and women*)

- Are your water related needs being adequately met through the year- domestic & agri-related, despite the climate change impacts?
- Have GPs/members been involved in local water security plans/ water budgets? How would GP ensure water access to landless, ST-habitation/ hilly landscapes, marginal farmers, women, tail end users, etc and also their role in water conservation?
- If Pamba RBP is to be prepared, do you think your GP should have a role considering water is devolved to LSGs? Given a chance, how would panchayat ensure equitable allocation to different social segments?
- Do you currently receive flood forecasts, climate or other advisories from the Water Resource Deptt? If yes, are they in an understandable format and have you used it in the past? Please give specific examples. If no, any suggestions on how it could be improved and made relevant?
- In which areas is capacity development required for GPs/ departments/ plan facilitation agencies/CSOs so that RBPs are inclusive and relevant to the needs of different social/ economic groups?

Agriculture

Result Area 3: Demonstrating integrated approach to multidimensional resilience at local level

Program Activities

Description	Dept / Agency
Realignment of state budget support towards promotion of AEU designated crops. [1]	DoA, SFAC (Small Farmer's Agri-Business Consortium)
Promotion and strengthening of Farmer Producer Organisations (FPO) in select AEU in Pamba basin [1,3] DoA, SFAC (Small Farmer's Agri-Business Consortium)	DoA, SFAC (Small Farmer's Agri-Business Consortium)WRD
Expansion of Integrated Agriculture Management Information System (IAMIS) as per Software Requirement Specifications (SRS)[1,3]	DoA

Sectoral/ Departmental Consultations

- What is the basis for deciding package of practices (PoPs) for different AEU? How does the department ensure affordability of AEU based PoPs for S& M farmers, women cultivators?
- Have PoPs ensured subsistence agriculture or food security for marginal producers?
- How does department/ State SFAC ensure adherence to FPO guidelines in organization of FPOs & positional role for women & marginal/ landless in its management and inclusiveness?
- Are the above 2 monitored? What systems are in place for it? What more can be done?
- Which agencies are engaged in introducing the PoPs- KVK/ FFS/ others? What are their capacities for stakeholder engagement and addressing relevant social issues? How can they be augmented?
- What has been the experience of IAMIS in terms of quality of info, outreach, last mile information sharing/ usability by those socially excluded and vulnerable?
- Does the IAMIS database make a distinction between landowners and tenants- who is it bent towards in providing PoP and other agri inputs/ incentives? Any suggestions for making the MIS more inclusive

Community/ Group Consultations (*One exclusive consultation with women, S&M farmers and one with existing FPO*)

- Have those present started using AEU-specific PoPs? Experience across segments- L, S &M farmers, landless, women? Have any of those present been involved in development of PoPs?
- Do they benefit all equitably, including tenants? If there are gaps, what can be done to fill them?
- As per your experience, have FPOs been able to protect farmers interests and assured more voice and agency to them, esp. landless and marginal producers? Your suggestions on further streamlining FPO constitution, management and operations.
- Have you used IAMIS for individual farm decisions /guiding others? How was the experience? Was information easily accessible and in a user-friendly format? Suggestions for improvement.
- What has been the experience of accessing Farmer Knowledge Centres for providing

information on the AEU wise PoPs?

Roads

Result Area 3: Demonstrating integrated approach to multidimensional resilience at local level

Program Activities

Description	Dept / Agency
Develop a comprehensive Road Asset Management System (RAMS) with climate module [1,2]	PWD
Guidelines developed for climate resilient construction and value engineering [1]	PWD
Roll out and management of long-term output and performance-based road maintenance contracts [3] [About Rs. 110 crores] – List of roads included	PWD
Capital works and climate enhancement layered works for climate resilient core road networks (CRN) implemented in Pamba basin [3] [About Rs. 330 crores] - List of roads included	PWD

Sectoral/ Departmental Consultations

- Is land available for improvement/ expansion of road network, and creating new RoWs, if required? If not, how does department plan to procure land- government; private; acquisition, outright purchase, negotiated settlement? (Please ask for recent tenders documents of roads where private land was acquired)
- What were the criteria for selecting road packages under RKP? Have likely (*) impacts on adjoining lands/ structures/ public utilities, livelihoods, indigenous communities, cultural resources, customary rights, issues of access been assessed before their selection? (Ask for risk screenings used in internally-funded road packages and for the current packages)
- Is improved access for vulnerable communities or to ST habitations a criterion. (If yes, seek supportive documents)
- Does PWD have expertise to minimize adverse social impacts of investments-PMC/CRN? How do they do it now? Do capacities need to be augmented-areas where needed?
- Does the Department’s contractual systems lay down elaborate measures for labour management and guiding their working conditions, including managing labour influx and its impact in terms of local distress, GBV and SEA?

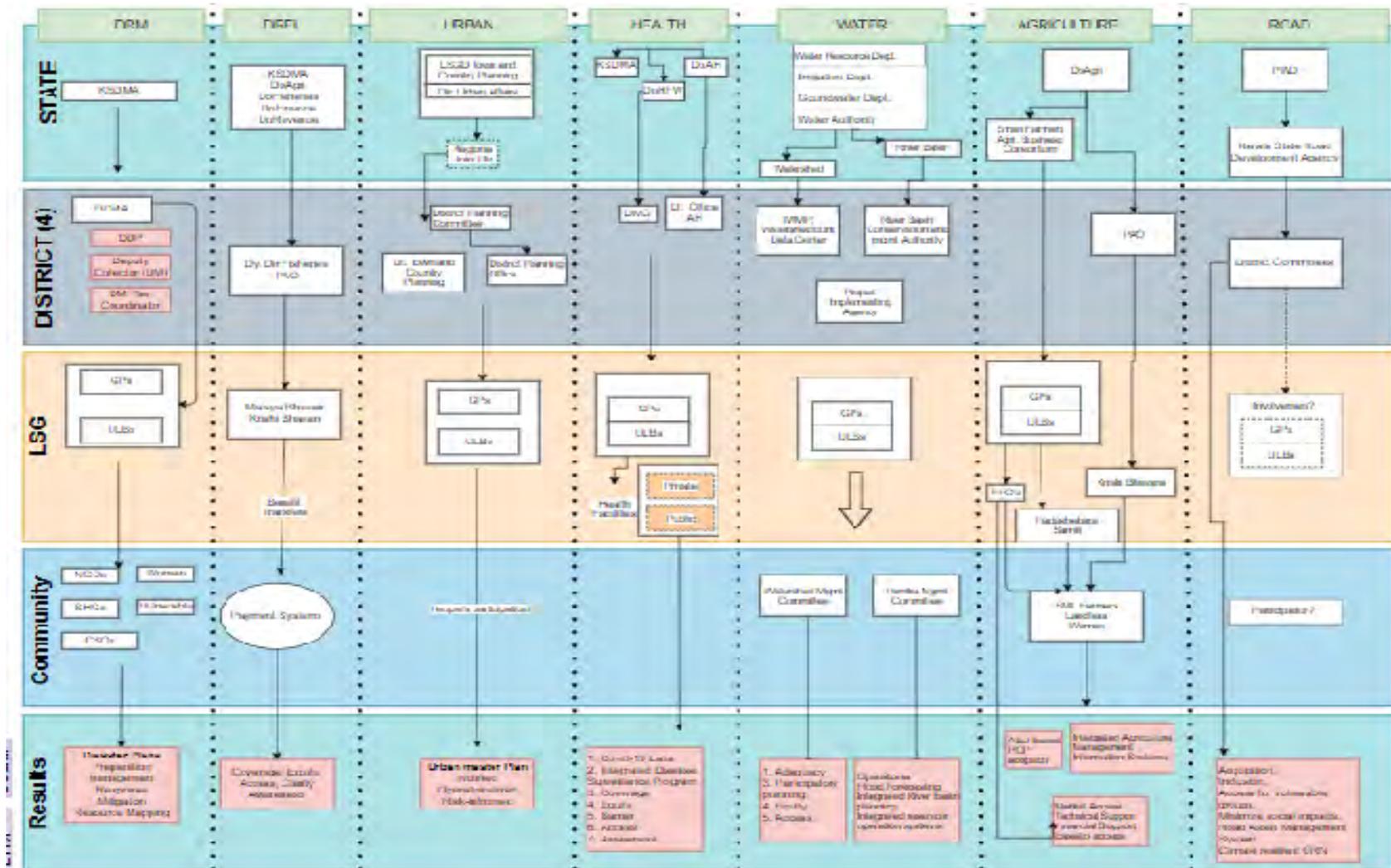
Community/ Group Consultations

- Are communities/GPs consulted before selection of packages? Are they provided opportunity to prioritize which roads are to be completed first? Alternatively, are departmental prioritizations explained to local communities/ ERs?
- Are you aware of criteria PWD uses for prioritising packages? If yes, what are they?
- Seeing the list of roads proposed, do you think there are social risks related to land acquisition or those highlighted in the 2nd bullet above (*) along specific alignments? Was anyone present involved in risk screening that may have been done for any of these packages/alignments?
- Do you think PWD has sufficient capacity to screen risks/ impacts and manage them?

What additional capacities/ measures are required- both in-house as well as within usual contractual staff to manage them?

- Are grievance redress mechanisms-GRM in place for people adversely impacted? Has someone used them - experience *wrt* its reliability & accountability? Suggestions for improvement.

Annexure B: Program level Stakeholder Map



Annexure C: List of State level Stakeholders Consulted

Name	Designation	Sector/ Department
Mr Salin	Project Leader	Head Kerala SFAC Agriculture
Mr Arun		Information Kerala Mission
Mr Raju KM	IAMIS Nodal Officer	Agriculture
Mr KN Satheesh	Ex MD State Civil Supplies Corporation	Food and Civil Supplies
Mr KA Joshy	Ex Chief Engineer	IDRB
Mr K Priyesh	Exe Engineer	Irrigation
Ms Soumya	AEE	Irrigation
Dr Sekhar L. Kuriakose	Member Secretary	Kerala State Emergency Operations Centre, KSDMA
Ms. Smitha S Nair	Joint Director of Fisheries	Directorate of Fisheries
Mr. P. Venugopal IAS	Principal Secretary	Department of Food and Civil Supplies
Mr. Gigi George	Chief Town Planner	Local Self Government Department
Dr. Renu Raj IAS	Director	Directorate of Urban Affairs
Dr. K M Dileep	Director	Directorate of Animal Husbandry
Dr. C.K. Jagadeesan	Dy.DHS(Planning)	Directorate of Health Services
Mr. Nadir	Executive Engineer	Irrigation Department
Dr. Rajatha	Deputy Director of Agriculture	Department of Agriculture Development and Farmers' Welfare
Dr. Jiju P Alex	Director of Extension	Kerala Agricultural University
Mr. Ajith Ramachandran	Chief Engineer(Roads)	Public Works Department

Annexure D: Report on Community and State level Consultations

State level consultations

Risk management

The major funding provided by the union government for disaster management is the State Disaster Response Fund (SDRF). This fund is used for repairing the damages and response to disasters. A certain amount of fund is provided by the central government as corpus funds and it is utilized by the state government as per the fixed norms and requirements. Another major fund is given through the National Cyclone Risk Mitigation Project (NCRMP). 17 shelters are made under this scheme. Last mile connectivity, early warning systems and capacity building activities are made under this project. Then there are a few minimal projects which are below rupees 20 lakhs. But these aren't considered schemes as such. Other than the two major schemes which are mentioned above, there are a few other activities which are included in the plan fund which comes under the Kerala State Budget Allocation.

There is no scheme wise involvement of any agencies as SDRF has certain norms. For e.g. If a person dies, Kerala State Disaster Management Authority (KSDMA) provides rupees 4 lakhs as compensation. The payment is initiated by the revenue department. If there is low yield to a crop and depending upon whether it is perennial or non-perennial, a certain amount is payable and is provided to the victims by the agriculture department. So it's not actually a scheme as a scheme is something which goes on for a longer duration. It is a mere relief initiated by different government agencies to the affected persons. These are provided via Direct Benefit Transfer Mechanisms.

In case of NCRMP, the plan design and technical approval are done by the Public Works Department (PWD). The construction works are also done by PWD. But there is a separate project implementation unit under the institute of land and disaster management for reconstruction and implementation.

For monitoring such projects, a third party quality monitoring agency is appointed. KSDMA gives routine reports to an external auditor, fund audit is done by the CAG, and quality check is done by a firm.

Last Mile Connectivity is used to issue the warnings. And a new project is implemented for the same reason which is the early warning dissemination system.

The only one fund which goes directly to the beneficiary's hand is through SDRF which is provided by the central government as relief assistance when a disaster happens. This fund is not provided to the beneficiaries in all the cases, but in the event of death of a family member in a recognized disaster, rupees 4 lakhs is provided to the individual's family through SDRF. The event and reason for death and enquiry on whether the death is in a recognized disaster is by the revenue department and on the basis of the FIR prepared by the Police Department.

If a house is destroyed during a recognized disaster, then it will be included in the list by the land revenue department. Inclusion is ensured during the beneficiary listing stage. Rather than beneficiary or benefit transfer, it is called right based transfers. It is the right of the people who lost their house due to disaster to get compensation and support. The payment mechanism is done by the Revenue department. However, at the ground level the entitlement is done by a three person Committee. A three-person committee is appointed which consists of an LSG

engineer, the village officer of the concerned place, the elected representative of the concerned place or a volunteer who is appointed by the particular elected representative. This committee is supposed to visit the disaster affected areas and prepare a report on the gravity of destruction incurred in the particular case. So at the last mile, this mechanism ensures that no single person can decide the transfer mechanism. So to conclude, there is already a mechanism which ensures that an official alone cannot say no or yes to a disaster affected. KSDMA is the only institution which provides training to rescue disabled persons in case of a disaster. And Kerala is the pioneers of the same in India. In fact, the national guidelines are set to match the standards that KSDMA maintains. In case of including everyone, we have gone far ahead.

There is still a long way that the state agencies need to cover in understanding the norms and regulations of disaster management. Particularly the prime relief agencies such as the land revenue department or the agriculture department. They still have a long way in understanding what disaster is and recognizing the ones who are disaster affected. Not all things can be done with a hard and fast criterion in case of disaster management. For instance, if a panchayat is flooded and only a few houses or buildings are under water, it doesn't mean that the gravity of the situation is low. The effect the flood may have on that particular area may last long. So, the norms and regulations must be used in a humanitarian manner. Our agencies are not well accustomed to do the same. Our state agencies work in a regulatory model and this often results in the denial of resources to many disasters affected persons.

We must stop equating the providing of livelihood assistance to a person for micro economic purpose and providing assistance in case of a disaster. Disaster management shouldn't be looked at from a regulatory perspective but from a benevolent perspective. It is due to the same reason that we brought a new law to ensure the participation of Local Self Governments in the case of disaster management.

The problem with our mechanism is its regulatory manner in handling situations. A disaster relief is only worthy if the relief is provided to the right person at the right time and afterwards. The success of disaster management lies in the trust and confidence we give to the volunteers and elected representatives to do the right thing within their discretionary power and not backing off fearing an allegation which may come in the future. The attitudes of our officers are of a regulatory manner and it can only change if they work with the true spirit of the disaster management norms which is to provide relief to the needy. There should be a balance that the officers and the authorities need to maintain while decision making.

There is no scope of inclusion or exclusion in case of disaster management on the basis of category. There is uniformity in case of treatment or relief to an affected person. They won't be discriminated against or given special treatment on any basis as it is a right based transfer. Hence there is no case of exclusion or inclusion on the basis of religion, caste, gender or race. There is a grievance redressal mechanism which is made to tackle any exclusionary actions due to political pressure.

Social Protection

KSDMA works as a custodian of the benefit relief protocols and is not directly involved in any direct transfers. In case of crop loss, certain norms are put forth and assessed by the agriculture department. And when it comes to the case of the animal husbandry sector, the situation is assessed and a report is given by the concerned department. These reports are not submitted to KSDMA as KSDMA is not responsible for the implementation. They rather analyze and ensure that all the norms are met. KSDMA acts as an authority rather than an agency. The SDRF fund is properly utilized by the district collector and concerned authorities. If a person dies and

rupees 10 lakhs is given instead of rupees 4 lakh, then KSDMA can revoke the action as it is not done as per the norms and regulations provided.

DoAH mainly targets marginal and small farmers. The database is usually based on the panchayat listing. Inclusion of beneficiaries is the main focus of the system and repeated updating at the ward level ensures that inclusion criteria are met. At Panchayath level there is a surgeon and two livestock inspectors who act as the interface. At least there are two institutions in every panchayats which work under guidance of DoAH. There is also a hospital development committee at Panchayath level which consists of Elected Representatives of the region. There are also working groups formed at ward level to ensure that none is excluded from the beneficiary list. The grievance redressal mechanism is at every district by deputy director, where the complaints are addressed and reported to concerned Panchayath, and a monitoring committee is constituted to understand if the case is genuine and to solve relevant issues. Specifically for the Disaster affected zone, livelihood support is provided. SDRF norms and databases are used for selecting the beneficiaries. SDRF norms ensure that maximum relief is provided to the disaster affected households. The issues regarding inclusion can only be solved by creating awareness among the citizens. It has been observed that a few are left behind from these schemes. One solution is regular participation in Gram Sabhas, but still solves the problem only partially. Ex, Tribal mass and fisher folks. The step forward to include them in the database is using social working and volunteers. The Ward level working group is formed to ensure that none is left behind. Proper working of this mechanism depends on the interest and commitment of this working group and hospital management committee. Kerala

The Fisheries department is currently running a savings scheme during the lean period where fishermen can get regular support as welfare during the lean period of the year (May-June-July). This is run by the state government and also the central govt is contributing to this scheme. Both inland and marine fishermen are the beneficiaries of this scheme. This list of beneficiaries is accessed from Kerala state fishermen welfare fund board. This is the active list of fishermen in the state. This list is updated every year. This comes around 2.42 lakh active fishermen, 84000 Fisheries sector related employers, and pensioners above 60 years. This is regardless of social class and categories. The only criteria are that they have to be active fishermen. This scheme is similar to SC/ST welfare scheme where all kinds of educational facilities and other support are provided by the government. Also for the insurance scheme for group accidents for the fishermen is also in place and is also based on the same database. Under this scheme, all fishermen are insured and the premium is also paid by the state government. Also there are schemes with Matsyafed where they can combine the benefits from both this database and from the Matsyafed.

This database is validated and still there are issues in the validation. To address this there is a new mechanism in place FIMS, Fisheries information management system. This process is about to be completed soon and will ensure that the database is validated and inclusion of the deserving can be attained. It's a one-time validation now but will be updated every year later. All new schemes will be moved to FIMS in the future which is more transparent and ensures more accountability. Currently the grievance redressal in Fishers sector is based on the decentralized system through district level officers. But a new system is already about to start as a call central which can provide live support for the fisherman regarding grievance redressal and technical assistance.

The Department of Agriculture compensates for crop loss through AIMS portal. Those farmers registered under AMIS portal are eligible for compensation for crop loss. The farmers must upload photos and based on that Agri officers at the specified regions approves the quest by

the field validation conducted by the field officers in that region. Once when the applications are approved and validated, the payments are made from the accountant. This is like an insurance scheme from crop loss. There is no special category or vulnerable community special scheme in this. It's a general insurance scheme and is based on the type of the crop and area of crop. The area based scheme for an entire village under the department of Agriculture is from the central government, where once a declaration is made for a specified region about crop loss for all the farmers in this region. At the grass root level registration happens at the Krishi bhavan or Agriculture offices in every panchayats

The food and civil supplies department covers a total of around 1.54 crores citizens under the system. It is based on the food security act (NFSA) implemented in 2017 in Kerala. Based on this act a questionnaire is provided to identify the eligibility based on the parameters and score. AAY cards are issued based on these parameters. The total number of cards issued is also fixed for the state. Families not covered under AAY are covered under Priority Household (PHH). This PHH system is a revamped BPL system. These cards are organic in nature and based on the eligibility the status of the card changes. This is periodically validated. Elimination and inclusion of vulnerable communities are ensured using this organic system. All the grievance redressal mechanisms are accessible to the general public. Most of the services can be accessed online. And those who are not able to enroll directly can utilize the *Akshaya* centers to access these services. It also includes grievance redressal mechanisms. Another scheme is the Annapurna scheme which includes the destitute categories where 10kg rice per month is provided. In Kerala 52000 people are eligible for this but only 5000 around cards were issued. This is because the eligibility criteria include a clause that these households are not receiving any other government support such as pension or relief. But most households are getting some other kind of support as well from the government making them not eligible for these cards. IMPDS system also enables card portability. There is an *Aadhaar* enabled system. The current issue faced by the department is on an average there are around NFSA card holders in other states are about 67% of the total population. But in Kerala it is limited to 1.5 crores which is around 43% of the population. So the department is taking up the matter to the central government. But a revision in inclusion is only possible after the new census (currently based on 2011 census) or approval from the central government

Agriculture

AEU delineation was a part of a mega project involving the State planning board, national bureau of soil science land use board state agriculture university. It's based on geographical features, soil parameters, water availability, rainfall pattern, vegetation type etc. Homogenous areas are identified and delineated into 23 distinct zones. 23 units are almost unique in their parameters, so across state there can be same crops but recommendation can be different in each agro ecological units. These recommendations are for crop production, and crop production is the same in both small and mega scale. But the kind of inputs provided and the cost of interventions will vary based on the scale of the unit. Basically Kerala focused on homestead farming and considered this as the main underlying requirement while considering recommendations. So, most of the PoP recommendations are based on affordable technology.

Relating food security and Pop is difficult. Pops are regarding increasing productivity per unit area. Pops are scientific practices to increase productivity by giving input at the critical stages of crop. Deviations can be made based on particular regional ad resource context. Farmers always deviate from the POP based on their experience, knowledge and resource constraint. What POP is recommending is the ideal scenario. So in relation to food security, it enhances the state or regional level food security. There are multiple dimensions for food security which also

include distribution. Pop ensures this food security in terms of productivity dimension. Since there is hardly any change in the crops cultivated but only the recommendations change in an AEU based PoP, there is no additional burden on the state due to adopting a revised Pop in terms of food security.

FPOs are a small alteration in the companies act. So every single FPO needs to be registered only by adhering to this guideline if they want to get credit linkages. In a sense those structures preferred by the funding agencies facilitate the better management of these organizations. As far as positional management is considered, FPOs are meant to be commercial entities which produce and or/ markets their produce under the guidelines of the funding guidelines. But sustaining the FPO activities is going to be tricky. It also includes SHGs, Cooperatives and other types of collectives. Anyone can be part of that, and there are no restrictions on the membership in an FPO. It is mostly linked by credit and there are no specific guidelines regarding the positional management in terms of gender or social equity. There are also monitoring mechanisms in place for The FPO especially if it is under NABARD, which also includes grading as well. Issues with FPO which require improvement is the marketability. It is primarily demand driven and there needs to be more focus on the marketing linkages and profitability. They need more support structures to stabilize production and marketing. They need to be given leverage and breathing time to get established and need through study on sustainability.

The PoPs are considered as a reference material of all people involved in farming to make scientific recommendations. These include even agriculture officers (AO) in every Panchayat. So indirectly the Pop reaches farmers through AOs and KVKs. The commercial cultivators are on a different scale and are more professional. They are even cultivating on leased land in huge quantities and sustaining the market. Such people need to give a different package and can be directed to follow Pop recommendations directly. Such people need to be given instantaneous assistance and training. The assistance should be live and in real time. Apps like *farm extension manager* are introduced to tackle this group which even gives the GIS location of the farms and live assistance. The AOs should be given more freedom to do extension work and to meet the people and farmers rather than the administrative procedure that is engaged now. This sector of commercial cultivators can be handled easily. But the other category of small and marginal homestead farmers need customized support. They are those who are engaged in agriculture as a secondary occupation. They are very active in social media and have a very organized way of information collection on farming even at individual level.

IAMIS are designed in such a way where they can register themselves in the AIMS portal. Also in need, they can use the services from *Akshaya* center by the government to register in the system. Under new schemes like *Bharatheeya pragarti krish*, more field staff are also planned to employ and once when this is implemented there will be more active grassroots level participation by connecting to individual farmers and field staff to get enrolled in AMIS portal.

The new agriculture bill which in draft form, is an improvement over the previous system in terms of reducing the differences in implementing benefit scheme between landowners and cultivators. Under the new bill a validation certificate with consent form land owners and registration of tenants is also planned. Once this new system is in place a crop cultivation card will be issued where the tenants can get benefits of the majority of the schemes.

AIMS is currently a great and successful platform by bringing many schemes under one umbrella. It also reduced the workload of Agriculture officers so that they can focus more on the extension activities for improving crop production. Currently there are no suggestions to improve the scheme.

Health

There is usually no requirement to acquire private land in Kerala for lab expansion as the RPCC tests were done in Pune by sending the results. Later, it was done by NIV Alappuzha and currently done in State medical colleges. Tata hospital was the only facility which was built during for Covid management and the construction was done at a Rapid pace and was handed over to the government. The land for this is government owned. Also in Kasargod Medical college construction and infrastructure was also completed at an increased pace due to Covid situation. As the health infrastructure in the state is highly evolved, there was no such need to acquire private land. However the government as a part of Covid management was able to bring private hospitals and institutions under the public management as Covid First line Treatment centers (CFLTC) by using the power of the district collectors. The government took control of private facilities as an initial response rather than acquiring private and to build no facilities. The government by using LSGD arranged all the required facilities needed for the treatment in CFLTCs which were under private and public ownership.

Government facilities for testing were not charged. Private facilities were charged but the charges were kept as per the market rate. Specifically the government controlled the prices of private facilities based on the supply of testing kits and availability of testing agencies. There was no additional support for the economically backward class in terms of prices for testing. In fact every test done at public facilities was free of cost regardless of the community background or income status. For SC/ST area coastal area and urban area there were also provisions provided for mobile testing clinics and Antigen testing facilities. This was also done free of cost.

For Covid treatment under the national comprehensive insurance scheme *Rashtriya Swasthya Bima Yojana* (RSBY), covered the public who were insured under this scheme. For those who were not covered under this scheme the state government used Comprehensive Health Insurance Agency of Kerala (CHIAK) insurance scheme- *Karunya Arogya Suraksha Padhathi* (KASP) insurance of government of Kerala to cover the Covid related expenses during treatment'. Private hospitals were also generally involved in KSAP. However if there were any hospitals which were not registered under KASP, there is another program called Covid package. There is also a committee under the guidance of the district collector to coordinate the private sector to proactively bring private hospitals under this scheme.

For the safety of workers involved in COVID management, there was a series of training called Infection control training held at different levels. Initial training was in person direct training and later as thorough videos and online platforms. There was also live FAQ support for the helpers and workers provided by the departments. Secondly they were also provided with an infection control system consisting of masks sanitizer, gloves, PP kits. There was no shortage of this due to efficient management, purchase and procurement Also various public institutions like Kerala State drugs and pharmaceutical under industrial sector were also involved in providing timely supply of safety equipment. Shield and marks were also sourced through SME under Kudumbashree and local innovations. Finally there was also a three tier system put in place to control the workload by managing their working shifts. This system was based on the risk and exposure by dividing them into high risk, low risk and no risk category and then switching the health worker between these categories as shifts. The health workers were also given special care if they tested positive for Covid and separate treatment facilities for health workers were also put in place.

A centralized biomedical safe disposal mechanism was done in Kanjikode in Palakkad district. Consultative meetings were conducted to fix the revised price for this as the volumes handled

were too high. Additional payments were given based on the volume handled. For the safety of the person involved in disposal guidelines and training were conducted. A Buddy system was put into practice where a team of two workers watch each other for safety measure lapses. For students, crash training was also conducted for safe handling of biomedical waste and Covid protocols through smart class rooms. Bio medical waste management was also a section in the Health app designed by the department as a part of Covid awareness campaign.

Most of the public departments were involved in training. The health department coordinated and provided technical support for other departments in the training. There were three different levels of training. By the time the Covid spread increased, other departments were able to handle most of the training part with assistance from the health department, and the health department was able to focus on disease management. Minister level committee, secretary level committee, and other department director level committee were also formed for coordinating and managing this. For ensuring inclusiveness, for example, for tribal communities, expertise and network of tribal development departments were utilized. In this case it was incorporated into the tribal action plan. Also for fisher folks, the department of fisheries played a major role in ensuring inclusion for the poor and vulnerable in creating awareness through coastal action plans. It was all coordinated at the three committees at the state level. Also in the urban area it was coordinated through Urban Primary health centers under. This ensured inclusion of the urban vulnerable section by conducting screening, awareness creation and social distancing. There were also additional staff placed in Urban PHC for controlling spread and awareness creation.

IDSP covers all public hospitals and public health facilities in the states and in case of public hospitals they have a weekly reporting system in place. In case of any unusual scenario, the public hospitals are also required to report immediately to IDSP. Also the ASHA workers were also trained for reporting any unusual cases occurring under their preview to the IDSP system immediately. There is also a system of rumor reporting in IDSP, where anything unusual reported in the media is investigated by the IDSP staff. . It covers printed media, social media and visual media as well. These also are a multiple framework for grievance-redressal mechanism through *Asha* workers, *Arogya Sena* volunteers, media, SHG, *Anganwadi* volunteers and ward health committee.

Testing facilities are lacking in the state. During the initial spread, samples of Covid were sent to Pune to get the results which always caused delay and increased the chances of spread. Even though later the testing was done in the state run medical colleges, still there is lack of testing facilities. A testing lab in every district is the current plan and is a work in progress. Also Urban Primary health care needs to be developed into a regular system. The main reasons for these suggestions are, In Urban areas diseased spread is high due to high population density and movement; secondly, the urban vulnerable sections are not able to afford the private hospital facilities.

Road

In most of the cases, when doing road widening or construction of roads, no land is available. Due to this majority of the projects are delayed due to the process of acquiring land. PWD will inform the Revenue department about the land needed to be acquired and based on this the land is acquired by the government and also a compensation is paid by the state. Roads for RKP are usually selected by Kerala Infrastructure Investment Fund Board and PWD has no role in this. For the CRN roads, PWD is having different cells to assess the social and environmental impacts and based on this the projects above 15 crores need to get approval from this cell.

Currently there are no additional amendments required to increase the in capacity of procedures for the existing impact assessment norms. PWD is not directly engaged in hiring labour for work. It is through tender PWD that is work done. It is the responsibility of the contractor to take measures for labour management and guiding their working conditions, including managing labour influx and its impact in terms of local distress, Gender Based Violence (GBV) and Sexual Exploitation and Abuse. PWD doesn't include any of these in their norms for tender.

Urban

The ULBs are currently capable of data collection and also are able to provide descriptive analysis. But they are not able to produce their own maps or technical analysis or a complete project proposal.

Rather than vulnerable communities the focus must be on vulnerable regions in resilience based planning. More than women and other categories it is important to take an area approach so that it covers everyone in such an area. The vulnerability assessment is made on area basis. The risk based vulnerability analysis was prominent in earlier master plans also. Earlier it was only demarking flood prone regions and marking buffer zones of 15 meters around for river basins. Only after the mega flood of the last few years we started the initiative to address them extensively and only recently to include them in master plans to prepare for such mega disasters. No development zones were demarcated in earlier master plans, but such extensive preparation was not done in order to prepare for mega flood.

Exposure and capacity building on planning, especially risk informed planning need to be done. For engineers in LSGDs capacity building on planning is required. Agencies like KSDMA can be made nodal agencies for these kinds of training. Usually feedback is taken on a participatory process on developing a master plan. These include Gramas and other council and ward feedback mechanisms.

Water

There was no river basin planning in the past. What was done earlier was Pamba rejuvenating action plan. For the Pamba action plan there was intensive discussion with all stakeholders. Later no comprehensive plan was done. Later plans were focused on a *piecemeal* strategy, where issues at specific areas here address locally, other than addressing the river basin as a whole. These discussions were at the people representative levels and not the community levels. During this there was no discussion with small and marginal farmers or tail end users. But to some extent this type of consultations were done in the rejuvenating action plan. Also the Action plan was not very successful and only at the implementation level very few initiatives were taken.

A second wave of more comprehensive action plans in Pamba was also initiated later. Currently a technical study for this is done and detailed consultation processes with the communities are in the pipeline. As a part of the river management plan, there were discussions on providing early warning systems. It is based on this concept room for river projects planned for containing flood. The department also focuses on interest in religious rituals and indigenous communities especially to safeguard their interest. Other agencies involved are KESB is focus on power generation in the region, Kerala water Authority on drinking water supply, Well irrigation and recharge is managed by Groundwater department, and pollution control board is responsible for controlling the polluting along the river and to maintain river water quality, Agriculture department is also a stakeholder due to downstream river irrigation involvement.

A capacity building involving all stakeholders is required for developing a comprehensive capacity building to safeguard the interest of SC/ST communities. A potential agency which could lead this capacity building is the irrigation department. The RB plan authority is still in its planning phase, so currently the structure and composition yet to be established. To ensure that flood forecasts, other advisories are in an understandable format and relevant for the target audience, there must be a multi-disciplinary team who can manage and provide diverse kinds of advisories.

Community and Panchayat level consultations

FGDs in Alappuzha District: Introduction

Pandanadu Gramapanchayat which has an area of 10.29 square kilometers is situated at both sides of the Pamba River. The Panchayat consists of 13 wards and 70% of the land is cultivated upon. Crops like rice, plantain, vegetables, coconut, and various varieties of edible tubers are the main agricultural produce of the area. The Panchayat also has its fair number of inland fishermen whose livelihood depends upon the Pamba river. Due to the calamitous flood of 2018, 90% of the agricultural produce was destroyed. The inherent loose soil of the area has caused both sides of the river banks to collapse regularly, which poses a danger till date. The discussions were held on 22/01/2021 with 14 people of various backgrounds from the area. The group consisted of farmers, teachers, elected representatives and the Chairperson and Vice Chairperson of the CDS.

Kainakary is a village in Kuttanad Taluk in Alappuzha District of the Indian state of Kerala. Five rivers originating from the Western Ghats, including the sacred Pamba River, drain into the Vembanad lake in the tip of Kainakary. The village is close to more than five lakes, which are vast in area. The village itself has numerous small water bodies, rivers, canals and ponds. Vast paddy lands make up the major part of the village. Floods are another major calamity that can be seen in Kainakary's history. Floods in Kuttanad are expected during every heavy monsoon season in Kerala, and Kainakary is one of the worst affected during these floods. The major income source of native people is from agriculture and fishing.

In the Alappuzha municipality, the two FGDs were conducted in two different wards to get a representative sample. 16 and 18 members participated in both the FGDs respectively. The group included Councillors of wards including chairman and vice chairman of the municipality, small and medium farmers, landless labourers, members from SHGs, fisher folks, ASHA workers, activists, PHC workers and teachers.

In Mannar panchayath, two FGDs were conducted. The entire Mannar GP lies in the Pamba river basin. In the FGD, elected representatives, farmers, farm labourers, Kudumbahsree members, health sector workers and housewives participated. A total of 18 members participated in the first FGD and 14 in the second FGD. The Panchayath was adversely affected by the flood and has led to large scale loss of livelihood and agriculture.

Risk management

In Alappuzha Municipality, the main challenges/ vulnerabilities faced recently were the consecutive floods in 2018 and 2019 caused damage to the ecological system. Climate change also resulted in wide destruction of paddy cultivation causing farmers distress and unemployment in the region. In the second FGD the, along with the agriculture crop loss, the participants also mentioned the loss in livestock such as poultry, ducks and goats. To a large extent biodiversity was also affected in the region. The damage caused to the roads during the

last folds was not yet repaired. And the Educational institutions such as schools and anganwadis need urgent repair following the three consecutive floods which have not been restored yet. There is also a noticeable increase in mosquitoes in the region causing high prevalence of communicable diseases. Covid had increased the burden in the form of increasing unemployment.

None of the group members participating in FGD received a format training on disaster management. For overcoming and developing disaster resilience, at ward level there must be volunteer committees under the guidance of Municipality. These members must also receive training in disaster management from corresponding agencies. Emergency response teams should be formulated. They must receive scientific Training in disaster reduction and management. There is also a need to increase the efficiency of the current disaster management working group and they must also be given training.

In Kainakary Panchayat, the most drastic effect of climate change is flooding and the collapsing of manmade embankments for water. The majority of people of the Kainakary Panchayat are suffering from these problems for a span of six months every year. No participants have ever received or attended any Disaster Management Training.

In Pandanadu GP the main concern regarding the dangers posed by climate change is the lack of drinking water and drought caused by the floods of 2018 which in result has submerged many areas of the Panchayat. Even with a dynamic and diverse group of elected representatives who are participating in this discussion, none of the elected representatives had prior disaster management training. The main suggestion put forward regarding this aspect is that urgent care has to be taken in providing scientific training.

In Mannar GP, the main climate related challenges faced by the inhabitants are drinking water shortage, both during flood and summer. Due to the geographical location of the GP, there is extensive damage to crop due to floods in the monsoon and drought in the summer. It is necessary to make interventions such as bunds along the sides of the river and streams to avoid crop loss. Also the GP is facing temporary habitation challenges due to flood. Obstructed flow of streams and river, encroachment of water bodies, paddy land conversion pollution in stagnant water bodies causing health hazards and loss of livestock during flood are other major issues faced by this GP. None of the participants received any kind of formal training in risk and disaster management. There is a need to initiate DRM team at ward level to do prevention and control of climatic adverse impacts.

Social Protection

Social protection benefits are currently received by the entire eligible citizen in the municipality of Alappuzha. As far the group is concerned none were excluded from those schemes. For identifying the eligible citizens in the regions, if there are any exclusion, Ward council members and other civic volunteers are regularly doing screening and validation at grass root level. The inclusion process starts with the screening process and the initiated are taken by the councilor of the ward. He./ she is supported by other members of the society as well.

As per the Kainakary FDG, Social benefits like Farmer's Pension is not available to all those who are eligible. The inclusion process is started by elected representatives, Kudumbasree workers and Government officials. Crop insurance is only given when loss is caused by breakage of embankments while in cases of simple flooding, insurance cannot be relied upon.

In Pandanadu GP Pensions and Public Distribution System are very effective in the Panchayat as to the point that every person and every household who are eligible are receiving benefits. But still no steps have been taken to widen the access to these systems apart from pension adalat which is still in the planning phase. Such activities which ensure inclusion of the common people in government schemes are initiated by elected representatives, Kudumbasree and Asha workers.

In Pandanadu GP the most crucial scheme of risk finance for fishermen are no way near implementation up to the point that the group which is concerned has no awareness of such a system, but on a positive note crop insurance is being utilized.

In case of crop insurance the current systems need modification in terms of eligibility criteria. For example, in the current system, farmers can only get compensation if the entire paddy fields in the micro watershed get flooded causing crop damage. If the eternal bunds are destroyed in natural calamities, there is no provision for compensation for those farmers alone. Also no compensation is paid if the water overflows above the bunds causing flood in marginal areas and paddy fields lying close to the bunds.

According to Mannar GP FGDs, there are no exclusions either in pension scheme or in PDS scheme. In addition, if there is any exclusion, the new Gramakam scheme is covering those who were excluded. However, there are cases of misclassification in PDS scheme where BPL families are categorized in APL group.

Even though there are no fixed institutional frameworks at grass root level for inclusion, the informal social mechanism comprising of social workers, Asha workers and elected representatives ensure total inclusivity. The LSGs also publish citizen rights handouts as a part of awareness creation.

Usually farmers opt of yield insurance specifically in paddy and less likely to participate in insurance schemes for other crops. Inland fishers are not getting benefits of any insurance schemes. Also the reach out of state risk financing at the LSG level is quite low. However, associated organizations and federations usually take initiatives to include these groups in their schemes.

Agriculture

None of the FGD reported to have started using the AEU based PoP in the district. They also have not participated in the development of these PoPs.

Tenants are not getting the same type of benefits as the land owning farmers. There is a need to bring changes in the guidelines and policy so that all farmers are treated equally.

In Pandanadu, FPO's are working well ensuring maximum production and profit. The local market is well suited for such agricultural organizations. Under FPOs, the profit is distributed between tenants and landowners reasonably.

In other areas they have FPOs that are not operational. None of the farmer participants were members of any FPO. On the other hand, Padashekara samithis (Paddy farmer's consortium) at regional level are doing the same activities as the FPOs.

IAMIS is still far from being implemented but the forecasting mechanism of the water authority done as part of disaster management is highly effective. Still a portion of farmers have little faith in the system due to false alarms and incomprehensive messages.

None of the FGD participants from Mannar GP are aware of PoPs and AEU based PoPs. None were also part of PoP finalization. FPOs are there among land owning class particularly among paddy farmers. However the inclusion of landless farmers and labour is still a concern. The participants are not aware of AIMS, but they usually depend on DMC advices which are occasionally vague

Health

In Pandanadu, Covid treatment centers are praised by everyone alike for the services it provides. Covid treatment centers in this locality are operating very well even under harsh circumstances. There are no cases of denial of treatment in the private sector. Also, there are no schemes to enhance economic access to the private sector. The treatment experience and Covid surveillance are held in the best regard. But transportation facilities, especially water transportation, need to be ensured for those who access the health services.

In Kainakary as well the Covid response, treatment centres and personnel are highly effective and have the full confidence of the people. The ease to access and quality of treatment for such affordable rates are highly praised by the people. There are no reported cases of refusal of treatment by the Private Healthcare Institutes. The only suggestion put forward was to increase the frequency of Covid tests which are now conducted only once a week and to increase the number of doctors and paramedical staff.

In case of Alappuzha also the participants are satisfied about the way Covid was handled by the health institutions. Free treatment was also provided. Also from the community kitchen food was also provided free of cost. In Alappuzha, there were also two participants who were tested positive for Covid earlier. They had availed these services from the government and are very satisfied the way they were treated. For making the health services better, it's necessary to deploy more health workers to manage Covid situation. Also they must be given additional training to manage these kinds of disasters. The FGDs also mentioned the need to give more awareness to the public regarding self-management in such situations.

In Mannar GP, the participants are satisfied with the Covid testing and treatment centers. These centers are not hard to access and are also reasonable or free of cost. There have been no cases of treatment denial, however the Mannar F.H.C works forenoon which can be improved to gain more accessibility. RSBY scheme gives financial support during any health relates shocks in the household. However there are updating issues in the scheme.

Road

As per the Pandanadu discussion, Road packages are allowed only after Panchayat's request. Therefore no discussions are held with the Panchayat when allowing road packages. Panchayat is given the opportunity to put forward a priority list of roads for construction. When acquiring land for road construction impact on factors such as environmental and culturally sensitive areas, public utilities and individual livelihood are considered but participation of the local community in risk consultation is minimal. The lack of scientific training provided to the employees of such construction workers is pointed out. Also the two FGDs at Alappuzha municipality also pointed out that there are discussions with the panchayats before road package announcements. But most of the ULBs are not sure about the prioritization list of these road packages.

All of the GPs were unaware if there was any risk screening conducted before announcing the road packages. But they do not believe that the PWD had sufficient capacity to conduct such

screening. Regarding the Grievance redress mechanism the participants are not aware of any such measures taken by PWD. They also reported that PWD must be given training in redressal mechanism

On the other hand, discussions from Kainakari, showed that no role is played by the Grama Panchayat in the selection, prioritization or discussion while roads are being constructed. Due to the low profit of construction, no contractors are willing to take orders. The people are of the opinion that the Panchayat should be consulted before selecting the road package. This is the only way to ensure that the roads are adequate and well-suited for the versatile nature of Kainakari land.

Urban

The participants are not satisfied in the way in which the preparation of the master plan was taken at the ULB level. The preparation of the last master plan was done in 2020. In the second FDG the participants were not sure when the last master plan was made. In ward meetings, the yearly plan at the ward level was discussed. Other than that the FGD members never participated in any planning activities. None of the participants know if the last plan was approved or notified. None of the participants were consulted at the ward level for such a master plan. However ward level annual plans were done in a participatory manner. And few of the suggestions were in-cooperated in the master plan as well. They suggested that there must be an inclusion process in the planning. Groups like residents associations, SHGs and ward sabhas must be used as a platform for introducing and discussing these plans.

Water

Water availability for agricultural use is adequate but drinking water is still scarce. This scarcity of drinking water can be solved if an extension is allowed from Neerettupuram and Thakazhi Water Plants. The people have already taken steps to address this issue by Rainwater Harvesting. But this method is far from effective. No participation of the Panchayat is present in Water Security Plans and Water Budgets. The Panchayat has a significant role under the Pamba River Basin Plan. Forecasts regarding disasters are made available through Television and Newspapers, which are utilized by the people. The participants are of the opinion that an extensive study considering the Bio-diversity, Lifestyle and Agriculture of the Panchayat is needed before drawing up any plans.

As for the general water distribution and management, the general availability of water for agricultural and personal use is still inadequate. There are no scientific methods adopted by any governing body to ensure access and participation to the schemes for vulnerable groups such as the landless, backward classes and small scale farmers. The disaster forecasting and climate regarding information provided by the water authority is very helpful and effective according to Pandanadu GP. But in the municipality of Alappuzha, even though drinking water is available, the water quality is very poor. The drinking water from RO-plant is not sufficient. Other than this there are no other drinking water schemes in the Municipality which is providing sufficient drinking water.

Regarding the developments concerning the Pamba River, the Panchayat has already devised plans to implement if it has an opportunity to be included in the Pamba River Basin Plan. The Panchayat plans to strengthen the river banks, to renovate canals for ensuring water availability and to employ scientific methods to divert stagnant water in paddy fields. On a note of advice, the effectiveness of schemes involving river valley development will be increased if suggestions of the local people concerned are also included. If given a role in PRBP the Panchayath must

consider the fact the need for different communities like farmers, landless labourers, women and SC/St are different in terms of water. There has to be a proper data collection and survey to know their requirements. A need based assessment is required for the distribution of water. Actions based on this will ensure equitable share of water under this project. There has to be an integrated approach involving concerned departments in solving the water issues, The LSGD must be also made a part of it in formulating and implementing the project.

The participants of the FGD were unaware of any early warning system issued by the water department. But they are aware of the early warning system from the LSGD and KSDMA. Also there was suggestion from the participants that ERT at the LSDG level must be given training in giving these early warnings and must act as a nodal point at grass root level for assuring that the warnings are reaching the needy in a timely manner.

In Mannar GP, there is sufficient water availability for agriculture and household use due to its proximity to the river. The concern of drinking water shortage usually exists only during the summer months in this GP. Schemes and projects to ensure water security are not yet implemented effectively. Water budgeting is a requirement in this area, but the LSGs are not having sufficient scientific knowledge or training to conduct water budgeting.

In order to ensure water security of deprived and vulnerable social classes, regional water management and community participation is essential. However this topic has not been seriously undertaken neither by LSGs nor by the communities. LSGs should have a fixed mandate on regional water management. This should include rejuvenation of water bodies and sources, promotion of scientific water harvesting technologies, community participation, awareness creation and practical training at people's level. The participants of the FGD from this GP strongly believe that their GP can play a very significant and active role in Pamba river Basin Plan. The GP don't get any warning regarding water related adverse events from the after department, but the LSG usually takes initiatives to provide such warning to the communities. Equitable distribution of water can be ensured under the guidance of LSGs in the river basin pan though activities and infrastructure creation such as, construction of bunds and promoting structures allowing natural flow of water.

FGDs in Kottayam District: Introduction

FGDs were conducted in 3 Panchayats and one municipality. These panchayats are Kooruthodu, Mundakayam, and Manimala panchayats and Changanassery Municipality. In Mundakayam GP there were 19 participants in the first FGD and 12 participants in the second FGD. In Changanassery municipality there were 12 members in the first and 8 members in the second FGD.

Risk management

In Manimala GP the main issues are floods. The causeway is not wide enough to do disaster relief activities. Also the school which is supposed to be the shelter in case of fold is not secure enough. There are also trees in the flood prone area which are dangerous to life nearby. In Mundakayam GP even though the participants were not completely aware of climate change, they were able to tell from their experience the adverse impacts they faced due to climate

change. These include changes in the cropping calendar, climate caused crop changes. Also human wildlife conflicts were reported in these areas as a disaster. Other vulnerabilities include, bore well failure, scarcity of drinking water, flood caused due to unscientific construction of roads, drying of water bodies and wildfire. In Changanassery ULB, the main issues were Communicable diseases, mental stress and insecurities faced by families due to climate change. In Koruthodu GP, the main issuers were flood due non-desilting of rivers, landslides and tree fall accidents due to dangerous trees in the region.

In Manimala and Changanassery none of the members got training in DRM. On the other hand, few of the former members from other two GPS had received training on DRM. But they had not taken the training seriously due to low intensity of incidents in the past. Those who received training got the session for KILA, Kerala Sastra Sahitya Parishad and Periyar Tiger Reserve. Training was received on topics such as, biodiversity conservation, tree planting, air and water pollution control, plastic eradication etc. The members of the FDG have utilized the knowledge from training to reduce the use of plastic in Sabarimala. Even though there were no mentioned shortcomings or gaps in the training, others mentioned that practically many of the training knowledge were difficult to implement due to non-inclusivity of those in the planning process. Most of the time, it is difficult to consider Panchayath as a single unit in implementing these instructions from the training. The group also mentioned the need for more training and implementation assistance because as compared to previous years the intensity and frequency of extreme climatic events are increasing in these regions and it seeks special attention.

Social Protection

There are few HH who have not received the entitlements in Manimala GP. According to Mundakayam, generally, all the HH are covered, despite a small number of exclusion error, which are rectified by the system later. However, there are also certain policy gaps in this, such as, divorcees are not eligible to receive widow pensions even though they are eligible. In the other two FGD all the eligible HH are covered under entitlement schemes. Usually the steps taken are the LSGD governance system and public utilities in the GP which ensure that none is left behind (ex, SHG members, ERs, ASHA workers, Palliative care, PHC workers etc). These agencies usually initiate the process of inclusion.

The farmers are getting crop loss insurance. The process is online now and hence the experience is better even though there are some delays in payments, they are receiving the payments. However those farmers without a smartphone are facing difficulties. From Mundakayam GP, there was a mixed response, where the small and medium farmers faced a variety of threats, such as crop loss due to pest wild animals and natural disasters. The insurance coverage for them is not adequate to cover these losses.

Agriculture

In Changanassery FDG, the participants are not aware of AEU based PoP. The current system is not useful to small and marginal farmers and also the benefits are not reaching landless agriculture farmers. There is a need for stricter advocacy of the rules and regulation in this regard so that the mindless are also benefited. FPOs are not able to protect the interest of small and marginal farmers. They are safeguarding the interests of influential citizens in the society. There is a need to create awareness among all types of farmers to better utilize the FPO structure and support. None of the participants have experience in using IAIMS in this FGD.

In Koruthode FGD the Agricultural officer revealed that the AEU based is not yet put into practice in this region. There is no equitable sharing of benefits in this region between

landowners and tenants. There are issues in accessing various welfare schemes by the tenants. How the FGD also suggested that this can be solved, but they were not sure what could be the solution. There are also no FPOs in this region as per the AO of the panchayat. AO also mentioned that only a few farmers (around 5%) are currently using IAIMS for agri advice. more awareness needs to be created in using IAMIS.

According to Mundakayam GP, not all benefits and schemes are reaching all farmers. One reason quoted for this is the heavy workload of the Agriculture office at the panchayat, level, so they get very less time to do field visits and create awareness among farmers. However the FGD also said that both farmers and tenants, regardless of land ownership, are getting equal benefits. The FPOs are not able to protect the small and marginal farmers. It has been done in a more democratic manner involving small and marginal farmers. There are only very few farmers who are using the IAMIS facility.

In Manimala GP, the participants have used PoP before. All kinds of farmers are able to get equitable benefits regardless of land ownership status. The participants are unaware of FPOs in this region. Only recently the farmers started using IAIMS. There are issues in accessing needed information for this. Those who have smartphones can come to AO with his phone to get support in accessing IAMIS. It will be better if such facilities can be privy through Akshaya centers as well.

Health

In all the FGD, the participants are satisfied with the way in which Covid situation was handled. All the testing was affordable and free. Only a few isolated issues about inadequacy of food were reported. However there is a need to enhance the testing facility so that it can be easily accessible (according to Changanserri ULB). Also there were situations where difficulties in transportation arrangements were made for home isolated patients. None of the FGD reported difficulty in accessing either public or private facilities for Covid testing. There have been no cases of rejection of testing or treatment for anyone who belonged to any specific community. All the communities were given the same quality of treatment as per the FGDs in GPs.

In Manimala, there is a need for more health workers and transportation facilities. In Changanacherry ULB there are issues like need for life coverage insurance for health workers; long work shift hours were raised. Also here it was reported that the number of facilities were limited and also had issues with different quality of treatment being offered. There is also a need for training for the ASHA workers and health workers to handle the situation and these training cannot be given only by the LSGD. An integrated approach is required.

Road

In Manimal GP and Changanserri ULB no discussions were held about the road package selection. In Mundakayam GP, The FGD concluded that even if there were discussions in most cases the discussion will not end in a democratic manner. More than public interest, there are many other power plays which come as a factor for road package selection. The criteria and priorities are set by the most influential people in the GP and this need to be replaced by a democratic system to bring a change.

All the FGDs participants were unaware of the criteria used by PWD for setting the road priorities. The participants are not aware of any risk screening done during the road packages provided. However in Changanserri ULB the participants were aware of the adverse impacts due to road accidents in those road packages, but they are not sure how efficient these were considered during the process of road planning. They have also not participated in any of such risk screening activities. None of the FGD reported that the PWD is efficient in conducting the risk screening. They are capable but are not utilizing their potential in safeguarding the interest of the public. Except in Koruthodu FGD, all other FGDs reported that the Grievance redressal mechanism of PWD is not effective enough to address the needs of the common man.

Urban

The Changanerri ULB FGD participants are not satisfied with the way the master plan was handled by the ULB. There was a lack of clarity in the master plan and the planning process was not transparent. None of the participants were previously involved in making the earlier master plans. One suggestion they have while developing master plans is that the process must focus more on disaster risk management. Supporting institutions, relief shelters, public utilities, hospitals should be given priority. This infrastructure should be available in the region, and they must be accessible with a proper approach road to get maximum benefit while facing a disaster. Also there is a need to increase the capacity of Ayurvedic hospitals in the region. Anganwadis must be provided permanent building infrastructure. There is also a need for establishing SME units, for establishing women-safe shelters, and public toilets.

Water

Drinking water scarcity is reported in all the four LBs. Other than in Koruthodu GP none of other LBs were able to be a part of any water security plans. These are a lack of comprehensive water security projects in all the LBs. Even though the LBs are trying to develop projects, the budget is not sufficient to implement such comprehensive schemes. In PRBP all the UBs are having a role in efficient water management. The FGD concluded that the equitable allocation can be ensured through a democratic approach involving gramasabhas and by following the norms and guidelines given in the project. The warning advisories are in an understandable format. But the general public is not taking the warnings seriously. At ward level a monitoring committee must be formulated to ensure that the warnings are followed. Also this committee must be made responsible for creating awareness about these. In order to make the GPs more efficient capacity development is needed in the form of training, and decentralized financial management for meeting urgent needs.

FGDs in Pathanamthitta District: Introduction

Risk management

The main vulnerabilities due to climate change are the flooding of the Manimala river which resulted in heavy damage to the river side roads in the Thiruvalla municipality. So it is necessary to develop /build adequate shutters in selected areas of the river to stop this issue. The roads which are constructed unscientifically caused water logging in nearby places. The canals of the locality should be deepened and strengthened. None of the elected representatives

participating in FGD was not received formal training on disaster management. All the elected representatives of the Thiruvalla municipality must receive training in disaster management from department agencies.

In Aranmula Panchayat the main threat faced due to climate change is its effect on agriculture production. The people are afraid that their very livelihood is at stake. Vulnerability to a disaster creates several socio-economic problems which the poor and illiterate can't anticipate. The Pamba Irrigation Project water canals should be maintained and regulated to enhance agricultural productivity. "Ezhikkodu colony", which is in a low lying area, gets separated even after minor floods. The groundwater there is contaminated by the local burial grounds. There is a need for an effective emergency response team during disasters, coupled with an early warning system for vulnerable areas. Emergency shelters equipped with medical facilities are needed

Ranni panchayat is affected with landslides and wildfires to address this issue there is a need to develop urgent response units with trained personnel and necessary equipment. There is a lack of Disaster Forecasting mechanism. The authorities should take steps to spread awareness of such disasters to the general public. Only one of the elected representatives had Disaster Management Training.

In Perunad panchayath, the main vulnerabilities due to climate change/disaster vulnerabilities are poverty, water scarcity, unemployment, and increase in the debt of people, created homeless people, and economic insecurity in houses. All the elected representatives participated in FGD was received formal training on disaster management and the training was given by DRM office Pathanamthitta district, Fire and Rescue Center, Ranni, soil survey protection office. The main takeaways from the training are: protection of forests, environment, and preparedness to face disasters, togetherness and cooperation among peoples, the need for water conservations etc. these training are helpful in the planning process in which they have developed panchayath level disaster risk reduction master plan, collected the resource status level in the panchayath, formed ward level rapid response team(youth), conducted separate Gram Sabha for various activities, identified camps centers for immediate evacuation at the time of disasters. Agricultural plans were developed for immediate interventions in the agriculture sector. There are several shortcomings in the training, delivery or planning process. To address these gaps it is necessary to create awareness among the general public, provide training and resources for rapid response teams, separate training need to be given to the working group, Panchayath level committee for disaster management, develop information networks and connect the activities with NREGP.

Social Protection

Social protection benefits are currently received by the entire eligible citizen in the Thiruvalla municipality. The inclusion process is initiated by the ULB. Crop insurance is utilized by several farmers but the benefit of such insurance will only be received after 3 years in the municipality.

Family Pension schemes for different sectors are available at the Aranmula and Perunad Panchayat. But still, some people (around 5%) are not included. The inclusion process is started by elected representatives, Anganvadi workers, Kudumbasree workers, public workers. Fishermen Risk Finance is being implemented in the Panchayat from the Kerala Fishermen's Welfare Fund Board (KFWFB). The inclusion process is also done by the elected representatives.

Social benefits like Pensions and PDS are still not all inclusive in the Ranni grama panchayath. The Anganvadi workers in charge of the inclusion process are overwhelmed; therefore the

intervention of Government officials is necessary. The participants are of opinion that Crop insurance should be increased.

In Perunad Panchayat the crop insurance was not available for farmers.

Urban

In Thiruvalla municipality the process of Master Plan preparation began in 2016 and Draft was published in 2020. Consultations were conducted with communities and complaints were settled at the preparation phase of the Master Plan. Consultations were conducted with communities, 506 proposals and complaints received. Since several complaints were similar, hearings were conducted and 246 complaints were settled. Municipal Chairman, Councilors, and Representatives of all political parties were included in the preparation of the Master Plan. Final master plan was not approved, even though the plan is still under consideration by the Government, the people are satisfied by the way their needs were addressed in the plan.

Water

There is no irrigation system in place for agriculture in Thiruvalla Municipality and the Water Authority is inefficient in meeting domestic needs. No members of the group discussion have been part of the Water Security Plans. The ULB has no mechanism in place to ensure water. Even though Flood Forecast are being received, they are not from the Water Authority but the Revenue Department. They are not in a fully understandable format to the layman. NGOs and CBOs should be trained in preparation and implementation of the Pamba River Basin Plan. The people feel like LSGIs are the most appropriate mechanism to ensure the participation of different social segments when implementing the Pamba River Basin plan.

In the last two years Aranmula panchayath having the water irrigation system and natural rains provided enough water for the major crops. Professional training and awareness are to be provided on the concept of water budgeting. The water distribution system has ensured drinking water availability for the needed. The only places where scarcity is experienced even to a smaller degree are highland areas where the water tankers could not reach due to bad roads. Aranmula has a considerable part in the Pamba River Basin Plan. The District Administration gives very efficient early warnings but more people need to be made aware of the warning system in place. The need for a well-equipped workforce placed downstream is necessary to implement the project effectively.

In Ranni panchayath Water scarcity is still prevalent in the locality. The Water Authority schemes which are in operation should be rejuvenated. Public wells, ponds and other water sources should be renovated. The Panchayat plans to find the eligible and with the help of modern technology and distribute the benefits if allowed a role in Pamba River Base Project. The Forecasting System of the Water Authority is efficient and was utilized back in 2018 during the Flood.

In Perunad panchayat water was not available for domestic and agricultural purposes. In the panchayat there is no partnership for local water security plans and water budgets. For ensuring the water access in GP tank water was supplied and also with the support of government scheme for drinking water was implemented in the panchayat. for the conservation of water protection of ponds and other water bodies in the panchayat, conducting activities for the protection of rainwater. Our panchayat has a critical role in the preparation of the Pampa river basin plan. To ensure equitable allocation of different segments: ensure the people participation in the planning process; uphold the transparency of all actions, finalizing the

criteria for beneficiaries. Currently the flood forecasting is received from the GP and Police department. Through the police department people are receiving announcements regarding the opening of dams and TV, News, different other media the people are receiving the Green, Yellow, Red alert.

Agriculture

In Thiruvalla municipality 60% of the farmers are using traditional methods but small and medium scale farmers who are using POPs find it beneficial. These benefits are equitably distributed between tenants and landowners. FPOs are in function but there are farmers who sell their products on the open market. The participation of farmers in FPOs is only after the assurance that they are sustainable. IAMIS has helped to increase productivity and cultivation.

In Aranmula panchayat, AEU's are becoming popular even though at a slow pace. IEC programmes are not used by any government bodies in the Panchayat and the people are unaware of the same. There are no FPOs present in this area as far as the participants are concerned.

In Ranni panchayat, the use of AEU and POP is existent but not efficient. The benefits of agricultural production are yet to reach the tenants. The functioning of FPOs is still in the dark, the people need urgent education in this matter. IAMIS is still not in use.

In Perunad panchayath POPs were not used. IAMIS was not used in the panchayath.

Health

Covid Testing facilities in the Thiruvalla municipality are providing affordable services. No cases of denial of treatment in the private sector have been reported. Medical insurance is available to the weaker sections in Private Medical facilities and all people in the society are receiving treatment for Covid-19 is completely free of cost in government hospitals. The present health services are transparent and affordable but Post Covid Treatment is not available in the municipality.

In Ranni panchayat The Covid-19 treatment process is praised by all, the treatment is very efficient, non-discriminating and economically feasible. The available number of medical personnel should be increased and some monetary help should be provided to infected families.

In Perunad panchayat Covid testing center was not available but a mobile antigen testing center of DMO is available to the people free of cost. But private hospitals are charging 3000 RS for Covid testing which is not affordable to the people. Health insurance is available to around 60% of the people. The testing and seeking of health services for Covid is inclusive. To make health services for Covid transparent and affordable, the participants put forward certain suggestions. They are: open Covid testing center, upgrade the health centers to CHC, increase the number of health officials, and conduct training for health staff.

Road

In Thiruvalla municipality there is no participation of people in matters regarding road package application and prioritization. The people have no information regarding PWD protocols and procedures. Even though there have been no large scale land acquisition in Thiruvalla, people are of the opinion that the PWD should employ the services of Sociologists when screening risk. The people are only aware of the Judiciary as only Redressal mechanism.

No consultations are made at the Aranmula Grama Panchayat level on the design and prioritisation of the roads, unless any land acquisition for construction is involved.

In Ranni, panchayat is given opportunities and included in consultation before selection of road packages and selection of priority in construction. The construction that should be undertaken must be according to the features of the area. When developing plans future needs and concerns should be taken in account.

In Perunad panchayat for constructing rural roads discussion was taking place in GPs, but for PWD roads there was no such process. GP is fixing the priority in the construction of rural roads. Grievance redress mechanism was available for the people who have adverse impact in road construction.

FGDs in Idukki District: Introduction

Risk management

In Peerumade Panchayath, the main vulnerabilities due to climate change/disaster vulnerabilities are: Flooding, water scarcity, landslides, destruction of roads and shelters, agriculture loss, decrease in the production of agriculture. The elected representatives participating in FGD have not received formal training on disaster management. So there is a need to conduct training on disaster management to all representatives thus the availability of trained people is ensured in all the GP.

In Peruvanthanam Panchayath, the main vulnerabilities due to climate change/disaster vulnerabilities are: flooding, landslides, destruction of crops, wildfire. The elected representatives participating in FGD did not receive formal training on disaster management. To address these gaps it is necessary to create awareness among the general public by DRM and also provide awareness among officials in record keeping of different documents.

Kumily GP is the largest Gram Panchayat in the Idukki district of Kerala. It is a town in Cardamom Hills near Thekkady and Periyar Tiger Reserve. Kumuli is a gateway town into Kerala from Tamil Nadu. Large-scale production of cash crops like cardamom, pepper, coffee, cinnamon etc. are cultivated in the hilly terrains. The community consultation had the participation of Farmers, Elected Representatives, Asha and Kudumbasree Workers and members of Vulnerable Communities. Droughts, Deluge, Landslides are the main impacts of Climate Change. No participants had undergone training in Disaster Management before. The urgent need for such training coupled with demonstrations is pointed out by the inhabitants.

Vandiperiyar is a spice municipality in Idukki district, Kerala, India. It is known for tourism, tea and coffee plantations, black pepper and other spice products. A number of tea factories are situated in the town. The Periyar River flows through the GP. The first community consultation had the participation of Panchayat Representatives, SHG members and farmers. The report of the consultation is given below. The second community consultation had the participation of Panchayat Representatives, members of Vulnerable Communities. The main climate change issues are Mullaperiyar Dam flooding, landslides and deforestation as seen in the first FGD. In the second FGD, the main impacts of climate change are in the form of strong winds, drought, flooding, water scarcity, yield loss, landslides, soil erosion, loss of fertility. In their opinion, there is a need for a group of trained personnel in the GP, specialized equipment and necessary training to the people.

Social Protection

In **Peerumade Panchayath** people are remaining out from the preview of pension and PDS in the panchayath, the procedure for obtaining a ration card should be liberalized. The inclusion process usually is started by the elected representatives or ward members, Anganvadi workers, kudumbasree workers, public workers. Crop insurance is utilized by few farmers and the benefit of such insurance was received by the intermediaries among insurance agents. Crop insurance benefits should be increased and there must be more awareness created so that the benefits reach directly to the farmers.

Social benefits like Pensions and PDS are still not all inclusive in the **Peruvanthanam GP**. The inclusion process is started by elected representatives, Anganvadi and ASHA workers, kudumbasree workers, public workers. The participants are of the opinion that they are receiving Crop insurance without much issue.

In Kumily GP, every eligible household and individual are receiving social benefits in the Panchayat. Kudumbasree and Anganvadi workers along with Elected Representatives are the ones tasked with initiating the process of inclusion. A large portion of farmers are still unaware of benefits such as Crop Insurance.

According to Both the FGD at Vandiperiyar, there are a small portion of people still not receiving social benefits. One suggestion put forward was to ensure benefits to people who don't have the necessary documents through Legal Service Authorities. The inclusion process to social benefit is initiated by Anganvadi Teachers, Ward Members and Kudumbasree workers and Anganvadi Teachers. Crop insurance, in the words of the participants, needs urgent reformation, such as the procedures in order to avail crop insurance needs to be simplified. Insurance should be extended to wild animal attacks and the benefits should be increased in regard to production cost increase and crop damage.

Agriculture

In **Peerumade Panchayath** farmers were not using AEU based. But in general, the increasing costs of all the raw materials is having a negative impact on the income of the farmers. Solve the land issues (land title deed) in the panchayath. FPO services are not available in the panchayath. IAMS facilities have not been utilized by the farmers of the panchayat. They are not aware of such a facility. There is a need to create more awareness on this in the panchayat.

In **Peruvanthanam Panchayath**, PoPs based farming practices are not in use. IAMS, FPO facilities are not regularly used in the panchayath.

In Kumily, AEU specific POP practices are still non-existent in the Panchayat. Tenants only receive benefits when they are associated with JLG (joint Liability Groups such as Kudumbasree) groups. IAMIS is still not introduced.

In Vandiperiyar, according to the first FDG, the usage of AEU specific POPs is very limited, but highly effective. Tenants in the Panchayat are not benefitting equitably as the land owners. Government benefits should be also available to them. FPOs are non-existent in the Panchayat along with IAMIS. Agriculture methods suited for the climate should be selected. Private individuals should not over exploit public ponds and canals.

Health

Covid Testing facilities are available in the **Peerumade Panchayat**. It is necessary to develop more centers in local places. No cases of denial of treatment in the private sector have been

reported. All people in the society are receiving treatment for Covid-19 and is completely free of cost in government hospitals. Ventilator facility was only available in medical colleges, and if it were available at local levels, access to immediate treatment would also be available to people in remote areas. So it is necessary to develop ventilator facilities at local level hospitals. The treatment of private hospitals is not affordable to the local people. There is also a need for conducting training for health staff and volunteers at local level, so that remote areas can get better health care facilities at local level.

Covid Testing facilities are not functioning efficiently in **Peruvanthanam GP**. No cases of denial of treatment in the private sector have been reported. GP has been using plan funds for the purchasing the medicine for the treatment. Lab facilities and transport facilities to be increased.

In Kumily, Covid treatment centres in the area are functioning well but all kinds of tests for Covid 19 confirmation are not available. Those who do not own private vehicles are facing difficulty to hire public vehicles for testing. The hospitals operating in the Panchayat are not giving access to Health Insurance. While the collective experience on treatment protocol has been positive, people need more transportation facilities to access such services. More services need to be given at Primary and Secondary Health Centres.

In Vandiperiyar GP, the Covid Treatment Centres in the locality are affordable and available to all. Due to the lack of transport facilities, people find it hard to access Public service. Transportation facilities need to be enhanced in regard to Public Health Services. Health Insurance schemes need to be extended to Private Hospitals. Still, there are no cases of treatment denial in the private sector. In regard to health insurance, the scheme must be extended to all hospitals. The testing process has a long waiting time which needs to be rectified. The other suggestion put forward was to increase the awareness regarding Covid among people.

Road

Consultations regarding the road package were made at the official level in the **Peerumade Panchayat** and the people have no information regarding PWD protocols and procedures. As per the official, the participation of people in the risk screening has been done in the development of roads and selection of packages. However the participants were unaware of such instances. They are in the opinion that the compensation of land acquisition be given in a timely manner. Provide additional training to different stakeholders to make them more efficient in handling such situations in the future. The Grievance redress mechanism is available for the people who have adverse impact in road construction.

In **Peruvanthanam GP**, the participants were given opportunities and were included in consultation before selection of road packages and selection of priority in construction during Gramasabhas. The people have no information regarding priorities in PWD protocols and procedures. The construction should be undertaken according to the features of the area. When developing future plans, the needs and local concerns should be taken in account. Also there were suggestions that there must be a committee formed at the local level to monitor the road construction. The people are only aware of the Grievance redress mechanism process through the panchayat. But none of them have any firsthand experience in using it.

According to Kumily, the inclusion of people is ensured while selection, prioritization and risk screening of road packages. The people are sure that constructions are according to PWD

Guidelines but are not informed what those guidelines are. The PWD needs the latest scientific training and equipment to meet the needs of the time. There is no redressal mechanism in operation.

In Vandiperiyar GP, no one from the Panchayat has been part in selection of road packages, prioritization of roads and risk screening. PWD needs urgent training and equipment to perform as needed.

Urban

No Urban LSGI were selected in Idukki district

Water

In Peerumade Panchayat water was not available neither for domestic nor agricultural purposes. In the hill areas the scarcity of water is chronic. The GPs/members are involved in the local water security plans and water budgets. For ensuring the water access in GP tank water needs to be supplied. Also with the support of the government, a drinking water scheme needs to be implemented in the panchayat. Protection of ponds and other water bodies need to be done in the panchayat for conserving the water, construct more check dams for conserving the rain water. Currently the flood forecasting is received from the GP. The people are receiving announcements regarding the opening of dams through TV, News, different other media. Enhance the efficiency of the agriculture department and irrigation department which will help to provide more services to the farmers. Infrastructure facilities need to be developed for the tourism promotion in the panchayat. Coordination of different departments needs to be improved to provide better services to the citizens.

In Peruvanthanam Panchayat water sufficient water is not available for domestic and agricultural purposes. The elected representatives are participating in local water security plans and water budgets. For ensuring the water access in GP earlier, tank water was supplied and also with the support of the government, a scheme for drinking water was implemented in the panchayat. For the conservation of water protection of ponds and other water bodies in the panchayat, conducting activities for the protection of rainwater. Our panchayat has a critical role in the preparation of the Pampa river basin plan. To ensure equitable allocation of different segments: ensure the people participation in the planning process; uphold the transparency of all actions, finalizing the criteria for beneficiaries.

In **Kumily** GP, there is drinking water scarcity and limited access to schemes is a major issue in the Panchayat. Even Though elected representatives are included in Water Security Plans, some representatives of selective wards are not included. The Grama Panchayat plans to provide access to vulnerable communities and backward classes by rainwater harvesting and recharging unused wells. There is no regional system established for providing Flood Forecasting, the people only come to know through Mass Media.

Water scarcity is still prevalent in **Vandiperiyar**. All pending schemes should be urgently implemented. Rainwater harvesting should be encouraged. Even though Grama Panchayat members are included, water related needs still remain unsolved. The completion of schemes already being implemented and along with the supply of water to the plantain regions is necessary to ensure the access of vulnerable communities. The Panchayat has a role to play in the Pampa river Basin plan. Flood forecast should be implemented more efficiently. Regional forecasts need to be implemented. The Panchayat should be given information beforehand regarding the forecast.

List of participants in the community consultations

No.	DISTRICT	NAME OF THE PARTICIPANT	GENDER	OCCUPATION	ER
	ALAPPUZHA	Saju Vishvanath	M	JHI	
	ALAPPUZHA	Thomas Mathew	M	Farmer	
	ALAPPUZHA	Udayanandhan	M	Farmer	
	ALAPPUZHA	Haneetha	F		
	ALAPPUZHA	Sunitha	F		
	ALAPPUZHA	Girija Kunjumon	F	ADS representative	
	ALAPPUZHA	Sindhu Ajaygosh	F	Asha Worker	
	ALAPPUZHA	T D Rajan	M	Health Inspector	
	ALAPPUZHA	M C Prasad	M	Panchayat President	yes
	ALAPPUZHA		M	P. Secretary	yes
	ALAPPUZHA	Jolly Joseph	F	Farmer	
	ALAPPUZHA	Soman K K	M	Farmer	
	ALAPPUZHA	Babilu	M	Auto driver	
	ALAPPUZHA	Mohanan	M	Social Worker	
	ALAPPUZHA	Anirudhan	M	Farmer	
	ALAPPUZHA	E. K Mohanan	M	A.L	
	ALAPPUZHA	Janamma	F	Health Worker	
	ALAPPUZHA	Dominic	M	R . A . L	
	ALAPPUZHA	Vijayakumar	M	Coolie	
	ALAPPUZHA	Sindhu	F	House hold	
	ALAPPUZHA	Baji K.R	M	ADS	
	ALAPPUZHA	Simi P.R	F	ADS	
	ALAPPUZHA	Mumthas	F	CDS worker	
	ALAPPUZHA	Mukundhan	M	Farmer	
	ALAPPUZHA	Kunjumon	M	Govt. Service	
	ALAPPUZHA	Sulprith	F	Teacher	
	ALAPPUZHA	Thilakamma	F	Activist	
	ALAPPUZHA	Usha	F	Activist	
	ALAPPUZHA	Beena	F	Councilor	yes
	ALAPPUZHA	Gracy	F		
	ALAPPUZHA	Mohamed Hussen	M	Vice Chairman	yes
	ALAPPUZHA	Gopan K. Unnithan	M	Farmer	Yes
	ALAPPUZHA	Vijayamma P.S.	F	Farmer	Yes
	ALAPPUZHA	Santhi S.	F	Housewife	Yes
	ALAPPUZHA	Bindhu Sunil	F	NREGA Mate	Yes
	ALAPPUZHA	Jain Jinu Jacob	F	Teacher	Yes
	ALAPPUZHA	B. Shihabudheen	M	A/A Krishibhavan	
	ALAPPUZHA	K.K. Gopalakrishna Pillai	M	Farmer	
	ALAPPUZHA	A.V. Rajendran Pillai	M	Farmer	
	ALAPPUZHA	Anil Kumar M.P.	M	Farmer	
	ALAPPUZHA	Varghese G.	M	Farmer	
	ALAPPUZHA	Praseetha Prasannan	F	CDS Vice Chairman	

	ALAPPUZHA	Usha Sasi	F	CDS Chairperson	
	ALAPPUZHA	Aleyamma Joseph	F	Teacher	
	ALAPPUZHA	Manojkumar K.	M	PVT Job	Yes
	ALAPPUZHA	Sujatha Manoharan	F	Anganavadi	
	ALAPPUZHA	Geetha K	F	Asha	
	ALAPPUZHA	Sujatha Suresh	F	Asha	
	ALAPPUZHA	Bindu Prasad	F	Bank employee	
	ALAPPUZHA	Shiju Abraham	M	Farmer	
	ALAPPUZHA	Gopalan TC	M	Kudumbasree	
	ALAPPUZHA	Lekha M Manoj	F	Asha	
	ALAPPUZHA	Kushum Biwi	F	ADS president	
	ALAPPUZHA	Ammani Gopalan	F	Kudumbasree	
	ALAPPUZHA	Puspha Jagadeesh	F	Kudumbasree	
	ALAPPUZHA	Anju Sachin	F	Kudumbasree	
	ALAPPUZHA	Ajitha Binu	F	Kudumbasree	
	ALAPPUZHA	Rajitha Vineeth	F	Kudumbasree	
	ALAPPUZHA	Beena T Roy	F	Kudumbasree	
	ALAPPUZHA	Reshma Balaesh	F	Kudumbasree	
	ALAPPUZHA	Jayakumari	F	NREG Worker	
	ALAPPUZHA	Beena Vincent	F	NREG Worker	
	ALAPPUZHA	Saleena Beevi	F	Farmer	
	ALAPPUZHA	Sreelatha Suresh	F	Housewife	
	ALAPPUZHA	Geetha Haridas	F	CDS Member	
	ALAPPUZHA	Laila Noushad	F	CDS Member	
	ALAPPUZHA	Ajithakumari	F	CDS Member	
	ALAPPUZHA	Sheeba Beevi	F	Farmer	
	ALAPPUZHA	Mariya Sherin Jos	F	Teacher	
	ALAPPUZHA	Remya Biju	F	NREG Worker	
	ALAPPUZHA	Saly Sunny	F	NREG Worker	
	ALAPPUZHA	Abhinaya K.	F	NREG Worker	
	ALAPPUZHA	Chanderlekha R	F	Teacher	
	ALAPPUZHA	Saleena Noushad	F	Ward Member	
	ALAPPUZHA	Vanitha Ramandev	F	Kudumbasree	
	ALAPPUZHA	Sindhu	F	Kudumbasree	
	ALAPPUZHA	Prabha Sunil	F	Kudumbasree	
	Pathanamthitta	Bindu Ravi	F	Haritha Karsena	
	Pathanamthitta	Tulsi Kumar	F	Haritha Karsena	
	Pathanamthitta	Radhamani	F	Haritha Karsena	
	Pathanamthitta	Savithri Sasi	F	Haritha Karsena	
	Pathanamthitta	Vijayamma M.K	F	Health	
	Pathanamthitta	K. P Ashokan	M	MSME	
	Pathanamthitta	S. Ramachandhran Nair	M	Ward member	
	Pathanamthitta	MohanKumar	M	Ward member	

	Pathanamthitta	Babu Thomas	M	KJU	
	Pathanamthitta	Satheesh Kumar	M	Ward member	
	Pathanamthitta	Manoj George	M		
	Pathanamthitta	Shyni. K	F	Palliative Nurse	
	Pathanamthitta	Sujatha M .G	F	Asha Worker	
	Pathanamthitta	P. M Sivan	M		Yes
	Pathanamthitta	Biju Varnashaala	M	Ward member	Yes
	Pathanamthitta	A.S Mathai	M	Ward member	Yes
	Pathanamthitta	Remadevi	F	Ward member	Yes
	Pathanamthitta	RadhaKrishnan P . R	M	Secretary, Palliyoda Seva Sangham	
	Pathanamthitta	Sheeja Pramod	F	Ward member	Yes
	Pathanamthitta	Adv. Pradeep Mammen Mathew	M	Advocate	
	Pathanamthitta	Shinu Eapen	M	Business	
	Pathanamthitta	Thomas Vanchipalam	M	Business	
	Pathanamthitta	Linda Thomas	F	Councilor	
	Pathanamthitta	Anu Soman	F	Councilor	
	Pathanamthitta	Shani Thaj	F	Councilor	
	Pathanamthitta	Bindhu Prakash	F	Councilor	
	Pathanamthitta	Indu Chandran	F	Teacher	
	Pathanamthitta	Reena Vishal	F	Teacher	
	Pathanamthitta	Sheeja Kariminkala	F	Teacher	
	Pathanamthitta	Sheeja M.R	F	Councilor	
	Pathanamthitta	Annamma Mathai	F	Councilor	
	Pathanamthitta	Rahul Biju	M	Councilor	
	Pathanamthitta	Mini Prasad	F	Councilor	
	Pathanamthitta	Pooja Jayan	F	Councilor	
	Pathanamthitta	Ganga Radhakrishnan	F	Councilor	
	Pathanamthitta	Sreenivas Purayat	M	Councilor	
	Pathanamthitta	Vimal G.M	M	Councilor	
	Pathanamthitta	Vijayakumar	M	Councilor	
	Pathanamthitta	Manoj K	M	Small Farmer	
	Pathanamthitta	PM Raju	M	Farmer	
	Pathanamthitta	Robin	M	Politician and Farmer	
	Pathanamthitta	P K Sugadhan	M	S. Farmer	
	Pathanamthitta	Ranjini	F	S. Farmer	
	Pathanamthitta	Arya P K	F	NGL Worker	
	Pathanamthitta	Aswin	M	Farmer	
	Pathanamthitta	Rameshan	M	S. Farmer	
	Pathanamthitta	K S Machan	M	S. Farmer	
	Pathanamthitta	Nishanth	M	Farmer	
	Pathanamthitta	Ajikumar	M	Farmer	
	Pathanamthitta	Sathasivan	M	Farmer	

	Pathanamthitta	Pradeepkumar	M	Farmer	
	Pathanamthitta	Thomas Kutty	M	Farmer	
	Pathanamthitta	Sujatha	F	House wife	
	Pathanamthitta	Nirmala	F	Ex member	
	Pathanamthitta	Suja	F	Farmer	
	Pathanamthitta	Sheela Babu	F	coolie	
	Pathanamthitta	Radha Prasannan	F	Ex member	
	Pathanamthitta	Ambili	F	Farmer	
	Pathanamthitta	Remya mol	F	member	
	Pathanamthitta	Anju S Raju	F	House wife	
	Pathanamthitta	Sudha	F	NREGA worker	
	Pathanamthitta	Subadhramal	F	NREGA worker	
	Pathanamthitta	Shanthamma	F	Asha Worker	
	Pathanamthitta	Sushama	F	House wife	
	Pathanamthitta	K R Prakash	M	Member	
	Pathanamthitta	Geetha Suresh	F	Member	
	Pathanamthitta	Lekha C K	F	House wife	
	Pathanamthitta	Shari Krishna	F	FLH Cordinals	
	Pathanamthitta	Mani Prakash	M	MGNREGA	
	Pathanamthitta	Manju	F	MGNREGA	
	Pathanamthitta	Eliyamma	F	Farmer	
	Pathanamthitta	Mandhiram Ravindran	M	Member	
	Pathanamthitta	Sudha Kumari	F	Member	
	Pathanamthitta	Raji	F	MGNREGA	
	Pathanamthitta	Omana	F	AWW	
	Pathanamthitta	Sujatha	F	AWW	
	Pathanamthitta	Shanthamma	F	AWW	
	Pathanamthitta	Geetha T M	F	Farmer	
	Pathanamthitta	Kumari Prabha	F	Mahila Pradhan	
	Pathanamthitta	Sulochana	F	Mahila Pradhan	
	Pathanamthitta	Anitha	F	K. Sree	
	Pathanamthitta	Mohanakumari	F	AWW	
	Pathanamthitta	Ajitha	F	AWW	
	Pathanamthitta	Naseera	F	AWW	
	Pathanamthitta	Usha Kumari	F	Anganwadi worker	
	Pathanamthitta	Manju Shaji	F	Member	
	Pathanamthitta	Sujatha	F	K. Sree	
	Pathanamthitta	Anil Kumar	M	Farmer	
	Pathanamthitta	Mini Thomas	F	Member	
	Pathanamthitta	Sandhyadevi	F	Member	
	Pathanamthitta	P O Mohanan	M	Farmer	
	Pathanamthitta	K N Balan	M	Worker	
	Pathanamthitta	Thekkepuram Vasudevan	M	Farmer	

	Pathanamthitta	Suma Vijayan	F	Asha worker	
	Kottayam	Beena Joseph	F	Social Worker	
	Kottayam	Shyni P J	F	News Reporter	
	Kottayam	Rajani Suresh	F	Social Worker	
	Kottayam	Sherin Malu	F	Sales Girl	
	Kottayam	Anil Kumar	M	Politician	
	Kottayam	Das	M	Engineer	
	Kottayam	Omana Nadarajan	F	AUEGS worker	
	Kottayam	Ranjith Ravindran	M	Social worker	
	Kottayam	Dileesh Divakaran	M	Carpenter	
	Kottayam	C V Anil	M	Engineer	
	Kottayam	Faisalmon	M	Legal Document Writer	
	Kottayam	Bilsy Manual	F	Lab Technician	
	Kottayam	Sheeba Difayin	F	Social Worker	
	Kottayam	Sinimol	F	Social Worker	
	Kottayam	Shiji M D	M	Social Worker	
	Kottayam	Rachel K T	F	Anganvadi Teacher	
	Kottayam	Prasanna Shibu	F	Asha worker	
	Kottayam	Kabani	F	Member	
	Kottayam	Jineesh Mohammed	M	Business	
	Kottayam	Jomi Thomas	M	Farmer	
	Kottayam	Sulojana Suresh	F	Asha worker	
	Kottayam	Rekha Das	F	President	
	Kottayam	Laila Kumari Ayyappan	F	Secretary	
	Kottayam	Regina Rafeeq	F	Housewife	
	Kottayam	V K Babu	M	Standing committee chairman	Yes
	Kottayam	Prasad R	M	Agri GR 1	
	Kottayam	Deepa Chandhra	F	JHIFHC Manimala	
	Kottayam	SobhanaKumari	F	ICDS Supervisor	
	Kottayam	Sheeja	F	JPHN	
	Kottayam	James	M	President G P, Manimala	Yes
	Kottayam	Athulya	F	Teacher	Yes
	Kottayam	Subin Babu	M	V E O	
	Kottayam	Sholly Philip	F	Asst. Secretary	
	Kottayam	Molly Michael	F	Standing committee chairperson	Yes
	Kottayam	Suni Varghese	F	Standing committee chairperson	Yes
	Kottayam	Anitha	F	JHI	
	Kottayam	Kavitha Josee	F	Sr. Clerk	
	Kottayam	Gayathri	F	Tailor	

	Kottayam	Mini	F	Housewife	
	Kottayam	Sinu	F	Asha worker	
	Kottayam	Shibi	F		
	Kottayam	Prakashini	F		
	Kottayam	Bindu	F		
	Kottayam	Mini Santhosh	F		
	Kottayam	Simi Shibu	F		
	Kottayam	Jayamol	F		
	Kottayam	Shobha Babu	F		
	Kottayam	Valsalakumari	F		
	Kottayam	Sujatha Thankappan	F		
	Kottayam	Valsamma	F		
	Kottayam	Jyothi Susheelan	F		Yes
	Kottayam	Sinu	F	Asha worker	Yes
	Kottayam	Latha	F		Yes
	Kottayam	Sheeba	F		Yes
	Kottayam	Jayadevan	M		
	Kottayam	Jancy	F		Yes
	Kottayam	Sreeja Shyne	F		Yes
	Kottayam	P N Sukumaran	M		
	Kottayam	Rajesh C N	M		Yes
	Kottayam	M Rubeena	F	Secretary	Yes
	Kottayam	Rajini Mol	F		
	Kottayam	Valasala	F		
	Idukki	A Raman	M		
	Idukki	Arokiamary	F		
	Idukki	P A Jacob	M		
	Idukki	P S Shyam Sundar	M		
	Idukki	A J Thomas	M		
	Idukki	Harikarr	M		
	Idukki	Chandhru	M		
	Idukki	Santhi Ramesh	F	Member	
	Idukki	Shoba	F	Member	
	Idukki	ElaySekar	M	Member	
	Idukki	Beena Joseph	F	Member	
	Idukki	Sabeena	F	Member	
	Idukki	R. Dinesan	M	Member	
	Idukki	Kunjunju Kutty U .M	M	Member	
	Idukki	Asha D	F	Overseer, MGNREGA	
	Idukki	Sobhana	F	A E	
	Idukki	Renjith	M	Overseer, MGNREGA	
	Idukki	Rajani mol	F	MGNREGA	
	Idukki	S Sabu	M	G/P President	

	Idukki	P. A Jacob	M		
	Idukki	Lakshmy Helan	F		
	Idukki	Arokiamary	F		
	Idukki	Omena Sasi	F		
	Idukki	Tulasi Balen	F		
	Idukki	Samyo V. K	F		
	Idukki	Murugesan	M		
	Idukki	K Sasikala	F		
	Idukki	Shobha	F		
	Idukki	Elaysekhar	M		
	Idukki	Santhi Ramesh	F		
	Idukki	Asha D	F		
	Idukki	Sobhana P . K	F		
	Idukki	E Chandhran	M		
	Idukki	Harikarr	M		
	Idukki	Sabeena Muhammed	F		
	Idukki	Beena Joseph	F		
	Idukki	Kavitha Ravindran	F		
	Idukki	K Aravindakshan	M	Farmer	
	Idukki	P S Jamal	M	Farmer	
	Idukki	K D AjithKumar	M	Nil	
	Idukki	Ayyappadas	M	Coach	
	Idukki	Munilakshmi	F	Nil	
	Idukki	Suchurani	F	Nil	
	Idukki	Priyanka R	F	Nil	
	Idukki	Shakeela T	F	Coolie	
	Idukki	PanchaNagaraj M	M	Nil	
	Idukki	R Kowsalya	F		
	Idukki	Sheela Kulathingal	F	Rtd Teacher	
	Idukki	Mariappan	M	Social worker	
	Idukki	Sreeraman M	M	Social worker	
	Idukki	Manikandan K	M	Social worker	
	Idukki	Alphonsa S	M	DTP	
	Idukki	Rehnas K A	F	Social worker	
	Idukki	Smruthy	F		
	Idukki	Abina	F		
	Idukki	Josmi Kumar	F		
	Idukki	Priya	F		
	Idukki	Anitha	F		
	Idukki	Surya	F		
	Idukki	Elizabeth	F		
	Idukki	Sebi mol	F		
	Idukki	Deepa	F		

	Idukki	M T Lisi	F		
	Idukki	Sindhu	F		
	Idukki	Marykutty	F		
	Idukki	Leela Gopi	F		
	Idukki	Indira	F		
	Idukki	Ansalna	F		
	Idukki	Jenci	F		
	Idukki	Dhanya Mol	F		
	Idukki	Augustin	M		
	Idukki	Nisha	F		
	Idukki	Sulega	F		
	Idukki	Sumayya	F		
	Idukki	P M Yusaf	M		
	Idukki	Murugamma D	F	Farmer	
	Idukki	Rejani Biju	F	House wife	
	Idukki	Gijo Radhakrishnan	M		
	Idukki	Chandhra babu	M	Govt. Employee	
	Idukki	Jaya manoj	F	Member	
	Idukki	Daisy Sebastian	F	LSGD	
	Idukki	Shylaja	F		
	Idukki	Ashish Kumar	M		
	Idukki	Kabeer	M		
	Idukki	Mohanan	M		
	Idukki	C B Vijayakumar	M		
	Idukki	V C Cherian	M	Member	
	Idukki	M Mohanan	M		
	Idukki	Joseph	M	Retired Govt.Employee	
	Idukki	Sunish	M	Agri.Asst	
	Idukki	Shibin Divakaran	M	AE/MGNREGA	
	Idukki	Sethulakshmi	F	DEO/MGNREGA	
	Idukki	Vinod Gopi	M	Member	
	Idukki	Varghese Joseph	M	A E LSGD	
	Idukki	Remya Mohanan	F	Member	
	Idukki	Robin George	M	Member	
	Idukki	Mani Meghala	F	Member	
	Idukki	Shaiju Hydros	M	Member G.P	
	Idukki	Sulu mol	F	Member G.P	
	Idukki	Jayamol	F	Member G.P	
	Idukki	Mary	F		
	Idukki	Annamma	F	CDS Member	
	Idukki	V . C Cherian	M	Member 1	
	Idukki	Varghese Thejus	M		

	Idukki	K L Shyamala	F	R . P	
	Idukki	Savitha Manu	F		
	Idukki	Kunjumol Varghese	F		
	Idukki	Sujatha Prasad	F		
	Idukki	Jessi George	F		
	Idukki	Bindhu Biju	F	H W	
	Idukki	Jayalakshmy	F	CDS	
	Idukki	Usha Vijayakumar	F	CDS	
	Idukki	Sulu	F	CDS	
	Idukki	Indira	F	CDS	
	Idukki	Usha	F	CDS	
	Idukki	Jaya Anil	F		
	Idukki	Chiyar Thankappan	M		
	Idukki	Anass	M		
	Idukki	Ajas	M		
	Idukki	Albin	M		
	Idukki	Ashwin	M		
	Idukki	Antony	M		
	Idukki	Noora	F	CDS	
	Idukki	Meena	F	K. Sree	
	Idukki	Remya Mohan	F	Member	
	Idukki	Nadiya	F	CDS	
	Idukki	N . Sadasivan	M		

Photographs of community consultations

















List of State consultations

List of LDGI's selected for consultations

Name of LSGI's	Name of LSGI's in Malayalam	Type of LB	District
Peermade	പീരുമേട്	Panchayath	Idukki
Peruvanthanam	പെരുവന്താനം	Panchayath	Idukki
Vandiperiyar	വണ്ടിപെരിയാർ	Panchayath	Idukki
Kumily	കുമിളി	Panchayath	Idukki
Kooruthodu	കോരുത്തോട്	Panchayath	Kottayam
Mundakayam	മുണ്ടക്കയം	Panchayath	Kottayam
manimala	മണിമല	Panchayath	Kottayam
Changanaserri	ചങ്ങനാശേരി	Municipality	Kottayam
Ranni	റാന്നി	Panchayath	Pathanamthitta
Perunad	പെരുനാട്	Panchayath	Pathanamthitta
Aranmula	ആറന്മുള	Panchayath	Pathanamthitta
Thiruvalla	തിരുവല്ല	Municipality	Pathanamthitta
Mannar	മാന്നാർ	Panchayath	Alappuzha
Pandanad	പാണ്ടനാട്	Panchayath	Alappuzha
Kainakari	കൈനകരി	Panchayath	Alappuzha
Alappuzha	ആലപ്പുഴ	Municipality	Alappuzha

Annexure E: Proceedings of the ESSA Stakeholder Disclosure Workshops

As a part of Environmental and Social Systems Assessment (ESSA), the World Bank, Rebuild Kerala Initiative (RKI) and Kerala Institute of Local Administration (KILA) jointly convened state level feedback workshops. The first workshop was organized on 18th February 2021 which was followed by a second workshop on 22nd February 2021. The objective behind organizing two workshops was to ensure maximum participation and feedback of the stakeholders. Following the Covid-19 protocol, both the workshops were organized virtually through an on-line platform. Further sections in this report are aimed at setting the context for the workshop, followed by objectives of the workshops, discussions and outcomes of the workshop.

Objectives of the workshops

The workshops were organized as a part of preparation and finalization of the ESSA report with stakeholder engagement at multiple levels to receive their feedback on the draft report. Prior to the workshops, the draft ESSA report was sent to the invitees in English and in Malayalam. The invitees were requested to go through the draft in detail before the workshop so that the suggestions and feedback can be more streamlined. The full report was also made available online in the public domain and RKI website. The participants and interested citizens were thus given the opportunity to download and comment on the report through the workshop and also through direct feedback mechanism.

A total of 175 participants were invited to the workshops which consisted of state/district level officials, NGOs, CSOs, Local Self Governance Institutions (LSGIs), multilateral organizations, independent researchers and individuals. The category wise breakup of the invited participants is given in fig 1. In the first workshop there were 54 participants.

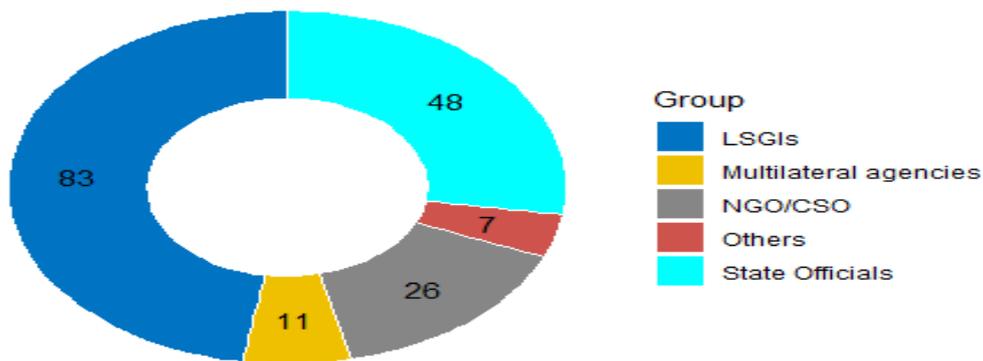


Fig 1: category wise breakup of the invited participants of the workshop

Sessions discussed in the workshops

The workshops were officially opened by the Director General of KILA, Dr. Joy Elamon. He introduced the purpose of the workshop, the ESSA team, sessions to be followed and the process of ESSA in brief. The importance of this exercise in building a stronger project implementation strategy with stakeholder support was stressed by him. During the opening he welcomed the guests, stakeholders, and officials who accepted the invitation.

The introductory remarks for setting the stage were done by Mr. R.K Singh IAS, Additional Chief Secretary, Finance and Secretary, RKI. In his introductory remarks, he mentioned the purpose of RKI as an establishment after the flood to tackle such extreme climatic events with support

from the World Bank to rebuild resilience and infrastructure. The objective of RKI is to embed resilience in infrastructure and administrative systems with the assistance of the World Bank. But there was a change in program modality due to COVID-19 pandemic and a new program design with inclusion of other bilateral donors was adopted with a sectorial approach consisting of Programs for result methodology (PforR). Mr. Singh stressed the importance of this workshop in the ESSA methodology where the stakeholders were given prime importance. HE concluded the session with the statement that “Administrative and social structures make sure that the vulnerable and affected communities will be protected and will guarantee their resilience through this program which is the need of the hour for Kerala state”.

In the next session Mr. Deepak Singh, Task team leader of RKP gave an introduction and background of the program. He explained the idea of two result areas and expected outcome followed by the timeline of events which resulted in this program. Challenges faced and activities planned in all the key sectors were comprehensively discussed.

In the subsequent session, Ms. Harjot Kaur, Team leader ESSA, discussed the purpose of ESSA, and the need for ESSA in PforR, and the methodology followed. Screening for risk and benefits, legal adequacy, institutional adequacy, system level adequacy as a part of ESSA framework which are critical as funding requirements were discussed.

In the next session, Mr. Amit Anand from the World Bank presented the highlights of the social part of the ESSA draft report. The sector wise evaluation of social risks and benefits were presented. The discussion also included the state’s legal policy framework and institutional capacities at sectorial level. The institutional capacities at state level were found to be adequate while at sectorial level was found to be limited. Overall recommendations were also presented to the participants. The workshop design allowed the participants to discuss and give their comments and questions after the end of each technical session.

Q&A of Social ESSA technical session

1. How does RKI expect the role of NGOs in this project?

AA: I mentioned in my presentation, there are different sectors where the participating institutions need to have a more nuanced understanding of vulnerabilities of engaging with citizens of engaging with different social groups, and that is where the capacities and the expertise of NGOs comes in. So, partnering with NGOs, to bring those capacities into the institutions is necessary.

HK: The existing systems, institutions actually already provide for the role of NGOs in different sectors, for example, the NGO is participating with the government institutions in the health sector, or in the social protection sector. So the program actually lays a huge amount of emphasis on engaging with the civil society organizations and moving forward, with the different reforms which have been proposed. So the ESSA also recommends that the different participating organizations or the wings of the government need to enhance the capacity, if at all, there is a need for certain departments, for example, Department of PWD or certain departments, which haven't really been engaging with the local level institutions to that extent as compared to the others. So there are those kinds of actions already recommended under the program.

2. **Shabeer Mohamed:** There are a lot of Adivasi (tribal) communities in that area. The different tribal communities are at different stages of mainstreaming. The suggestion is to include these tribal groups not as one, but give differentiated treatments based on their

exposure to the main stream society. Especially those tribes which are living a nomadic life must be included as a vulnerable group and special schemes and participatory mechanisms for the communities must be formulated, who don't have any contact with outside society.

3. **Kalaiarasan Periasamy:** Road repair or maintenance works may not require resettlement and removal of structure. But in the case of road construction like widening or new alignment may need R&R

AA: Road repair or maintenance works may not require resettlement and removal of structures, but in the case of road construction, like widening or new alignments may lead to resettlement. If the ROW of these roads is occupied by non-title holders, resettlement may be needed.

4. **Meena Kuruvilla:** With regard to social protection the children below 18 years (Tribal children, fisher folk children, children of migrant workers, special need children) are not included in the vulnerable group. It is better to include them also.

AA: Yes, they will be included in vulnerable group

5. **Meena Kuruvilla:** One more suggestion is that, in our local government, the recent people's biodiversity register. As a preventive aspect, the local self-governments need to update these registers but are seldom done. So I think you can also include the upgradation of the biodiversity register at the local self-governance level in the program. It's also one of the preventive aspects to avoid all these disasters.

DS: That's a very good and valid position. And maybe the program does not specifically mention this aspect. And I'm sure that there are many such aspects. However, as far as the local governments are concerned, they would be mandated to integrate the climate information and the disaster management information into one document. And they would then apply that into their investment planning process. And therefore, if there are any actions related to which are connected to either the mitigation aspect or the adaptation aspect on the climate side or on the risk reduction side, would get suitably rewarded for there would be incentive for the local governments to take these kind of affirmative actions which would help them mitigate the climate or the disaster. So I think we would feel that it can come in as a specific action under the local government's mandate of the investment plan.

6. **TKA Nair:** There are a couple of observations and a couple of suggestions. You know, first, let me come in on what was talked about last, the biodiversity aspect of it. You know, there is all India legislation Under the Ministry of Environment, the state governments are expected to get a biodiversity board at state level set up. And these boards are expected to register biodiversity in each village or panchayat.. In the case of Kerala, the chairman of the biodiversity board has completed that exercise. I do not know whether it is time to get it updated. But the main point is, what do we do with this register? Registry is excellent, that is the starting point, and because we should know where we stand. But once the registers are in place, what is the responsibility of the Panchayats or the parties to maintain these? Many of them are in private lands, and I know personally that many private landowners have, over a period of time, destroyed these biodiversity spots. In the Kerala context, most of them were known as *surpakavukal* (sacred groves); those are now getting extinct. So it has got a large impact on the biodiversity of the area. So maybe based on whatever has been studied, the team, if it has the time, could have an exchange of information ideas with

the chairman of the biodiversity board and incorporate something by way of a follow up action. That's point number one.

Number two, it's very specific. It's, in the context of Pathanamthitta the district, that's about the river basin authority. You know, perhaps some of you may know, some of you may not know that the government of Kerala has passed a legislation which is in the statute book of Kerala, about the river basin authority. About authority, but it would be worthwhile for all of us to do studies and make suggestions from time to time depending upon the circumstances prevailing to have a look at what has happened in the past, which will be extremely useful. If someone has the time and the inclination to look at this particular legislation and whether any follow up action based on that legislation has taken place or not. The chairman of that authority was none other than the chief minister of the state.

A third observation is about land use. Whether it is for a small building, whether it is construction of a road, land use becomes extremely important. When this matter of the rebuild Kerala was discussed at the level of the chief minister and subsequently at the level of the chief secretary in the state high level committees, some steps were proposed to be taken for this area of land use. Kerala has again a land use board it has got a land use plan prepared, but that remains on paper mostly and also many of them are really outdated. So, a land use plan to my mind is crucial, particularly when you talk in terms of fragile areas, you know, ecologically vulnerable areas which are disaster prone and where buildings of any kind are to be avoided. So, maybe an exercise to you to delineate areas which are fit for different kinds of activities or construction work particularly could be useful to protect the environment and more importantly, to prevent unforeseen developments like what happened during the time of the devastating floods in 2018. Well, I'm very glad as a person to note your general observation that all the capacity of the departments and the infrastructures, in terms of the departments, are good for taking up the kind of activities that are in the plan. My main point is that it is more important than making a plan. If you ask me, most of these plans remain on paper, these studies in which we invest a lot of time, they remain on paper unimplemented. So, how do you propose to build into your recommendations, the steps which are hard to put good plans into operation? Here, I think coordination is the key. And coordination is extremely important, because practically every activity is cutting across different departments. And departments have a tendency as all of us know to work in its own compartments. So coordinating these activities to see that they are all aimed at and they are ultimately leading to a process of sustainable development through the Kerala rebuild initiative. I think it is very important to be kept in mind.

And I also appreciate that we say that your list of exclusions because that impact, you know, answers the question that I was raising. If you say that these are activities to be excluded for these are projects, which need not be considered that you know, ipso facto, rule out certain kinds of activities.

The last point that I would like to make is indeed, everything that you talk about, ultimately will involve some kind of building activity or the other, whether it is a road project, small or big, whether it is the construction or some other training infrastructure, your building materials are a major problem. Wood, and wood and materials used in the past, they are not available any longer. And, the traditional construction materials are also becoming unavailable. And, you know, quarrying is or has been a very, very disastrous activity, but without quarrying you won't get the material for road building, or building houses, etc. So what kind of modern building materials are suited to the climate to the agro climatic conditions of Kerala? To know if there is anything readily available, needs systematic

research and is extremely important. And again, here, the government has got to take the initiative. I don't think there's any private initiative, which you can expect, because they are not expected to produce any results, this is more in the way of scientific research. So that kind of research to my mind is critical, as we go along the path of development, particularly in the area of construction.

And my final point is, just as we talk in terms of river basin authority, recognize the importance of the river as a source of water, we are in this state, or we have a large number of ponds. Practically every temple had one pond and most of them are dysfunctional, most of them have been filled for construction activity etc. But at least the remaining ponds, which are sources of water, could be protected to be rejuvenated. I think that will; on the one hand, make available water in times of scarcity in localities, and also it will help in recharging the groundwater availability in those areas.

DS: I don't see that there is anything that can be contradicted or commented upon on what you said. I think it would be in the best interest of the project to try to integrate the maximum of the suggestions that you have provided. I think already some of the processes that are outlined would include many of these suggestions to certain extent that you have indicated. But we'll try to see that more of what you're saying particularly in terms of the implementation aspects of the plan and the issues related to local materials, the delicate balance between the requirements of human activity and the natural resources, those do get addressed in these processes.

AD: It was issues relating to the water resources that are taken into account in some of the results which we are coming out on this project. Especially with the river basin conservation Management Authority where as a part of the first phase we will be developing a sort of a Basin Plan. That is one of the outputs which we are going to include where it will be integrating the entire watershed area. Lot of the water resources, which were mentioned by TKA, like small streams and rivers which we have back at home and also the sacred groves, are going to be part of that integrated planning. How the water resources which are available could be conserved, and redistributed for effective management and conservation? So that's part of the exercise, which the Water Resources Department will be getting incentivized on, which is one of the core areas of the program. That's why if you really look at the entire project program is concentrating around the Pamba basin area, because they were the first ones to get affected. That was the area which got affected the worst in the 2018 floods. So we have restricted the program to that area so that whatever we do in an integrated fashion could serve as a model for other bigger river basins and the smaller sub-basins.

7. **Jomon:** How long would it take to be implemented?

DS: As per the plan, the project is yet to be negotiated and finalized. We're looking at a horizon of five years for the implementation.

8. **Saju Itty:** How could we integrate it with the Sustainable Development Goals, especially in the health sector?

Deepika: So right at the outset, the areas that have been planned under the PforR are, are very well integrated, and aligned with the SDGs of universal health for all health system readiness, and also pandemic preparedness. So it is all well and aligned, not just with the broader health policies and frameworks and current priorities, but also with SDGs. So there's nothing parallel, but we want to further strengthen it to further integrate and prioritize some of the lagging areas in the context of Kerala.

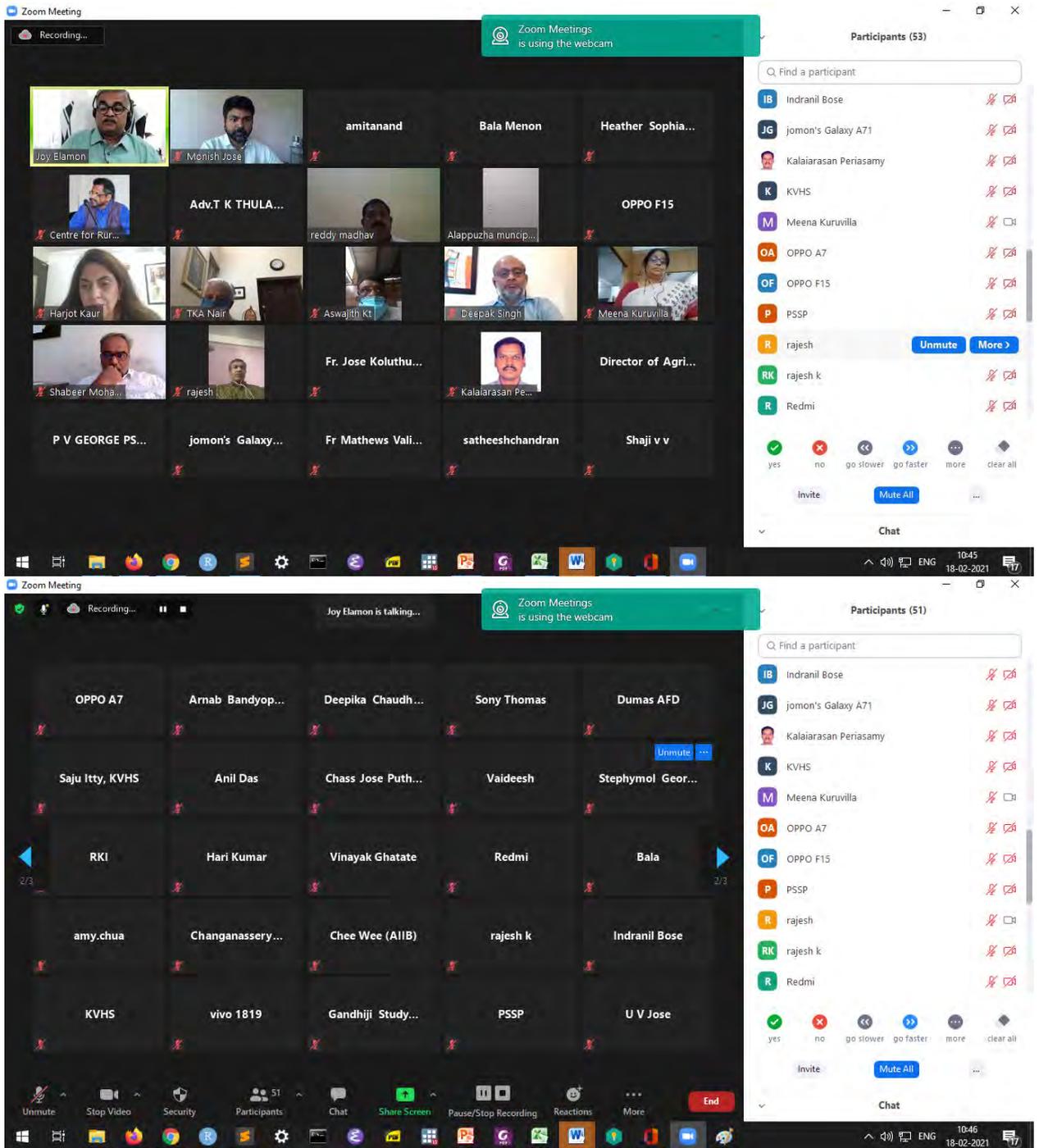
9. **Chee Wee (AIIB):** Regarding the displacement of less than 50 people involved, and whether there will be a resettlement plan for those kinds of physical displacements and if there are, who could actually represent these affected people.
HK: Yes, with regard to the question, for every sub project or any activity which will be taken up there will a screening carried out to know the level of impact. At this point of time also, when this activity is going to be taken up for the implementation, there'll be a social screening carried out, and we work with the concerned department, and to see that those social impacts, which are there in terms of displacement or any resettlement related issues are appropriately mitigated. So these actions will be taken, in preparation of an abbreviated resettlement action plan otherwise by the state government based on the state policies, as well as, aligned to the bank policies on issues of land acquisition and reset.
10. **CSES India (Comment):** Integrated development of river basin has been mentioned in the report. The role of LSGIs to be detailed. The watershed based approach to be adopted in the preparation of regular plans of LSGI. A program to be implemented to strengthen the LSGIs in Watershed based approach.
11. **Kalaiarasan Periasamy:** Role of RKI in development of State Water Policy with respect to National Water Policy 2012
AD: The State Water policy of the Kerala State Water policy is dated back to 2008. And which is one of the better policies in comparison to a lot of states and which have laid out the roadmap of what has to be done. The RBCMA is a formation which has been taken from that policy. And in connection with the linkage with the national policy, it's very much aligned. The role of RKI will be to ensure and facilitate a lot of the agreements between and the activities which have to be undertaken and directed by the State Water policy as well as which is already covered under RBCMA . The draft RBCMA which the government has prepared, which is in a draft state, covers both the national as well as the state water policy. In that respect it is perfectly in alignment. there's no reason for concern or any red flag which we need to be raised. And RKI is facilitating that process fundamentally to ensure that this falls in place and it takes forward the agenda of what will finally get passed in the legislation.
12. **Saju Itty:** Kerala State Transport Project developed the first comprehensive R&R policy. Will you revise it with new laws and RB goals?
AA: Kerala State Transport Project R&R policy has been updated to match the national R&R policy. Any policy that is applied to any project, if there are changes in the government policies and the enabling environment it will get updated. And the KSTP project is coming to an end. It is more important what the policy of the state government through the PWD would have applied.
13. **Arun PS:** Will RKI amend relevant acts, policies, regulations etc. Will the draft amendments be placed in the public domain for public comments before finalizing the same?
DS: Respective departments of the government of Kerala will take up these amendments. Two specific amendments to the act are being advertised under the project. One is the Town Planning Act, which is to include the provision and strengthen the provision on inclusion of risk information and the process of town planning, the urban planning. The second one is the river conservation basin Management Act, which will also give mandate to the authority for the integrated planning. So, both of these will be piloted by the state, not necessarily the RKI. The Water Resources Department and the local government department will be piloting these acts and will go through the normal process of act formulation which includes the process of public consultation.

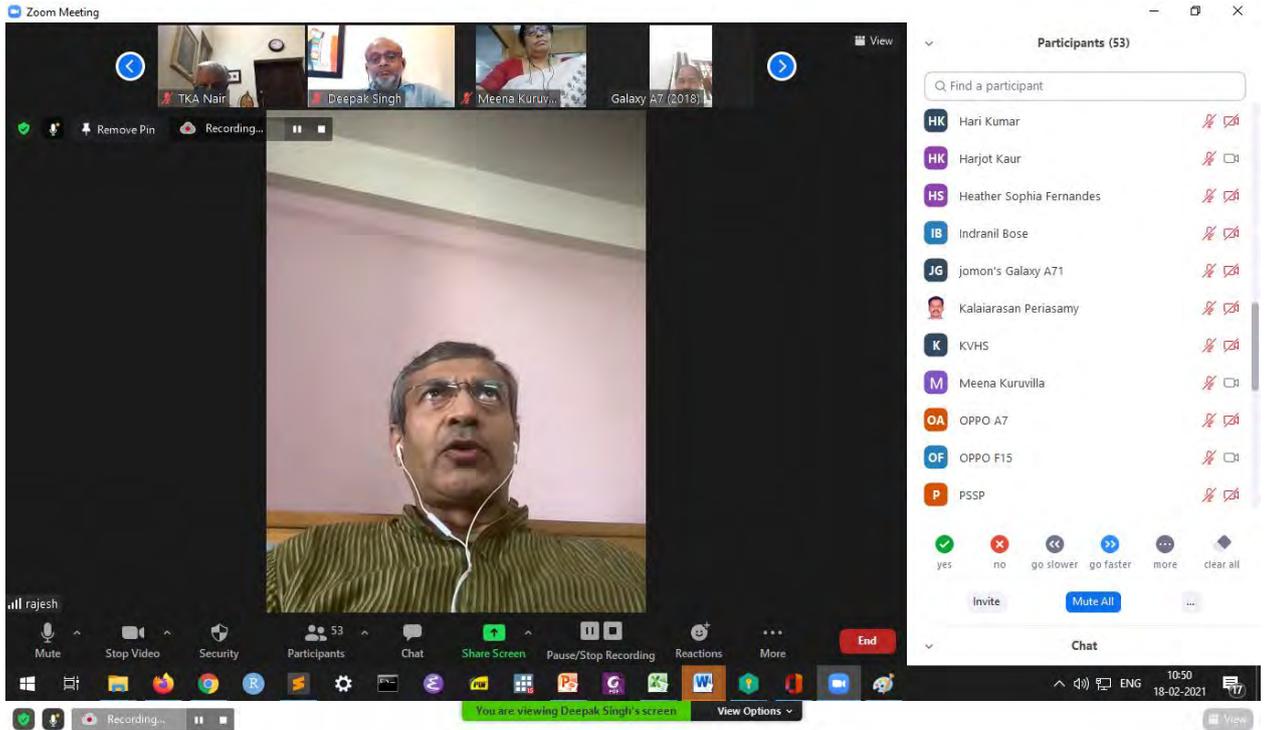
14. **Mridul Eapen:** In this capacity building, I am hoping that all these programs or projects will specifically focus on women that they are really drawn into the whole capacity building and training is one thing, which is very important, because they play an important role in terms of when disasters happen and they sometimes are at the disadvantage. But they're also the ones whose resilience is much higher. So a conscious attempt to see that women get included, which means that you have to make an effort to get them there. It's not always easy to get the women to come for these training modules. This will have to be designed in a way which is more gender friendly, that maybe reach out to them where they are, rather than having them come to places of training. That has to be worked out.

The second thing I wanted to ask was, I was very happy to see that a few projects have, in terms of beneficiaries, give gender disaggregated data; how many men, how many women, how many children, transgender. I don't know whether that is being included. But what I wanted to say was that when we are talking of direct beneficiaries, there can be individuals, and then another type of beneficiary can be a household. Now my request is that when you are considering a direct beneficiary as a household, you can also specify whether it's a female headed household, or it's the husband-wife household. So this is another thing I wanted you all to be careful about. Direct beneficiaries, definitely individuals which is very good, indirect also you all have in place and can be taken care of by the way you are doing it. But in the direct beneficiaries please give the nature of the household, especially if it is a female headed household or not.

HK: These are really great suggestions, and we will certainly incorporate them as part of our recommendations.

Screenshots of the First Disclosure Workshop





Timeline



August 2018

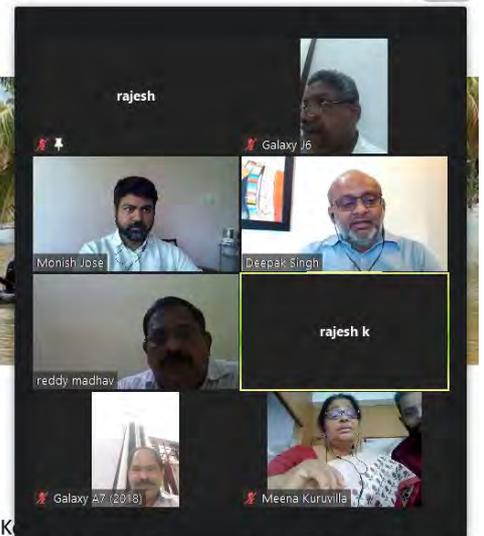
Floods and landslides

September 2018

Kerala Joint Rapid Damage and Needs Assessment (JRDNA)

June 2019

First Resilient Kerala Development Policy Operation (DPO 1, US\$250 million)



Policy Operation converted to PforR

financed the AIIB and complemented by the KfW through TA support



The image displays two sequential screenshots from a Zoom meeting. The top screenshot shows a presentation slide with a dark purple background and white text. The slide title is "Environment and Social Systems Assessment (ESSA) An Overview" and the subtitle is "KERALA RESILIENCE PROGRAM". A video thumbnail of Harjot Kaur is visible on the right side of the meeting interface. The bottom screenshot shows a similar slide with the title "Resilient Kerala Program" and the subtitle "SOCIAL SYSTEMS ASSESSMENT". The participant list on the right includes rajesh, Monish Jose, Deepak Singh, Harjot Kaur, reddy madhav, and amitanand, with amitanand's thumbnail highlighted by a yellow border. Both screenshots show a Zoom control bar at the bottom with 52 participants and various meeting controls.

Screenshots of the Second Disclosure Workshop

Timeline

August 2018	September 2018	June 2019	March 2020	2021
Floods and landslides	Kerala Inom Rapid Damage and Needs Assessment (KRDNA)	First Resilient Kerala Development Policy Operation (DRD 1, US\$250 million)	Second Resilient Kerala Development Policy Operation (DRD 2, converted to PfOR)	Proposed Resilient Kerala PfOR, co-financed the full and complemented by the 6th through 18 support

Participants (26)

- Nancy Jacob
- Nandita Roy
- punnapra south
- RKI
- ruchi
- Shyama Kuriakose
- Sony Thomas
- Swati
- toshiaki.keicho
- Vaideesh
- yuka.terada
- Jessy Varghese

Recording... You are viewing Harjot Kaur's screen View Options

Unmute

KoruthoduGP Monish Jose Alappuzha munic... Deepak Singh Vaideesh

ruchi RJI KAINAKARY yuka.terada

Heather Sophia... Sony Thomas toshiaki.keicho Shyama Kuriakose Arun PS

Fanny Ragot punnapra south AJAY VERMA Harjot Kaur HITESH JOSHI

mundakayam p... Ambalapuzha bl... Amit Anand Vinayak Ghatate

Unmute Stop Video Security Participants 24 Chat Share Screen Pause/Stop Recording Support Reactions More End

Recording...

Resilient Kerala Program

SOCIAL SYSTEMS ASSESSMENT

KoruthoduGP Monish Jose Deepak Singh

Alappuzha m... ruchi Amit Anand

Koottickal GP Vaideesh

Jessy Varghe... RJI

KAINAKARY yuka.terada

Names and Institutional affiliation of the participants

Nr.	Name	Institutional affiliation
1	Adv. TK Thulassedharan Pillai	
2	Agathe Dumas	E&S officer - AFD (French Development Agency)
3	Ajan MJ	
4	Ajay Verma	
5	Alapuzha Municipality	
6	Ambalapuzha BP	
7	Amit Anand	Social Development Consultant, World Bank
8	Amy Chua	AIIB (Asian Infrastructure Investment Bank) Environmental Specialist.
9	Arnab Bandyopadhyay	The World Bank
10	Arun PS.	Public policy researcher
11	Balakrishna Menon Parameswaran	The World Bank
12	CARD KNH	
13	Centre for Rural Management	
14	Changanaserry Municipality	
15	Chee Wee	AIIB (Asian Infrastructure Investment Bank) Social Specialist
16	Ciby Thomas	HDS
17	CSES INDIA	
18	Deepak Singh	The World Bank
19	Deepika Chaudhery	The World Bank
20	DPM	
21	Dr Rajesh	KILA
22	Dumas	AFD
23	Er. A.Madhava Reddy	LT PMC- LBG- Environment & Social Expert
24	Erumeli GP	
25	Fanny Ragot	AFD
26	Fr Mathews Valiyaputhenpurayil	Asst. Director, Kottayam Social Service Society (KSSS).
27	Fr. Jose Koluthu	
28	Fr. Mathew Thadathil	HDS Idukki
29	Harikumar	Agriculture (PPMCell) Department
30	Harjot Kaur	The World Bank
31	Heather Sophia	The World Bank
32	Hitesh Joshi	
33	Indranil Bose	Consultant Transport World Bank
34	Jessy Varghese	
35	Jincy Jose	
36	Jomon Joseph	STARS calicut
37	Joy Elamon	DG, KILA
38	Kainikary GP	

39	Koruthodu GP	
40	KVHS	
41	Meena Kuruvilla	Rajagiri outREACH, Rajagiri College of Social Sciences, Kalamassery
42	Monish Jose	KILA
43	Noufal Seyde	Gandhiji Study Centre ,Thodupuzha,Idukki
44	Mundakayam GP	
45	Nancy Jacob	UDRP-AF Dehradun
46	Nandita Roy	The World Bank
47	Preehta Sreekumar	
48	PSSP	
49	Raseena	EOWw Azhutha Block
50	RK Singh IAS	Secretary, RKI
51	Ruchi	
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54	Shabeer Mohammed	Citizens India Foundation
55	Shiny Joshy	Archana Women's Center, Ettumanoor
56	Shyama Kuriakose	Independent Environmental Law Researcher
57	Sibi Thomas	NLUS
58	Simi Mohan	
59	Sona Thakur	The World Bank
60	Sony Thomas	The World Bank
61	Stephymol George	KVHS, Kottayam
62	Sunil Kumar	Joint Secretary RKI
63	Swati	
64	Swati Bisht	UDRP-AF, Dehradun, Uttarakhand
65	Thomas	Mirror
66	TKA Nair	Managing Trustee, Citizens India Foundation, Trivandrum
67	Toshi Keicho	AIIB
68	UU Jose IAS	Additional Secretary, Local Self Government Department
69	V V Shaji	IDUKKI KSSP
70	Vaideeswaran S.	The World Bank
71	Vinayak Ghatate	The World Bank
72	Yuka Terada	AIIB