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Report No: PAD3624

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED INTERNATIONAL DEVELOPMENT ASSOCIATION REGIONAL GRANT
IN THE AMOUNT OF SDR 17.6 MILLION
(US\$24 MILLION EQUIVALENT)

AND

PROPOSED PROGRAM FOR ASIA RESILIENCE TO CLIMATE CHANGE TRUST FUND GRANT
IN THE AMOUNT OF US\$3.5 MILLION

TO THE

ASIAN DISASTER PREPAREDNESS CENTER (ADPC)

AND A

PROPOSED INTERNATIONAL DEVELOPMENT ASSOCIATION REGIONAL GRANT
IN THE AMOUNT OF SDR 8.8 MILLION
(US\$12 MILLION EQUIVALENT)

TO THE

REGIONAL INTEGRATED MULTI-HAZARD EARLY WARNING SYSTEM FOR AFRICA AND ASIA
(RIMES)

FOR A

CLIMATE ADAPTATION AND RESILIENCE FOR SOUTH ASIA (CARE) PROJECT

APRIL 20, 2020

Urban, Resilience And Land Global Practice
South Asia Region

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CURRENCY EQUIVALENTS

January 20, 2020

US\$ 1.38 = SDR 1

Bangladesh

Currency Unit = Bangladeshi Taka (BTK)

BDT 84.91 = US\$1

Nepal

Currency Unit = Nepalese Rupee (NPR)

NPR 113.65 = US\$1

Pakistan

Currency Unit = Pakistan Rupee (PKR)

PKR 154.80 = US\$1

Thailand

Currency Unit = Thai Baht (THB)

THB 32.63 = US\$1

FISCAL YEAR

July 1 – June 30 (Bangladesh, Pakistan)

July 16 – July 15 (Nepal)

October 1 – September 30 (Thailand)



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ABBREVIATIONS AND ACRONYMS

ADPC	Asian Disaster Preparedness Center
AMIS	Agriculture Management Information System
API	Application Programming Interface
BDP	Bangladesh Delta Plan
BPC	Bangladesh Planning Commission
CARE	Climate Adaptation and Resilience for South Asia
CCMIS	Climate Change Management Information System
CGIAR	Consultative Group on International Agricultural Research
CPF	Country Partnership Framework
CWG	Coordination Working Group
DHM	Department of Hydrology and Meteorology
DOLI	Department of Local Infrastructure
DSS	Decision Support System
E&S	Environment and Social
ESCP	Environment and Social Commitment Plan
ESF	Environment and Social Framework
ESS	Environment and Social Standards
FloCAST	Flood Forecasting and Warning Systems
FM	Financial Management
GCA	Global Commission on Adaptation
GLOF	Glacial Lake Outburst Flood
ICIMOD	International Center for Integrated Mountain Development
IDA	International Development Association
IWRM	Integrated Water Resource Management
LAP	Local Adaptation Plan
LAPA	Local Adaptation Plans for Action
LGED	Local Government Engineering Department
M&E	Monitoring and Evaluation
MoA	Ministry of Agriculture
MoALD	Ministry of Agriculture and Livestock Development
MoCC	Ministry of Climate Change
MoDMR	Ministry of Disaster Management and Relief
MoEFCC	Ministry of Environment, Forests and Climate Change
MoEWRI	Ministry of Energy, Water Resources and Irrigation
MoF	Ministry of Finance
MoFE	Ministry of Forests and Environment
MoFL	Ministry of Fisheries and Livestock
MoNFSR	Ministry of National Food Security and Research
MoPDR	Ministry of Planning, Development and Reforms
MoPIT	Ministry of Physical Infrastructure and Transport

MoWR	Ministry of Water Resources
NAP	National Adaptation Plan
NAPA	National Adaptation Programme of Action
NDC	Nationally Determined Contribution
NDMA	National Disaster Management Authority
NDRRMA	National Disaster Risk Reduction and Management Authority
NGO	Non-Governmental Organization
NHMS	National Hydrological and Meteorological Services
NPC	National Planning Commission
PARCC	Program for Asia Resilience To Climate Change
PDO	Project Development Objective
PER	Public Expenditure Review
PIU	Project Implementation Unit
PPSD	Project Procurement Strategy Development
P-RAMS	Procurement Risk Assessment and Management System
RDAS	Resilience Data and Analytics Services
REED	Rural Economic and Enterprise Development
RIMES	The Regional Integrated Multi-Hazard Early Warning System for Africa and Asia
SAARC	South Asian Association for Regional Cooperation
SAR	South Asia Region
SOPs	Standard Operating Procedures
SESAME	Specialized Export System for Agro-meteorological Early Warning for Climate Resilient Agriculture
SFP	Sector Focal Point
SoE	Statement of Expenditure
STEP	Systematic Tracking of Exchanges in Procurement
SWAT	Sindh Water and Agriculture Transformation
TA	Technical Assistance
TOR	Terms of Reference
ToTs	Training of Trainers
WMO	World Meteorological Organization



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DATASHEET

BASIC INFORMATION

Country(ies)	Project Name	
South Asia, Bangladesh, Nepal, Pakistan	Climate Adaptation and Resilience for South Asia	
Project ID	Financing Instrument	Environmental and Social Risk Classification
P171054	Investment Project Financing	Moderate

Financing & Implementation Modalities

<input type="checkbox"/> Multiphase Programmatic Approach (MPA)	<input type="checkbox"/> Contingent Emergency Response Component (CERC)
<input type="checkbox"/> Series of Projects (SOP)	<input type="checkbox"/> Fragile State(s)
<input type="checkbox"/> Disbursement-linked Indicators (DLIs)	<input type="checkbox"/> Small State(s)
<input type="checkbox"/> Financial Intermediaries (FI)	<input type="checkbox"/> Fragile within a non-fragile Country
<input type="checkbox"/> Project-Based Guarantee	<input type="checkbox"/> Conflict
<input type="checkbox"/> Deferred Drawdown	<input type="checkbox"/> Responding to Natural or Man-made Disaster
<input type="checkbox"/> Alternate Procurement Arrangements (APA)	

Expected Approval Date	Expected Closing Date
12-May-2020	05-Aug-2025

Bank/IFC Collaboration
No

Proposed Development Objective(s)

To contribute to an enabling environment for climate-resilient policies and investments in select sectors and countries in South Asia.



Components

Component Name	Cost (US\$, millions)
Promoting Evidence-based Climate Smart Decision Making	10.00
Enhancing Policies, Standards and Capacities for Climate Resilient Development	24.00
Project Management and Specialized Support	5.50

Organizations

Borrower:	The Regional Integrated Multi-Hazard Early Warning System for Africa and Asia (RIMES)
Implementing Agency:	Asian Disaster Preparedness Center (ADPC) The Regional Integrated Multi-Hazard Early Warning System for Africa and Asia (RIMES) Asian Disaster Preparedness Center (ADPC)

PROJECT FINANCING DATA (US\$, Millions)

SUMMARY

Total Project Cost	39.50
Total Financing	39.50
of which IBRD/IDA	36.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Development Association (IDA)	36.00
IDA Grant	36.00

Non-World Bank Group Financing

Trust Funds	3.50
Program for Asia Resilience to Climate Change MDTF	3.50



IDA Resources (in US\$, Millions)

	Credit Amount	Grant Amount	Guarantee Amount	Total Amount
South Asia	0.00	36.00	0.00	36.00
Regional	0.00	36.00	0.00	36.00
Total	0.00	36.00	0.00	36.00

Expected Disbursements (in US\$, Millions)

WB Fiscal Year	2020	2021	2022	2023	2024	2025	2026
Annual	0.00	2.89	5.32	7.43	7.89	8.80	3.67
Cumulative	0.00	2.89	8.21	15.64	23.53	32.33	36.00

INSTITUTIONAL DATA

Practice Area (Lead)

Urban, Resilience and Land

Contributing Practice Areas

Agriculture and Food, Macroeconomics, Trade and Investment, Transport, Water

Climate Change and Disaster Screening

This operation has been screened for short and long-term climate change and disaster risks

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category	Rating
1. Political and Governance	● Substantial
2. Macroeconomic	● Low
3. Sector Strategies and Policies	● Moderate
4. Technical Design of Project or Program	● Moderate
5. Institutional Capacity for Implementation and Sustainability	● Moderate
6. Fiduciary	● Substantial
7. Environment and Social	● Moderate



8. Stakeholders	● Substantial
9. Other	
10. Overall	● Moderate

COMPLIANCE

Policy

Does the project depart from the CPF in content or in other significant respects?

Yes No

Does the project require any waivers of Bank policies?

Yes No

Environmental and Social Standards Relevance Given its Context at the Time of Appraisal

E & S Standards	Relevance
Assessment and Management of Environmental and Social Risks and Impacts	Relevant
Stakeholder Engagement and Information Disclosure	Relevant
Labor and Working Conditions	Relevant
Resource Efficiency and Pollution Prevention and Management	Not Currently Relevant
Community Health and Safety	Not Currently Relevant
Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Not Currently Relevant
Biodiversity Conservation and Sustainable Management of Living Natural Resources	Not Currently Relevant
Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Not Currently Relevant
Cultural Heritage	Not Currently Relevant
Financial Intermediaries	Not Currently Relevant



NOTE: For further information regarding the World Bank’s due diligence assessment of the Project’s potential environmental and social risks and impacts, please refer to the Project’s Appraisal Environmental and Social Review Summary (ESRS).

Legal Covenants

Sections and Description

Project Implementation Unit | Description: Within thirty (30) days after the Effective Date, establish and thereafter maintain at all times during the Project implementation, two Project Implementation Units (“RIMES PIU” and “ADPC PIU”) with functions and resources satisfactory to the Association, led by a Project Director and with staff in adequate numbers and with qualifications, experience and terms of reference satisfactory to the Association. | Due Date: 31-August-2020

Sections and Description

Sector Focal Points | Description: Within thirty (30) days after the Effective Date, Sector Focal Points (SFP) from the departments of the beneficiary ministries of each of the Participating Country shall be identified. The Sector Focal Points shall meet on a bi-annual basis to review progress, share information, assist in removing implementation bottlenecks and avoiding any potential duplication or gaps. | Due Date: 31-August-2020

Sections and Description

Project Operations Manuals | Description: The Recipients shall adopt a Project Operations Manual in form and substance satisfactory to the Association. The Recipients shall ensure, that the Respective Part of the Project is carried out in accordance with the arrangements and procedures set out in the Project Operations Manual, provided, however, that in the case of any conflict between the arrangements and procedures set out in Project Operations Manual and the provisions of this Agreement, the provisions of this Agreement shall prevail. | Recurrent Frequency: Continuous

Sections and Description

Coordination Working Group | Description: Within thirty (30) days after the Effective Date, a Coordination Working Group (“CWG”) shall be established jointly with representatives from ADPC and RIMES, to facilitate close coordination and collaboration in the implementation of the Project. Without limitation on the following, the CWG shall meet at least once a month to discuss progress on activities including an outline of next steps and discuss potential areas for more detailed coordination. | Due Date: 31-August-2020

Sections and Description

Annual Work Plans | The Recipients shall furnish to the Association, for review and approval as soon as available, but in any case not later than September 30 of each year, the detailed annual work plan and budget for the Respective Part of the Project for each subsequent year of Project implementation, of such scope and detail as the Association shall have reasonably requested and thereafter ensure that the Project is carried out in accordance with such plan and budget as agreed with the Association. | Recurrent Frequency: Continuous



Conditions



I. STRATEGIC CONTEXT

A. Regional Context

- 1. South Asia has experienced a long period of robust economic growth, averaging 6 percent a year, over the past 20 years.** This strong growth has translated into declining poverty and impressive improvements in human development. The number of extreme poor living on less than US\$1.90 a day dropped to 216 million people in 2015 from 275 million in 2013 and 536 million in 1990.¹ Even more remarkably, South Asian countries experienced an increase in incomes among the poorest 40 percent of 2.6 percent a year between 2010-2015, faster than the global average of 1.9 percent.
- 2. However, these long-term development gains are increasingly threatened by the staggering social and economic impacts of climate-related hazards.** Between 1990 and 2019², over 1000 climate-induced disasters in South Asia region affected over 1.68 billion people, killed an estimated 267,000 and caused over US\$127 billion in damages. The South Asia monsoon flooding in 2019 (July-Sep) alone displaced at least 41 million people in India, Nepal, Bangladesh, and Pakistan, and killed over 1,000 people. A recent World Bank study³ concluded that 800 million (or 44 percent) people in South Asia today live in locations that would become moderate or severe climate hotspots by 2050 without climate action. World Bank estimates suggest that climate change could result in 62 million people in SAR being pushed below the extreme poverty line by 2030⁴ and floods alone could cost an estimated US\$215 billion annually by 2030. Extreme weather affects jobs and productivity in key economic sectors such as agriculture, urban infrastructure, hydropower, and tourism, and even put women face additional risks during and post disaster events.
- 3. The unprecedented crisis posed by the coronavirus (COVID-19) will mean that South Asia, a region already highly vulnerable to impacts of climate change, is likely to experience its worst economic performance in 40 years,** with at least half its countries falling into a deep recession. Growth in the region is projected between 1.8 and 2.8 percent this year, down from the projected 6.3 percent⁵. The sudden disappearance of mostly informal jobs and a rise in food prices have created economic hardship, especially for poor and vulnerable people. which are also most vulnerable to climate-induced extreme events. The pandemic has also stretched the emergency response and preparedness agencies that are also at the forefront of dealing with climate-induced natural disasters.
- 4. South Asia could preserve and enhance its social and economic growth by investing in climate-resilient development.** Investing in resilience is both profitable and urgent as disruptions are extremely costly for governments, households and private sector and large ongoing investments in infrastructure assets will

¹ <http://povertydata.worldbank.org/poverty/home/>

² Calculations based on EM-Dat Data (as of July 2019)

³ Mani, Muthukumara S.; Bandyopadhyay, Sushenjit; Chonabayashi, Shun; Markandya, Anil; Mosier, Thomas Michael Rowe. 2018. South Asia's hotspots: The impact of temperature and precipitation changes on living standards. Washington, D.C.: World Bank Group.

⁴ World Bank. 2016. World Bank Group climate change action plan. Washington, DC: World Bank Group. <https://hubs.worldbank.org/docs/imagebank/pages/docprofile.aspx?nodeid=26114433>

⁵ "World Bank. 2020. South Asia Economic Focus, Spring 2020 : The Cursed Blessing of Public Banks. Washington, DC: World Bank. © World Bank. <https://openknowledge.worldbank.org/handle/10986/33478> License: CC BY 3.0 IGO."



have long-lasting repercussions as poor maintenance and natural disasters result in vulnerable shocks. The incremental cost is estimated at around 3 percent of the overall investment need with a benefit of US\$4 for each dollar invested in resilience.⁶ In addition, improving the provision of and access to weather, water and climate-related data and information in weather-dependent economic sectors could make critical contributions to economic productivity while also enhancing community resilience to natural hazards. Stronger institutions and a higher level of service delivery capacity can foster climate-resilient development, promoting safety, security and economic well-being.

5. **Resilience can be strengthened through global and regional cooperation as countries develop the foundation and enabling environment towards a climate-resilient South Asia.** Given the transboundary nature of weather and climate, regional collaboration can help to improve the understanding of increased weather and climate variability, devise effective policy reform strategies and foster the knowledge and technology required to scale up climate adaptation action, climate finance and strengthen resilience. Resilience can be further enhanced by breaking down data into actionable information and raising awareness on the non-structural climate adaptation measures. It is essential to share this knowledge with decision makers as well as with those who are affected by actions or inactions.

B. Sectoral and Institutional Context

6. **SAR countries are already providing strong leadership on climate adaptation and disaster resilience.** Following the SAARC declarations in 2007 and 2008 on climate change, the SAARC Summit in 2010 concluded with the Thimphu Declaration on Climate Change, which sets an ambitious goal for reducing poverty while strengthening resilience to climate change. SAARC's report - *Climate Risks in the SAARC Region: Ways to Address the Social, Economic and Environmental Challenges in SAR*, is already under implementation. The ongoing South Asia Regional Hydromet Program is helping strengthen institutions, facilitate knowledge exchange, and enhance regional cooperation with respect to management of hydro-meteorological ("hydromet") risks. Considerable national investments are being made in coastal resilience and adaptation, resilient infrastructure, etc. including a World Bank active portfolio of over US\$4.7 billion to strengthen climate resilience. All SAR countries remain committed to the 2015 Paris Climate Agreement on Climate Change, through their Nationally Determined Contributions that specify priorities and actions proposed to be taken to combat climate change both through adaptation and mitigation policies.⁷ SAR countries are working towards translating these policy statements into adaptation actions at sub-national levels and to mainstream them into development programs. In order to further support IDA countries a phased approach would need to be taken with possibility for further scale up of financing. Factors for prioritization include climate risk exposure and vulnerability. Considering key results from the Global Climate Risk Index 2019, Pakistan, Nepal and Bangladesh are IDA countries which rank higher than others in the region.
7. **More specifically, select IDA countries are committed to mainstreaming adaptation into national**

⁶ Hallegatte, Stephane; Rentschler, Jun; Rozenberg, Julie, 2019. Lifelines – The Resilient Infrastructure Opportunity. Washington DC; The World Bank

⁷ Based on the INDCs the extent of global warming is estimated between 2.7 and 3.7 degrees C compared to pre-industrial levels. While it is below the 4.5 degrees BAU estimate, it is still substantially higher than the target of 2 degrees. See: <http://www.wri.org/blog/2015/11/insider-why-are-indc-studies-reaching-different-temperature-estimates>



development plans in priority sectors as highlighted below:

- **Bangladesh** has identified water, health, forestry, agriculture and infrastructure sectors⁸ as priorities for mainstreaming adaptation. The government approved Bangladesh Delta Plan 2100 (BDP 2100) in September 2018, which promotes safe living through greater resilience and sound economic development. The Plan comprises 6 overarching goals which envisions a country safe from flood events and climate change-related disasters and achieves an integrated use of land and water resources.
 - **Pakistan's** dependency on climate sensitive sectors such as agriculture, water, natural resources and the environment makes it one of the most vulnerable countries in the region. Pakistan has created a Ministry of Climate Change (MoCC), passed a Climate Change Policy, addressed climate in its Vision 2025, and most recently passed the Climate Change Act in early 2017, which foresees the setup of three instruments: the Climate Change Council, the Climate Change Authority, and the Climate Change Fund. The Government of Pakistan is aiming to adopt a climate resilience centric approach as an overarching umbrella for adaptation and mitigation activities in the country. The new vision of Government aims to empower the MoCC as the principle institution for rolling out a broader climate resilience agenda in the country, which encompasses both adaptation and mitigation. Driven by this institutional and policy realignment, the MoCC has launched an ambitious climate resilience initiative titled 'Ecosystems Restoration Initiative' (ESRI). The estimated national adaptation needs are between US\$7 billion and US\$14 billion per year.⁹
 - **Nepal's** climate change policy (2011) envisions a country spared from the adverse impacts of climate change, by considering climate justice, through the pursuit of environmental conservation, human development and sustainable development envisioning a prosperous society. Following a robust federalization process, the country updated its climate change policy in 2019, in line with its National Framework on Local Adaptation Plans for Action (LAPA). The 2019 policy establishes institutional linkages between the three tiers of government and empowers local governments to implement activities related to adaptation.
8. **There is ample opportunity to translate these policy statements into adaptation actions. However, there is currently a lack of climate-informed planning and investment processes primarily due to deficient or outdated data, barriers to data sharing and capacities.** The challenge for IDA countries in SAR is to develop capacity to absorb the scientific information on localized projections of spatial and temporal impacts and adopt a suite of non-structural and structural investments to build resilience to climate change. Policy reforms are expected to lead to transformations towards climate-smart planning, skills, institutional capacity building and investments. To achieve them, however, an incentive structure must be created in the form of providing cutting-edge information and expertise, and incremental financing to support climate resilient investments. There is a need for a clear understanding of how climate policy (or inaction) may impact economic growth, fiscal sustainability and the country's broader development agenda, and how fiscal and economic policy tools can be used to adapt to climate change.
9. **This project will facilitate regional collaboration in SAR and supports existing regional adaptation initiatives.** Climate change does not adhere to ecological or jurisdictional boundaries and is one of the most critical development challenges in SAR with the potential to impact more than 1.9 billion people.

⁸ https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Bangladesh%20First/INDC_2015_of_Bangladesh.pdf

⁹ <https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Pakistan%20First/Pak-INDC.pdf>



CARE aims to facilitate regional collaboration among priority countries in SAR and support them in regional data and knowledge sharing as well as to develop regional standards for resilient infrastructure. Collective regional efforts to address climate risks will provide economies of scale, reduce transaction costs, improve shared learning and have an overall multiplier effect by creating momentum and enabling cooperation. In the next five years, the region would benefit from the support of two experienced inter-governmental regional institutions (the Asian Disaster Preparedness Center (ADPC) and the Regional Integrated Multi-Hazard Early Warning System for Africa and Asia (RIMES)). Lastly, CARE also supports existing regional adaptation initiatives. For example, it responds to a request received from the South Asia Association for Regional Cooperation (SAARC) to support the SAARC Roadmap on regional cooperation for climate change adaptation.

10. **A critical gap and capacity assessment for climate resilience mainstreaming was carried out for the three participating countries, i.e. Bangladesh, Nepal and Pakistan**, including analysis of: (i) the climate policy landscape in each of the three countries, (ii) specific sectoral plans and strategies and their alignment with climate impacts and actions, (iii) national planning documents, (iv) climate finance landscape, (v) institutional mechanisms in place to address climate risks, (vi) climate information and data, and (vii) key capacity assessment needs. In addition, a detailed gap analysis of existing sectoral data systems is available in Annex 4. A summary of proposed activities to address identified gaps and details of each component, including country-specific activities, is presented in Annex 2. These activities will be carried out across three sectors – climate smart agriculture, integrated water resource management, and resilient infrastructure (transport) – as well as two cross-cutting sectors – financing and planning. CARE consists of three main components and will be implemented over a period of five years.
11. **CARE prioritizes the strong link between regional and country-specific work.** Countries in the region tackle similar climatic issues and thus have great opportunity to learn from each other, therefore the experience of each country directly feeds into the collective experience of the South Asia Region as a whole. In this way the sectoral knowledge gathered through project activities feeds into country specific data and guidelines, which in turn directly feed into a regional database. Further detail on national agenda items supported through the regional CARE program can be found in Annex 2.
12. **CARE recognizes that adaptation occurs at multiple levels, and hence supports and links activities at the regional, national, and local levels.** CARE regional activities hence dovetail with relevant policies and institutions at different scales. Importantly, such cooperation can build on existing economic, political, and technological networks and initiatives for climate adaptation in the SAR region.

C. Relevance to Higher Level Objectives

13. **The Project is centrally positioned with the priority outcomes and result areas in the World Bank Group's Country Partnership Framework (CPF) of three focus SAR countries**, which describe the areas of WBG's support to clients in their adaptation and mitigation of climate change. All CPFs have integrated increased resilience to climate variability and change into their key objectives and broad pillars. CARE is fully consistent with the Bangladesh CPF (2016-2020), dated April 5, 2016 (Report 103723-BD). By supporting and providing technical support to Transport, Agriculture, and Water Global Practices for climate smart operations, climate data analytics and resilience data platforms, leveraging financing and risk financing mechanisms including risk financing facility, and combining with ICT and disruptive



technologies, the project contributes to the CPF's priority focus on strengthening disaster and climate resilience and also supports the Bank's broader efforts to promote regional cross-border cooperation on climate resilience. CARE aligns well with the Pillar 3 of CPF for Nepal for 2019-2023, dated July 19, 2018 (Report 121029-NP). One of the areas of implementation of the CPF emphasizes on balancing flexibility and steady focus on the country's transition to a federal state with the quest for higher and sustained growth with poverty reduction and inclusive development. To that end, climate adaptation and resilience are aligned with the critical path of the CPF in supporting the Government of Nepal (GoN). Similarly, it is aligned with the Outcome 3.3. of the Pakistan CPF (2015-19)¹⁰, and Part 1, Section C of the *Pakistan 100 Strategy*¹¹ that focuses on *Building Resilience to Natural Disasters and Climate Change*. Finally, CARE's proposed activities are aligned with the adaptation priorities identified in the respective Nationally Determined Contribution (NDC) and national adaptation plans (NAPs) of Nepal, Pakistan and Bangladesh.

14. **Furthermore, the Project will support the WBG's Action Plan on Climate Change Adaptation and Resilience¹², adopted in January 2019, which aims to increase the World Bank Group's level of ambition and commitments on climate change adaptation and resilience.** Through the Action Plan, the World Bank will ramp up its direct adaptation climate finance to reach US\$50 billion over FY21–25. With an emphasis on regional specificities, the Project is fully aligned with the overall Action Plan's two objectives of (i) boosting adaptation financing and (ii) driving a mainstreamed, whole-of-government programmatic approach within countries in the region. While investing in mitigation and green growth is critical, this project sets out to support the World Bank's ambition to scale up support for adaptation, climate finance and strengthen resilience, given the high vulnerability of the region to projected impacts of climate change.
15. **The project's design and activities contribute to the key objectives of the WBG's operational framework on "Supporting Growth, Investing in People and Addressing Fragility" and operationalize the SAR Regional Strategy's** deepened focus on climate smart investments, building human capital and strengthening resilience. The project's focus on policy reforms and investments to strengthen South Asia's climate resilience further the agenda on supporting growth and sustainable investments. Activities focused on developing institutional capacity and skills to absorb those policy reforms and undertake climate-resilient investments contribute to the Bank's efforts on investing in people and building human capital. Investments in resilient infrastructure and climate-resilient sectoral activities like climate-smart agriculture, operationalize SAR Regional Strategy's actions to support adaptation to climate change and contribute to the WBG strategy's fragility agenda by enhancing preparedness and reducing vulnerability to disasters.
16. **The project bolsters the integration agenda of the SAR Regional Strategy** through South-Asia wide data and knowledge sharing and generation, development of regional standards and guidelines and common policy reform approaches. A key aspect of this regional approach is forging of partnerships among regional institutions and leveraging regional initiatives like South Asia Water Initiative (SAWI), the South Asia

¹⁰ World Bank. 2014. *Pakistan - Country partnership strategy for the period FY2015-19 (English)*. Washington DC; World Bank Group.

¹¹ "World Bank. 2019. *Pakistan at 100 : Shaping the Future*. World Bank, Washington, DC. © World Bank.
<https://openknowledge.worldbank.org/handle/10986/31335>

¹² <https://www.worldbank.org/en/news/press-release/2019/01/15/world-bank-group-announces-50-billion-over-five-years-for-climate-adaptation-and-resilience>



Hotspots report, the South Asia Regional Program for Hydromet, Early Warning and Climate Services for Resilience, etc. to promote and share knowledge, data on climate resilience across the region. In addition, the project's focus on scaling up climate resilient investments and policy reforms in IDA countries aligns with the SAR Climate Change Business Plan and underscores the transformational work IDA is supporting in the region. The Project would contribute to the objective of the SAR Climate Change Business Plan, which is to boost transformational climate action through policy and change investments, specifically by identifying a few transformative/high climate impact activities in SAR focus countries and supporting systematic interventions to identify and prepare those activities.

17. **Finally, CARE builds on a number of global and national climate adaptation initiatives that supports the region to achieve desired adaptation outcomes at the national and sub-national level.** The common adaptation interests are reflected in their national priorities, as highlighted in their national communications, National Adaptation Programme of Action (NAPAs), National Adaptation Plans (NAPs), and NDCs and existing regional and sub-regional initiatives (see Annex 2). Some of the other key global and regional initiatives the project will build upon include: i) Global Commission on Adaptation (GCA); ii) Coalition of Finance Ministers; iii) SAARC Roadmap on regional cooperation for climate change adaptation; iv) and the World Bank's flagship reports including "South Asia's Hotspots: Impacts of Temperature and Precipitation Changes on Living Standards"¹³ and "Lifelines – The Resilient Infrastructure Opportunity"¹⁴.

II. PROJECT DESCRIPTION

A. Project Development Objective

PDO Statement

The objective of the Project is to contribute to an enabling environment for climate resilience policies and investments in select sectors and countries in South Asia.

PDO Level Indicators

18. **To achieve the PDO, the following PDO-level indicators are proposed:**

- Improved access to regional climate information and analytics for climate-informed decision making in select sectors;
- National-level decision-making and planning tools are better climate risk informed in select sectors;
- Regional climate resilience guidelines for select sectors incorporated into national standards;
- Sectoral investments supported to include climate risks and resilient design in select sectors; and
- Institutional capacities within select sectors strengthened to undertake climate informed policies and planning.

¹³ Mani, Muthukumara; Bandyopadhyay, Sushenjit; Chonabayashi, Shun; Markandya, Anil; Mosier, Thomas. 2018. South Asia's Hotspots: Impacts of Temperature and Precipitation Changes on Living Standards. South Asia Development Matters; Washington, DC: World Bank.

¹⁴ Hallegatte, Stephane; Rentschler, Jun; Rozenberg, Julie, 2019. Lifelines – The Resilient Infrastructure Opportunity. Washington DC; The World Bank



B. Project Components

19. The project aims to achieve the PDO through three components viz.:
 - a. Promoting Evidence-based Climate Smart Decision-Making
 - b. Enhancing Policies, Standards and Capacities for Climate Resilient Development
 - c. Project Management and Specialized Support



20. **Component 1: Promoting Evidence-based Climate Smart Decision Making (US\$10 million).** This component will develop platforms to enhance access to data for resilient planning and investments, including hazard and climate variability data, climate impact knowledge and other sector-specific data.
- **Sub-Component 1.1: Expanding SAR Regional Resilience Data and Analytics Services (RDAS) (US\$3.5 million).** This sub-component will support the development of a public domain data and analytics platform, namely the Regional Resilience Data and Analytics Service (RDAS) Platform to make climate-informed policy, planning and investment decisions for climate resilient development.
 - **Sub-component 1.2: Strengthening national-level sectoral decision support systems (DSS) for the Participating countries (US\$6 million).** The sub-component will provide support to enable the Participating Countries in developing or enhancing their respective interactive decision support system (DSS) platforms at national and sub-national levels to enable decision making within ministries responsible for finance, planning, climate smart agriculture, integrated water resource management and transport; and (ii) support investments in IT infrastructure and appropriate online hosting (e.g. cloud services) where needed for such platforms. For e.g. for Bangladesh this will also include supporting the development of a water data portal; for Nepal, this will also include supporting (i) the integration of climate hazard information for resilient rural/local roads network and (ii) in the roll out of agriculture-specific information systems; for Pakistan, this will also include supporting the development of decision support systems to track climate resilient projects through incorporation of climate indicators.
 - **Subcomponent 1.3: Trainings for Climate-Informed Decision-Making (US\$0.5 million).** This sub-component will support policymakers and other users (i) within the South Asia region, in utilizing the data and RDAS platform for climate-informed planning and decision-making through the provision of trainings at the regional level; (ii) within the Participating Countries in utilizing the data and DSS platforms for climate-informed planning and decision-making in various sectors through the provision of trainings at the national and sub-national levels
21. **Component 2: Enhancing Policies, Standards and Capacities for Climate Resilient Development (US\$24 million).**
- **Sub-component 2.1: Advisory services for policy and investment interventions (US\$5 million).** This sub-component will support the carrying out of (i) a comprehensive policy, institutional and public expenditure analysis for climate and disaster risk informed investment and the creation of a coordination, investment appraisal and approval framework and (ii) Conduct district-level climate vulnerability assessments within the Participating Countries.
 - **This sub-component will support the Participating Countries, to develop and/or strengthen evidence-based resilient policies, strategies and action/investment plans within the Participating Countries for mainstreaming climate resilience** within key ministries handling Finance, Planning, and select technical line ministers (climate smart agriculture, livestock, water, and transport); through interventions that include but are not limited to (i) provide evidence-based policy analysis to integrate climate risk management in sector policies and action plans; (ii) develop investment plans for scaling-up existing structural climate resilient measures; (iii) strengthen strategic and policy frameworks for climate smart agriculture and integrated water resources management; (iv) integrate gender-informed resilience into



sector- strategies; and (viii) provide policy and knowledge support to implement select adaptation priorities under the NDCs. For example,

- For Pakistan, this shall include interventions to (i) develop and/or strengthen strategic and policy frameworks for climate smart agriculture and integrated water resources management (ii) Formulate climate indicators to incorporate in the planning policy and documents; (iii) develop a climate-change financing framework implementation plan; and (iv) Support development of a ground water strategy for Sindh in drought affected areas.
 - For Bangladesh, this shall include interventions to, (i) develop and/or strengthen strategic and policy frameworks for climate smart agriculture and integrated water resources; (ii) support the roll-out of existing Develop Bangladesh Climate Fiscal Framework (BCFF) implementation plan; and (iii) Provide climate risk analysis for water accounting.
 - For Nepal, this shall include interventions to, (i) develop and/or strengthen strategic and policy frameworks for climate smart agriculture and integrated water resources management; (ii) develop an implementation plan to roll out the climate change financing framework in select provinces; (iii) support the integration/ operationalization of the recently updated Climate Change Policy 2019, development of NAP and LAPAs, into developing resilient road networks, slope stabilization and protection measures; and (iv) help develop scale-up plan for advanced bio-engineering slope stabilization solutions.
- **Sub-component 2.2: Promoting Climate Resilient Design and Standards for South Asia Region (US\$2 million):** This sub-component will facilitate (i) the development of regional climate-resilient guidelines in the priority sectors of finance, transport, water, agriculture; and (ii) strengthen national and/or sectoral standards to account for factors like climate conditions and vulnerabilities, geophysical hazards, gender-considerations, environmental and social trends, local practices and priority areas.
 - **Sub-component 2.3: Implementation Support to Climate-Risk Management Solutions for Participating Countries (US\$14 million):** This sub-component will support capacity building and technical support across the Participating Countries by: (i) Provide Training on climate-resilience adaptive policy making, design and solutions in priority sectors (transport, water and agriculture) at the sub-national and local government levels and instituting train-the trainer programs to disseminate climate-smart agriculture technologies (ii) provide technical assistance for (i) enabling the adoption of technology solutions; (ii) supporting the creation of climate smart institutions, governance and finance; (iii) support climate research and development through collaboration with academic institutions; (iv) supporting ministries responsible for finance and planning on analytics for macro-level and fiscal risk management; and (v) assisting the Participating Countries in developing disaster risk financing strategies including supporting accreditation process for its national/sub-national entities.
 - **Sub-Component 2.4: Innovation for Climate Adaptation and Resilience (US\$3 million):** This sub-component will support innovative and disruptive technology solutions for resilience through the provision of Sub-grants within the South Asia Region
22. **Component 3: Project Management and Specialized Support (US\$5.5 million):** The component will provide assistance for (i) the establishment and operation of the RIMES PIU; (ii) Project implementation



and supervision of Component 1 of the Project, (iii) monitoring and evaluation; (iv) Training; (v) carrying out of relevant studies for climate impacts and related interventions, inclusive and gendered practices in climate resilient planning and investments; and (vi) financing of Incremental Operating Costs.

- 23. The component will also provide assistance for (i) the establishment and operation of the ADPC PIU; (ii) Project implementation and supervision of Part 2 of the Project, (iii) monitoring and evaluation; (iv) Training for ADPC staff ; (v) financing of Incremental Operating Costs; and (vii) and all costs pertaining to the implementation of the PARCC TF Grant.

Table 1: Project Cost Summary

COMPONENT		COST (US\$ million)
Component 1 Promoting Evidence-based Climate Smart Decision Making	1.1 Expanding SAR Regional Resilience Data and Analytics Services	3.5
	1.2 Strengthening national level sectoral DSSs	6.0
	1.3 Supporting Climate-Informed Decision-Making	0.5
Sub-total		10.0
Component 2 Enhancing Policies, Standards and Capacities for Climate Resilient Development	2.1 Advisory services for policy and investment interventions	5.0
	2.2 Promoting Climate Resilient Design and Standards	2.0
	2.3 Implementation Support to Climate-Risk Management Solutions	14.0
	2.4 Innovation for Climate Adaptation and Resilience	3.0 (PARCC TF)
Sub-total		24.0
Component 3	Project Management and Specialized Support	5.5
Total Project Cost		39.5

C. Project Beneficiaries

- 24. **All SAR countries will benefit from access to improved data and knowledge generated, and guidelines developed under Component 1 at the regional level.** All SAR countries will be invited to join the regional dialogue focusing on ministries of finance, planning and climate. The direct support on policy reforms, institutional capacity building, and operations support is focused on the three countries Bangladesh, Nepal and Pakistan. This distinction is primarily driven by the need to channel limited project resources to up to three highly climate vulnerable IDA countries that would require greater support on policy and capacity building to integrate climate resilience in their development agenda to preserve their development gains.
- 25. **The project is supporting a “whole-of-government¹⁵” approach on climate resilience with an initial thematic focus on three sectors.** The project will work closely with cross cutting sectors i.e. Ministries of Finance and Planning in each country as well as thematic sectors i.e. the Ministries of Agriculture, Livestock, Water and Transport to address challenges for following a climate resilient approach in development. National Hydromet Agencies (NHMSs) and National Disaster Management Organizations (NDMOs) will also play a role, particularly in longer term climate outlook and analytics as well as risk information for Hydrometeorological events. The beneficiary departments may be modified depending on emerging needs and resources.

¹⁵ World Bank. 2019. The World Bank Group Action Plan on Climate Change Adaptation and Resilience., Washington, DC: World Bank



Table 2: Potential Beneficiary Departments / Ministries

Country	Departments
Nepal	National Planning Commission; Ministry of Agriculture and Livestock Development; Ministry of Forests and Environment; Ministry of Energy, Water Resources and Irrigation; Ministry of Physical Infrastructure and Transport (including the Department of Road, Department of Transport Management, Road Board Nepal); Department of Local Infrastructure; National Disaster Risk Reduction and Management Authority; Ministry of Finance; Department Hydrology and Meteorology.
Pakistan	Ministry of Planning, Development and Reforms; Ministry of Climate Change; National Disaster Management Authority; Ministry of Climate Change; Ministry of National Food Security and Research; Pakistan Agricultural Research Council; Ministry of Finance; Pakistan Meteorology Department; Department of Agriculture, the Government of Punjab; Sindh Irrigation Department, Provincial Planning and Development Departments / Boards
Bangladesh	Bangladesh Planning Commission; Local Government Engineering Department; Ministry of Road Transport and Bridges (including Dhaka Transport Coordination Authority, Bangladesh Road Transport Authority, Bangladesh Road Transport Corporation, Roads and Highways Department, Bangladesh Bridge Authority); Ministry of Environment, Forests and Climate Change; Ministry of Water Resources; Ministry of Disaster Management and Relief; Bangladesh Agriculture Research Council; Department of Agriculture Extension; Department of Livestock Services; Ministry of Finance; Bangladesh Met Department.

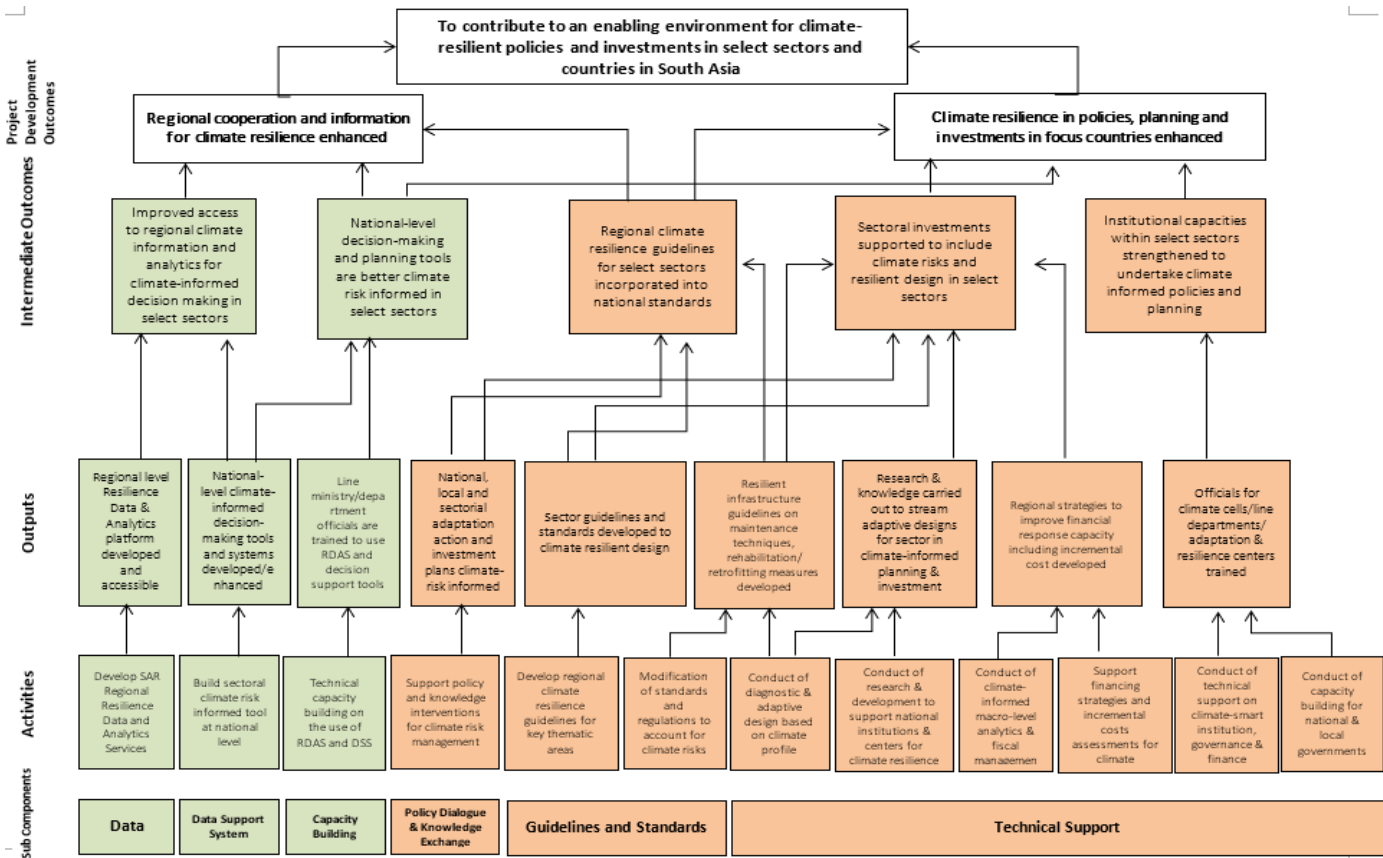
D. Results Chain

26. **The premise underpinning the Project’s theory of change (TOC) is that improved availability of climate data and analytics alongside relevant guidelines, tools and capacities for key sectors, will enable the governments in South Asia to take climate-risk informed decisions for policy making, planning and investments.** To achieve this, the proposed project will contribute to an enabling environment to enhance the capacity of the government stakeholders in priority sectors through analytics and action planning. Enhanced awareness, knowledge, as well as long-term commitment is required to institutionalize the new practice for policy making, planning and investments. Three critical assumptions have been considered (a) the sector counterparts from the governments are committed to make climate-informed decisions for their sector-specific policy making, planning and investments, (b) relevant counterparts, particularly Government counterparts, will agree and cooperate for data access and sharing beyond their current domain, and (c) beneficiary Governments are committed to putting own resources to support climate resilience including expertise and have full ownership of the agenda.

Figure 1: Theory of Change¹⁶

Problem Statement: Despite the transboundary nature of weather, the South Asia region lacks regional collaboration to improve the understanding of changing weather patterns, devise effective policy reform strategies and foster the knowledge and technology required to scale up climate adaptation. climate finance and strenathen resilience.

¹⁶ The outputs illustrated in the TOC are the key outputs and not an exhaustive list of the project outputs.



F. Lessons Learned and Reflected in the Project Design

27. **Transformative interventions should build upon existing government priorities, programs and commitments.** Countries have strong existing tools and processes with the NDCs and those should be used as the primary vehicle for generating commitments and priorities. The project’s interventions, including the decision support systems, will build upon existing systems and priority will be given to sectors and commitments outlined in the country’s NDCs.
28. **Regional projects in a less-integrated region should take a phased approach. Regional projects on climate involve a multi-country, multi-sectoral approach.** This becomes a challenge in a less-integrated but vast region like South Asia. Hence, early successes need to be achieved before scale-up to additional but equally vulnerable countries and sectors in the region. Also, as demonstrated by regional projects in Africa, e.g., West Africa Coastal Areas Management Program (WACA), substantial ground work is required for gap identification, awareness building and an inclusive prioritization process, using technical assistance, before rolling out investment programs.
29. **Local-level data and analytics is key to climate-informed planning and investments.** The need for availability of downscaled information is critical for addressing appropriate level of climate risks in designs and investments. This has also been highlighted in the Lifelines Report, Hotspots Report, and the gaps identified in the existing data platforms. The project’s data platform and DSS aims to provide the local



level data to sectors in the region.

30. **Institutionalization of project activities is key to ensure the sustainability of project outcomes.** To ensure sustainability of activities it is essential to have a demand-based approach. The project has developed an elaborate engagement strategy during the design stage for including key stakeholders, particularly potential beneficiary departments for building on existing government policy frameworks and programs. This allows activities to be anchored in the correct institutions with greater ownership and commitment for both implementation as well as commitment beyond the project duration leading to sustainability of investments.
31. **Coordination between departments and Implementing Agencies.** While implementing complex projects with multiple departments and implementing agencies, coordination is critical for success. The project has created a mechanism of Sector Focal Points from beneficiary departments in each country led by Ministries with strong convening power to allow for better information sharing, coordination and cooperation during implementation. Being inter-governmental organizations, ADPC and RIMES will use their existing formal mechanisms for coordination and implementation with departments and line ministries. On the implementing agencies side, a coordination working group mechanism will be in place which would allow for synergies between both implementing agencies.

III. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

32. **The project will be implemented by two regional institutions** - the Asian Disaster Preparedness Center (ADPC) and the Regional Integrated Multi-Hazard Early Warning System (RIMES). While RIMES will implement Component 1, ADPC will implement Component 2. The two organizations will receive IDA Grants for Regional Institutions based on the eligibility criteria. They were selected after a detailed technical and fiduciary assessment.
33. **The Regional Integrated Multi-Hazard Early Warning System for Africa and Asia (RIMES)** is an intergovernmental institution based in Thailand, comprising of 21 Member States from Africa and Asia and supported by 27 collaborating countries. RIMES caters to differential needs and demands of its Member States by enhancing capacities for end-to-end multi-hazard early warning. RIMES currently provides the following services to its member countries: Hazard monitoring, detection, analysis, prediction, and forecasting, risk assessment; potential impact analysis; generation of tailored risk information at different time scales to aid decision-making. RIMES also has cooperation agreements with SAR countries for sharing of weather and climate data, which provides it with the unique advantage of engaging with all NHMS in SAR and as well as the ability to use national level data to construct a regional perspective.
34. **Asian Disaster Preparedness Center (ADPC)** is an intergovernmental organization that aims to build resilience of people and institutions to disasters and climate change by supporting countries in building the capacity of their systems and institutions. The organization has a strong track record for collaborating with countries in the South Asia Region to deliver comprehensive technical services within the area of climate adaptation and resilience. ADPC's Climate Resilience department is well aligned with CARE as it



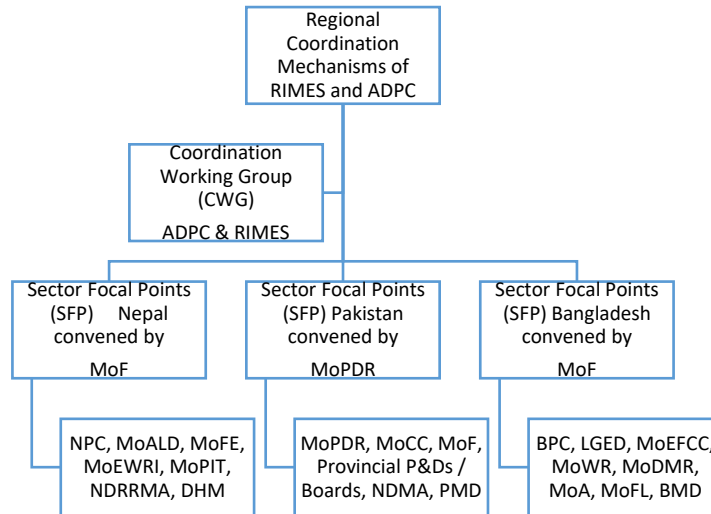
focuses on the development of climate risk information, tools, techniques, and systems to be used in risk management and climate change adaptation plans in multiple sectors. It also works on mainstreaming climate resilience into public investments and planning.

35. **Rationale for selection, strengths and challenges:** Considering the limited number of regional organizations in South Asia, two organizations come with adequate capacity, already established networks, access to member states and proven ability to navigate and work in client countries, and credibility with the clients. Since there are no corresponding eligible regional organizations for each thematic area, and there is a need to maintain flexibility based on country-demand for certain priority sectors, it was imperative that the eligible organizations are able to provide cross-cutting technical support. The selected organizations possess significant technical strength in climate data analytics, mainstreaming and policy dialogue and experience of working on World Bank projects in the region. The two organizations also have established experience working in the three focus countries and solid networks in country. There are recognized challenges such as limited sector-specific expertise, size of operating budgets and leveraging power that would require appropriate support from the Bank team including GPs during preparation and implementation.
36. The following outlines proposed implementation and coordination mechanisms for the project:
- a) **Project Implementation Units:** The Project will have two Project Implementation Units (PIUs) - the Regional Integrated Multi-Hazard Early Warning System for Africa and Asia (RIMES) and Asia Disaster Preparedness Center (ADPC). Each PIU will utilize their respective country units led by Country Coordinators and comprising of sector specialists for implementation of CARE activities in Bangladesh, Nepal and Pakistan. The PIUs would coordinate with respective Sector Focal Points (SFP) in each beneficiary department in all three countries for implementation of project activities and would present progress in coordination meetings convened under the national coordination mechanism explained below.
 - b) **Implementing agencies level coordination:** A Project level Coordination Working Group (CWG) consisting of representatives from ADPC and RIMES will be set up to facilitate close coordination and collaboration between the agencies on their respective components and activities. The CWG will meet monthly to discuss progress on activities including an outline of next steps and discuss potential areas for more detailed coordination.
 - c) **National Coordination:** A mechanism for national coordination among beneficiary departments would be established through putting in place Sector Focal Points (SFP) from participating departments in each country, convened by respective Ministries of Finance in Nepal and Bangladesh and Ministry of Planning, Development and Reforms in Pakistan. A coordination meeting would be convened on a bi-annual basis to review progress, assist in removing implementation bottlenecks and avoiding any potential duplication or gaps.
 - d) **Regional Coordination:** The Project will use the existing mechanisms of the intergovernmental implementing agencies for regional coordination, i.e. ADPC's Regional Consultative Committee (RCC) mechanism of ADPC and RIMES' Council. RCC mechanism comprises of 26 member countries and includes representatives from Planning departments, respective national Disaster Management organizations and regional partners like SAARC, UN organizations and bilaterals. RIMES' Council, comprising of National Meteorological and Hydrological Services of RIMES Member countries is empowered to make policy decisions, on behalf of governments, concerning regional hydrometeorological data and other activities as endorsed by the Council, including implementation



of CARE. The respective mechanisms will be used by CARE for strategic policy discussions, guidance, annual review of project impact, knowledge sharing, and lessons learnt.

Figure 2: CARE Coordination Architecture



37. **The implementing agencies will work with the World Bank task team to align with and strengthen ongoing work, leverage existing sectoral dialogues and pipeline.** This to ensure that the project is solidly anchored in cross-sectoral collaboration and leveraging the comparative advantages of different World Bank teams. The agencies will work with building client capacity and systems and setting the stage for new and more climate resilient planning and investments. Grant funds will go to the two implementing agencies for them to implement all project activities.

38. **Network of institutions:** A key implementation modality by the two agencies would be building a network of various existing regional and national institutions specializing in knowledge-sharing on, and research relevant to, climate resilience in South Asia. CARE, through the implementing agencies, would attempt to dovetail with relevant policies and institutions at different scales. Examples of these institutions and initiatives are provided in Annex 1.

B. Results Monitoring and Evaluation Arrangements

39. **M&E Plan:** Project monitoring will be carried out regularly, and will include physical and financial progress, intermediate outcomes and development results, compliance with safeguards policies and fiduciary regulations, and third-party validation. In addition to annual questionnaire surveys to monitor implementation progress and achievement of indicators under the results framework, two implementing agencies will carry out an independent impact evaluation study for the responsible activities to assess project results, impacts, and implementation performance at the project’s mid-term review and completion stage. The study will review and analyze the results envisioned and achieved under the project through qualitative analytical methods in accordance with the results framework of the project. The study will also apply a qualitative approach where applicable, annual questionnaire and perception surveys,



focused group discussions, interviews, as appropriate. The mid-term evaluation study will inform lessons learned, assessment on the progress of achievement of indicators, and potential changes in the PDO, targets, and indicators during the mid-term review.

40. **M&E Arrangement:** The two implementing agencies will each assign an operation/monitoring and evaluation specialist who carries out the M&E plan on a daily basis in coordination with country focal points or coordinators and reports to the Project Director/Manager in each agency. Quarterly progress report will be prepared and discussed at the CWG where representatives from two implementing agencies and the World Bank. The adequate budget to maintain the M&E arrangement, to carry out third-party validation and impact evaluation, and provide necessary training for monitoring specialists will be allocated for each implementing agency under Component 3: Project Management and Specialized Support.

C. Sustainability

41. To better optimize available recourses from regional IDA funds, the project will identify and align with existing portfolio and upcoming pipeline and Advisory Services and Analytics (ASA) programs and provide in-depth technical preparation support so that outcome from the project can be effectively utilized to mainstream climate resilient aspects into the project design as well as facilitate country on-going dialogues.
42. **Long-term engagement:** SAR countries will benefit not only from those regional products and policy interventions but also enhancement of their institutional capacities to better respond to the emerging needs for climate resilient policies and investments in future. Given the significance of climate resilience agenda in SAR, some CARE activities may be further scaled up even after five years, subject to country demand and availability of financing. The RIMES Council Meeting in January 2020 including representatives from Governments of Bangladesh, Nepal and Pakistan endorsed a resolution adopting the World Bank CARE project, with commitment to provide sustained support beyond project closing.
43. **Institutional sustainability:** The project will establish a robust implementation and coordination mechanism at both the regional and national level, building on the established networks across South Asia. However, there is a risk of dependency on external expertise and national/sub-national systems may be unable to maintain required technical standards once the project cycle has ended. To mitigate this risk, the project will focus on building institutional capacity, skills and bringing policy level reforms to institutionalize climate-resilience across all relevant sectors at national/sub-national levels. The policy dialogue with planning ministries/commissions would generate client demand for mainstreaming climate resilience across various investments and planning processes.
44. **Financial sustainability:** Recognizing that the capacity of IDA countries and the respective implementing agencies is very limited to assess climate risk, vulnerability and associated incremental costs, and prepare climate resilient design, substantial technical support would be provided to SAR IDA countries to undertake transformation towards climate resilient investments.

IV. PROJECT APPRAISAL SUMMARY



A. Technical and Economic Analysis

45. **The Project’s technical design builds on the country and regional context, best practices, technical analysis, and consultations with government counterparts and broader stakeholders to align with country demands and sector priorities.** The design of the project benefitted through extensive analytical work and technical studies carried out by the Bank and other partners as well as sectoral experts. The technical work has drawn heavily from the “Lifelines Report”, “South Asia’s Hotspots: Impacts of Temperature and Precipitation Changes on Living Standards”, Degrees Turn Down the Heat – Climate Extremes, Regional Impacts, and the case for Resilience, “Effects of climate change on seasonal monsoons in Asia and impact on variability of rainfall in southeast Asia” and 2015 Joint Report on Multilateral Development Banks’ Climate Finance among others. The project has also drawn on technical approaches used under the “West Africa Coastal Areas Management Program (WACA) Program” which is another recent regional program financed through IDA grants in the Africa Region. Nepal, Pakistan and Bangladesh have also submitted NDCs which outline priorities areas and were reviewed along with national policies and plans to inform project design. This was followed by extensive consultations with different sectors, country management and clients. Country consultative workshops with a wide range of national stakeholders were carried out for ascertaining country demand and ownership. Regional level consultations with SAARC, various donors and regional partners through regional coordination mechanisms were also arranged to ensure regional level buy in and cross learning to design solutions for SAR client countries. The overall approach was used to: (i) ensures a system-wide approach, to lay the foundation for support from the Bank and future support from other development partners; and (ii) ensures that the Project can stand alone—that is, its activities and interventions will result in the desired outcomes without being dependent on the support of other development partners but at the same time be complementary in nature.
46. **The economic rationale for this project is strongly supported by the economic analysis conducted as part of the World Bank’s flagship report Lifelines (Hallegatte et al., 2019).** While the nature of the project activities are that of technical assistance and capacity building, they address bottlenecks in decision making processes – and hence have socio-economic benefits that can extend far beyond the sectors covered in the project scope. The analytical tools and capacity that are strengthened by this project will be vital for facilitating comprehensive climate risk assessments, and thus for ensuring the resilience of future investments – not only in the transport, water, and agriculture/livestock sectors, but also in urban planning and beyond.
47. **In Bangladesh, Nepal, and Pakistan, the lack of resilient infrastructure is causing substantial socio-economic costs to households and firms.** The lack of resilience in infrastructure systems not only means that transport and water systems are vulnerable to natural shocks. Even in the absence of natural shocks, non-resilient systems tend to be less reliable, thus imposing significant costs on households and firms. For instance, utilization losses incurred by business in these three countries are estimated to be around US\$3 billion each year (for a breakdown of estimates see **Table 5**). To reduce these significant economic losses associated with unreliable and non-resilient infrastructure systems, governments and utilities need to ensure that infrastructure investments are made resilient.



Table 5: Annual utilization losses incurred by business due to the lack of resilient and reliable transport and water infrastructure (estimates based on Rentschler et al, 2019)¹⁷

	Sector	Annual utilization loss (m 2018 USD) ¹⁸	% of GDP
Bangladesh	Transport	787.8	
	Water	9.2	
	Total	797.0	0.55
Nepal	Transport	107.9	
	Water	2.9	
	Total	110.8	0.57
Pakistan	Transport	1,931.0	
	Water	112.5	
	Total	2,043.5	0.97

48. **For countries in the South Asia region, the incremental cost of making infrastructure investments resilient could be as low as about 3 percent of overall infrastructure investment needs – but only if adequate data and tools are available.**¹⁹ A recent World Bank study²⁰ has estimated that total infrastructure investment needs in the South Asia Region will be between US\$47.6 billion and US\$247 billion per year, where the range depends on socio-economic trends, quality, and spending efficiency. Given that large infrastructure investments will be occurring in these fast-growing economies, it is crucial to ensure that decision making tools are available that can help make these investments resilient to natural shocks in a cost-effective way. The Lifelines report estimates that the extra cost of incorporating resilience in infrastructure designs could be comparably low if data and decision-making tools are available – as low as between 2.9 percent and 3.7 percent of overall infrastructure investment volumes. However, without adequate risk data and tools, investments in infrastructure resilience cannot be targeted and prioritized to where they are needed. Hence, without such decision support systems, this incremental cost could be more than six times higher in the transport sector, and even more in other infrastructure sectors. By strengthening standards and decision-making tools, this project can provide the means to make resilient infrastructure affordable, thus reducing the substantial socioeconomic costs caused by the lack of resilient high-quality infrastructure systems.

49. **This project has the potential to enable more resilient infrastructure investments, which can be shown**

¹⁷ Rentschler, J.; Kornejew, M.; Hallegatte, S.; Braese, J.; Obolensky, M. (2019). *Underutilized Potential: The Business Costs of Unreliable Infrastructure in Developing Countries*. Policy Research working paper. WPS 8899.

<http://documents.worldbank.org/curated/en/336371560797230631/Underutilized-Potential-The-Business-Costs-of-Unreliable-Infrastructure-in-Developing-Countries>

¹⁸ "All GDP figures are expressed as 2018 real GDP.

¹⁹ Hallegatte, S.; Rozenberg, J.; Rentschler, J.; Nicolas, C.; Fox, C. 2019. *Strengthening New Infrastructure Assets: A Cost-Benefit Analysis*. Policy Research working paper WPS 8896.

<http://documents.worldbank.org/curated/en/962751560793977276/Strenghening-New-Infrastructure-Assets-A-Cost-Benefit-Analysis>

²⁰ Fay, M. and J Rozenberg (2018). *Beyond the Gap : How Countries Can Afford the Infrastructure They Need while Protecting the Planet*. Washington DC: World Bank <https://openknowledge.worldbank.org/handle/10986/31291>



to have large economic net-benefits, with a benefit cost ratio of 4 to 1. The economic rationale for this project is strongly supported by the Lifelines report. The report has shown that investments in the resilience of infrastructure systems yields large socio-economic benefits – both in the form of avoided asset losses and avoided impacts on households and firms. For 130 developing countries, the Lifelines report estimates that the net-benefits of investing in the resilience of new infrastructure investments could be about US\$4.2 trillion over the lifetime of these investments. The socio-economic benefits of investing in infrastructure resilience are estimated to exceed costs by a ratio of 4 to 1 – an estimate that applies to countries in the SAR region but is relatively consistent across all regions. These estimates are directly applicable to this project, as they cover the transport and water sectors, as well as key economic sectors that rely on infrastructure services (such as agricultural households and businesses).

50. **This project delivers on several of the core recommendations provided by the economic analysis in the Lifelines report.** More specifically, 1) it makes available the critical analytical resources (data and tools) required by decision makers, 2) it strengthens the technical capacity of decision makers to use these data sources and tools to stress test new investments, and 3) it strengthens the guidelines and standards to ensure that adequate risk assessments become part of standard investment designs and appraisals. Overall, these measures can enable more robust and risk-informed decision making in the infrastructure and economic sectors covered by this project – but even beyond (e.g. hazard data is critical for risk assessments in other sectors, such as urban planning or electricity systems).
51. **Overall, adequate data and analytical tools are public goods that are indispensable for enabling economically sound and resilient investments and development planning.** The estimates from the economic analysis suggest strongly that data and decision-making tools are economically sound investments – even when only considering specific infrastructure sectors in the client countries. However, it is important to note that activities supported by the project – such as the RDAS – will be available to all eight countries in the SAR region and can thus support the integration of resilience planning in countries and sectors that extend well beyond the project scope.

B. Fiduciary

(i) Financial Management

52. **Both project implementing entities (ADPC and RIMES) have proper functioning financial management systems in place.** The implementing entities have documented control framework in the form of regulations, manuals and guidelines, and are in the process of updating those. Annual external audits are carried out by independent auditors who have expressed an unqualified audit opinion on the last audited financial statements of RIMES and ADPC. Both the entities have been implementing projects funded by donors, governments and NGOs, and are conversant with the fiduciary requirements of the donors. However, they have not been an implementing entity of a Bank funded project, and mainly worked as consultant or beneficiary entities on other Bank funded projects. Some activities under Component 1 and 2 will be implemented by the existing staff/experts of ADPC and RIMES. These activities and associated costs will be identified in the annual work plan of both implementing entities. It has been agreed that



ADPC and RIMES can spend up to 15% of the total component 1 and 2 allocation on salaries and associated operating expenses for the program activities they will implement employing their existing staff/experts.

53. **The financial management systems of ADPC and RIMES are capable of accounting and reporting on the use of funds by project and donor.** Both the entities use fund/project accounting where receipts and expenditure related to a fund/project are separately accounted in accordance with applicable regulations and restrictions. ADPC uses *SunSystems* software for accounting that is capable of segregating accounting transactions and generating financial reports by project, by donor or any other relevant variable. RIMES maintain books of accounts on MS Excel and manually prepares financial reports of the entity and the projects implemented. ADPC prepares its annual financial statements in accordance with ADPC accounting policies and uses Thai Bhat as the reporting currency but is in the process of adopting US Dollar as the reporting currency. RIMES follow Thai Financial Reporting Standards to prepare its annual financial statements and the figures are reported in US Dollars.
54. **During the FM Assessment, following areas to strengthen the FM systems of the entities were agreed:** (i) RIMES to get its accounting software under development to be certified by an independent techno-functional expert; (ii) within six months of project effectiveness, RIMES to hire a consulting firm to develop and support implementation of an institutional development plan. The assignment will include review and redesign of governance and business process as well as development and implementation of the detailed policies and procedures manuals; and (iii) by December 31, 2020, ADPC to finalize and adopt the updated manuals for FM, Procurement, HR and Administration. During 2022, ADPC to employ an independent consultant to conduct a detailed assessment of the implementation of the updated manuals. Overall, the detailed policies, procedures and internal controls prescribed in the RIMES and ADPC Financial Manuals and other relevant manuals (e.g., Administration Manual) will be used as the applicable financial management framework for the CARE project.
55. **The entities will use their existing financial management systems for the project.** The control framework of ADPC and RIMES in the form of manuals and SOPs would apply, in addition to the Projects Operations Manual. Disbursements will be SOE based and annual audits will be carried out by reputable audit firms in accordance with the TORs agreed with the Bank. Please refer to Annex 5 for the project financial management arrangements.

(ii) Procurement

56. **Procurement for the Project will be carried out in accordance with the World Bank's Procurement Regulations for IPF Borrowers, dated July 2016, revised November 2017 and August 2018, hereafter referred to as "Procurement Regulations", and the provisions of the Grant Agreements.** In addition, the Project will also follow the Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants, Dated October 15, 2006 and Revised in January 2011 and July 2016. All expenditures in the category of incremental operating costs may follow the implementing agencies' procedures acceptable to the Bank.
57. **Implementing Agencies – RIMES and ADPC will be responsible to carry out all the procurement activities and contract management under the Project as defined in the Components and detailed in their respective Procurement Plans, including those contracts for activities to be carried out in the beneficiary**



countries. The agencies will nominate a list of staff to be part to the PIUs, dedicated to implementing the Project. Salaries of such staff will be financed by the Project as part of the Incremental Operating Cost to be defined in the Grant Agreement. The agencies may engage additional personnel as individual consultants depending on the needs for other expertise to manage the implementation.

- 58. **Procurement activities and use of STEP.** Contracts to be procured will be in small or medium size for employment of individual consultants, establishment of data centers, computer software, office equipment and furniture, hiring of firms for provision of various types of consulting and non- consulting services in the field of climate change related policy studies and planning, events managing, etc. The agencies have no e-procurement system yet but will use the Bank’s online tool Systematic Tracking of Exchanges in Procurement (STEP).
- 59. **Project Procurement Strategy Development (PPSD) and Procurement Plan.** As per the requirement of the Procurement Regulations, a PPSD has been developed by ADPC and RIMES respectively. A short summary of the PPSDs is included in Annex 6. The goods and services required for the Project are considered of common nature and generally available from the market of Thailand, where ADPC and RIMES are located with their headquarters, and the markets of the beneficiary counties. Based on the PPSD, each of them has prepared and agreed with the Bank on a Procurement Plan for the initial 18 months of implementation. The Plans will be published at the Bank’s website once the negotiations of the Project are completed. The Procurement Plans will set out the selection methods and Bank’s review requirements to be followed by the agencies during Project implementation in the procurement of goods, works, non-consulting and consulting services financed by the Bank. The Procurement Plans will be updated at least annually with the Bank’s prior agreement. A General Procurement Notice of the Project will be published in the UNDB online and the Bank’s website before any specific procurement activities are advertised/launched.
- 60. **Summary of Procurement Assessment and Arrangement:** A summary of the Bank’s assessment of the implementing agencies’ procurement capacity, procurement risk rating and agreed mitigation measures, is provided in Annex 6. Bank’s assessment of the agencies’ procurement manuals, applicable thresholds for Bank prior review, as well as the thresholds for selection methods are also provided in Annex 6.

C. Legal Operational Policies

	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Areas OP 7.60	No

D. Environmental and Social

- 61. **The proposed project is limited to Technical Assistance and Advisory Services that supports the development of data and analytic services, decision support systems, regional policies and guidelines, advisory services, knowledge sharing and capacity strengthening for climate resiliency of regional institutions and participating SAR countries.** It will not support preparation of future investments such as feasibility studies, detailed designs, bidding documents, etc. nor will it finance any civil works. By its very



nature, the project is expected to have positive impacts and benefits to the region and to the participating countries as it helps develop regional capacity, policies, guidelines and standards that promote and support climate-resilient planning and development. It will also promote knowledge sharing and best practices on climate-resilient planning and investment approaches. The likely environmental risks and impacts from project activities, if any, will be indirect, downstream, and outside the scope of the project and will be related to designing and implementing priority climate-resilient infrastructure/investments, which will be processed and evaluated separately from this project. If downstream investments are financed by the World Bank, the said investments will be processed and approved according to Bank policies and requirements. The indirect and downstream risk, however, lies with other investments that will not be financed by the Bank and for which the Bank will not have any influence or leverage over the E&S standards that apply to them.

62. **A screening of the list of activities to be supported by the project (see Annex 2) confirmed the absence of any direct risks and impacts of CARE.** The screening also confirmed the potential presence of indirect and downstream risks related to investments that will be implemented by the participating countries outside the scope of this project. As a standard operating procedure in the project, every proposed activity/TA will be subjected to a detailed environmental and social screening to assess any E&S risks and impacts and, where relevant, E&S risk assessment and management will be integrated into the TORs of various activities. TORs, work plans, guidelines, training programs and other documents to be supported by the project will be prepared and developed to be in compliance with the ESF.
63. **A Stakeholder Engagement Plan has been developed during preparation to promote broad, inclusive stakeholder engagement and participation at all critical phases of the TA.** Labor Management Procedures for direct workers have been embedded in the Environmental and Social Commitment Plan, which has also been prepared by the Implementing Agencies.
64. **The two regional organizations implementing CARE, ADPC and RIMES (the former in particular), have an established track record of working with a diverse set of partners, from the United Nations to government agencies and line ministries, multi- and bilateral donors, community-based organizations, universities, technical agencies, international non-governmental agencies, and private sector companies.** These types of partnership networks, and the entities they contain, have been mapped as part of the development of a Stakeholder Engagement Plan (SEP) for the project. The SEP has been prepared drawing on the latest understanding of the views, needs and interests of those who have a stake in, or otherwise stand to gain from, climate resilience mainstreaming at multiple levels, especially in the focal countries of Bangladesh, Nepal and Pakistan. Finally, both ADPC and RIMES have some kind of standing grievance redress mechanisms, which have been assessed during preparation and found to be suitable to serve as an overall project-specific GRM for CARE.
65. **Technical staffs with ADPC and RIMES have been mobilized during project preparation to develop the SEP and ESCP.** The existing staffing of ADPC and RIMES will be beefed up to help screen the activities, integrate E&S measures into TORs and activities and implement the SEP and ESCP.



E. Gender

66. **Gender gap:** Analytical work and literature^[1] shows that during climate-related disasters, women face additional risks, due in large part to gender inequities that result in women bearing the disproportional brunt of disaster impacts.^[2] The *Enhanced Lima work programme on gender and its gender action plan*, adopted at COP25, specifically priority D: *gender-responsive implementation and means of implementation*, aims to ensure the respect, promotion and consideration of gender equality. CARE focus countries have made considerable efforts in developing their Climate Change Gender Action Plans (ccGAPs²¹), which express their commitment to action in advancing gender equality and realizing women's and men's equal human rights. However, a gender-responsive implementation of the action plans is not happening on the ground due to the lack of contextualized and sector-specific data analytics on gender in climate change. There is demand from policymakers in all three focus countries to have access to comprehensive and gender-disaggregated data analytics, which will inform the decision and policy-making process to improve women's voice and agency. This gap was also recognized by SAR governments participating in the Gender Equality Working Group of the Asia-Pacific Ministerial Conference on Disaster Risk Reduction (APMCDRR), at the ADPC's Regional Consultative Committee on Disaster Risk Management.
67. **Gender Action:** Given the nature of CARE's support on climate-resilient policies and standards (Component 2), there is a clear opportunity to help the focus countries translate the COP25 commitments under the *Enhanced Lima work programme on gender*, and the national ccGAP commitments into sectoral strategies and investment plans, to address climate-related impacts with a clear, gender-informed approach. CARE will support generating gender-disaggregated data analytics on gender differences such as vulnerabilities and gender-disaggregated hotspots, which can be later incorporated into the new and existing sectoral decision support tools developed under CARE. This will help make the decision and policy making process of climate change adaptation gender-responsive. In addition, these new sets of gender-disaggregated data analytics would inform the design of substantial and innovative gender activities as part of South Asia DRM and Climate Change portfolio in the future. To support, CARE will conduct analytical works in priority sectors in partnership with regional/local universities, academic institutions, as well as CSOs to identify effective opportunities and practical actions that accelerate gender-sensitive approach for climate resilience in priority sectors (transport, agriculture and water). Furthermore, CARE will support the governments of Pakistan, Bangladesh and Nepal in developing sector-specific climate-resilience strategies and guidelines to enhance gender-informed resilience in priority sectors when the gender-disaggregated data analytics becomes available. These strategies and guidelines will be reviewed to ensure strategic alignment with ccGAPs while ensuring practical measures to facilitate implementation on the ground.

^[1] Shockwave (World Bank, 2016) as an example.

^[2] Moreover, women are often discouraged from learning coping strategies and lifesaving skills, such as how to climb trees or swim. Both factors put them at a disadvantage when floods hit. Often women are not permitted to evacuate their homes without consent from their husbands or elder men in their families or communities. Gendered cultural codes of dress may inhibit their mobility during crises, resulting in higher disproportionate mortality during many disasters. During such events, women and girls are frequently subjected to intimidation, gender-based violence

²¹ The ccGAPs build on a country's national climate change policy, plan or strategy and delve into gender-specific issues by priority sector and creating innovation action plans to enhance mitigation, adaptation and resilience-building efforts for women and men in every community.



68. **Gender Indicator:** The Project can increase availability and access to gender-disaggregated data by monitoring the: *percentage of gender-disaggregated data analytics developed that contributes to narrow the gender gap in climate change vulnerability.*

F. Citizen Engagement

69. The Citizen Engagement approach of the project includes capacity building of community-based organizations to plan, design and manage climate risk-informed community infrastructure; consultations with stakeholders during preparation and implementation of the project; and a grievance redress mechanism. More specifically, CARE will support the capacity building of community-based organizations, particularly sector-oriented sub-groups of cooperative societies and common-interest groups (e.g. farming societies, water cooperatives, women self-help groups, etc.) to: i) address the knowledge gap of communities to advance climate resilience at the local level; and ii) plan, design and manage resilient community infrastructure (e.g. irrigation facilities, rural access roads, water storages, etc.) with enhanced safety targets, in line with the local adaptation plans (LAPs). This will accelerate the implementation of government-led climate resilient policies and plans at ground level and help the communities cope with climate risks as part of their daily lives. These activities are detailed in the Stakeholder Engagement Plan (SEP) and progress on these activities will be monitored through a dedicated beneficiary feedback indicator that counts the number of trained community-based organizations.
70. Specifically, the Bank carried out country-level consultations with a number of stakeholders in Bangladesh, Nepal and Pakistan including over 19 civil society organizations as well as relevant line ministries and other stakeholders. The objectives of these consultations were to share key aspects of CARE, gather suggestions and finetune the design of the Project in line with the PDO.

V. GRIEVANCE REDRESS SERVICES

71. **Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS).** The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit <http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service>. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

VI. KEY RISKS



72. **The overall risk of the project is rated Moderate.** The main risks to the project are political and governance, fiduciary and stakeholder risk, which are considered substantial. Institutional capacity and technical design risk are both considered moderate.
73. **Political and governance risks are rated substantial:** A regional program in South Asia can face complex coordination and cooperation challenges due to the political economy risks. Despite common climate challenges, common heritage, history, linguistic, cultural and social practices shared by these nations, South Asia is the least integrated region in the world²². Regional politics, poor inter-state relations based on deep-rooted and historic differences and the consequent trust deficit have arrested cooperation in matters of policy and development. The implementation of SAARC's various agreements and institutional mechanisms has been hampered by poor commitment to regional cooperation and a preference for bilateralism.²³ This risk is expected to be mitigated by having inter-governmental regional entities lead implementation and use apolitical regional technical mechanisms to foster knowledge sharing, dialogue events and learning workshops to enhance communication flow among countries for greater cooperation for resilience.
74. **Risk related to institutional capacity is rated moderate:** The capacity of IDA countries and the respective implementing agencies to prepare and implement climate resilient investments is limited. This could pose risk to effective preparation and implementation of climate resilient projects and efficient use of available financing. The proposed institutional arrangement will help mitigate this risk by making available to the countries all the necessary data and expertise at a national and regional level. This will help all focus countries efficiently access the same information and experts that can help downscale and translate the information for a country and sector specific project. Networking of institutions approach through the regional and national organizations would also provide additional technical back stopping for implementing agencies as well as beneficiary departments within focus countries.
75. **The project fiduciary risk is rated substantial:** The Bank has assessed both agencies' capacity to carry out the procurement under the Project. Overall, their capacity and internal controls are considered adequate, provided the agreed mitigation measures are implemented. Both FM and Procurement risk is substantial
76. Procurement risk assessment of the Project and its monitoring and updating during implementation is recorded through P-RAMS tool of the Bank's operational portal. Both have undertaken Bank-funded consultancy assignments but do not have prior experience in organizing and managing implementation of a project of such size as Borrower/Recipient in relation to the Bank. Being international organizations, they do not follow the public procurement law of Thailand where their headquarters are located. They recently strengthened their procurement and contract management systems through adopting institutional Financial Regulations and Procurement Manual. The associated risks will be mitigated through incorporating, based on the deviations identified, a set of conditions as agreed with RIMES and ADPC, in their Procurement Plan respectively.
77. Though both the entities have been implementing projects funded by donors, governments, and NGOs, they have not been an implementing entity of a Bank-funded project. Therefore, the transaction (SOE)

²² <https://www.worldbank.org/en/programs/south-asia-regional-integration>

²³ Kher, P. (2012). Political economy of regional integration in South Asia. UNCTAD Background Paper No. RVC5, Geneva: UNCTAD. Working Paper Series on Regional Economic Integration No. 54



based disbursement is proposed where implementing entities will report transaction wise details for expenditure documentation. Both implementing entities need to develop elaborate internal control frameworks. ADPC is finalizing detailed manuals for financial management, procurement, HR, and the administration that will be applicable from 2021. The project will support RIMES to review and redesign its governance and business process as well as the development and implementation of the detailed policies and procedures manuals. To avoid the risk of charging the recurrent cost to the grant proceeds, the Bank will review the annual work and cash plans of the entities. The staff cost will be charged only for the actual time spent on the project based on monthly timesheets.

78. **Stakeholder risk is considered substantial:** The Project could face concerns from various stakeholders, including government agencies/ministries, sub-national entities regarding selection of activities/location as a result of resource and needs-based prioritization private sector and local communities. Extensive consultations and communication with all relevant stakeholders will be undertaken during preparation and implementation.
79. **Technical design risk is considered moderate:** The technical design involves implementation across three countries and three key sectors. The implementing agencies, clients and the Bank have limited experience in similarly regional operations. The design is also ring-fenced by the requirements of a relatively new regional IDA Window. These factors can pose risk to the achievement of the objective. The project is thus mitigating these risks through a phased implementation approach, using a rolling work plan that will be reviewed annually by Sector Focal Points and Convening Ministries through national coordination meetings which would also focus on incremental progress. The implementation would involve extensive consultations with national counterparts on evolving national priorities to create ownership and support a demand-based approach.



VII. RESULTS FRAMEWORK AND MONITORING

Results Framework

COUNTRY: South Asia

Climate Adaptation and Resilience for South Asia

Project Development Objectives(s)

To contribute to an enabling environment for climate-resilient policies and investments in select sectors and countries in South Asia.

Project Development Objective Indicators

Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
Regional cooperation and information for climate resilience enhanced							
Improved access to regional climate information and analytics for climate-informed decision making in select sectors (score-based) (Number)		0.00	1.00	3.00	3.00	4.00	5.00
National-level decision-making and planning tools are better climate risk informed in select sectors (Yes/No)		No	No	No	No	Yes	Yes
Climate resilience in policies, planning and investments in focus countries enhanced							
Regional climate resilience guidelines for select sectors incorporated into national standards (Yes/No)		No	No	No	Yes	Yes	Yes
Sectoral investments		0.00	0.00	1.00	2.00	4.00	5.00



Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
supported to include climate risks and resilient design in select sectors (Number)							
Institutional capacities within select sectors strengthened to undertake climate informed policies and planning (score-based) (Number)		0.00	0.00	3.00	6.00	9.00	12.00

Intermediate Results Indicators by Components

Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
Promoting Evidence-based Climate Smart Decision Making							
A regional-level resilience data and analytics services platform (RDAS) developed and accessible (Yes/No)		No	No	No	Yes	Yes	Yes
Number of climate-informed decision-making tools and systems developed/enhanced in focus countries (Number)		0.00	0.00	5.00	10.00	10.00	10.00
Number of new climate-informed decision-making tools and systems developed (Number)		0.00	0.00	3.00	6.00	6.00	6.00
Number of existing sectoral decision-making tools and systems enhanced		0.00	2.00	4.00	4.00	4.00	4.00



Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
(Number)							
Percentage of gender-disaggregated data analytics developed that contributes to narrow the gender gap in climate change vulnerability (Percentage)		0.00	10.00	20.00	40.00	40.00	40.00
Enhancing Policies, Standards and Capacities							
Number of regional climate resilience guidelines for key sectors developed (Number)		0.00	1.00	3.00	3.00	3.00	3.00
Number of national sectoral standards with climate resilience incorporated (Number)		0.00	3.00	6.00	6.00	6.00	6.00
Percentage of officials trained in targeted unit/departments to apply climate resilient standards and data analytics in policies, planning and investments (Percentage)		0.00	0.00	5.00	10.00	20.00	30.00
At least fifty percent of the female staffs is trained among the staffs trained within targeted unit/departments (Yes/No)		No					Yes
Number of national policies and plans supported to become climate risk informed (Number)		0.00	1.00	3.00	5.00	6.00	9.00
Number of community-based organizations trained to plan,		0.00	0.00	10.00	20.00	30.00	50.00



Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
design and manage risk-informed community infrastructure (Number)							
Number of innovative resilient solutions crowd sourced through Climate Innovation Challenge and TechEmerge Resilience Challenge (Number)		0.00	5.00	10.00			10.00

Monitoring & Evaluation Plan: PDO Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Improved access to regional climate information and analytics for climate-informed decision making in select sectors (score-based)	<p>RDAS will be developed to provide climate information and analytics across South Asia region. Each milestone represents one point each and should be completed in the following order. The end target will be five points.</p> <p>- Regional data is collected and incorporated into the existing regional data sharing mechanism</p>	Annually	Own source	Questionnaire survey; an impact evaluation study will be carried out at the time of MTR and completion.	RIMES



	<p>managed by RIMES.</p> <ul style="list-style-type: none"> - Data analytics platform is developed and incorporate into the regional platform. - User-interface of the RDAS is created and available to be connected with the existing or new decision support tools. - A series of regional dialogues/trainings is organized at least twice in focus countries. - The RDAS is fully connected to, at least, the decision-support tools supported by the project. 				
National-level decision-making and planning tools are better climate risk informed in select sectors	National-level Decision Support Systems (DSS) would be developed/enhanced. Once the RDAS is ready, these systems are fully connected with regional-level climate data through the RDAS.	Annually	Own source	Questionnaire survey; an impact evaluation study will be carried out at the time of MTR and completion.	RIMES
Regional climate resilience guidelines for select sectors incorporated into national standards	Regional resilience guideline will be developed for mainstreaming climate resilient design and management for key sectors. National standards are updated and referred to	Annually	Own source and data from target countries	Questionnaire survey	ADPC



	the regional resilience guidelines.				
Sectoral investments supported to include climate risks and resilient design in select sectors	Investments in key focus sectors are provided technical support to include climate resilient design after review of available technologies adopted for resilience and identification of gaps. Two projects in each focus country will be targeted to be supported by the project.	Annually	Project management report	Project management report	ADPC
Institutional capacities within select sectors strengthened to undertake climate informed policies and planning (score-based)	<p>Institutional capacities are strengthened in each focus country. The following indicators represent one point for each country once achieved/completed. The end target will be total 12 (4 in each country).</p> <ul style="list-style-type: none"> - Technical staffs are trained, at least, in one training in each country under Component 1.3 (Maximum 3). - Technical staffs are trained, at least, in two trainings under Component 2.3 in focus sectors in each country (Maximum 6). - Focal points for climate 	Annual	Own source	Project Management Report; an impact evaluation study will be carried out at the time of MTR and completion.	ADPC and RIMES



	change are appointed (Maximum 3).				
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Monitoring & Evaluation Plan: Intermediate Results Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
A regional-level resilience data and analytics services platform (RDAS) developed and accessible	RDAS is launched and becomes functional at RIMES.	Annually	Own source	Deliverable	RIMES
Number of climate-informed decision-making tools and systems developed/enhanced in focus countries	At least two national-level decision support system (DSS) is launched and nine existing sectoral DSSs and integrated into the existing government systems in focus countries with support from the project.	Annually	Own source	Deliverable	RIMES
Number of new climate-informed decision-making tools and systems developed	New national-level decision support systems are launched.	Annually	Own source	Deliverable	RIMES
Number of existing sectoral decision-making tools and systems enhanced	Existing sectoral decision-making tools are systems are enhanced by better climate related information and analytics.	Annually	Own source	Deliverable	RIMES
Percentage of gender-disaggregated data analytics developed that contributes to narrow the gender gap in climate change vulnerability	New and existing sectoral decision support tools connected with RDAS supported by the project will incorporate	Annually	Deliverables	Project Management Report/Deliverables	RIMES



	disaggregated data analytics on gender differences such as vulnerabilities and gender-disaggregated hotspots and make available for decision makers to analyze and make climate change adaptation gender-responsive which will inform the design of substantial and innovative gender activities as part of South Asia DRM and Climate Change portfolio in the future.				
Number of regional climate resilience guidelines for key sectors developed	Regional guidelines are developed based on consultations for three priorities sectors (agriculture, transport and water).	Annually	Own source	Deliverable	ADPC
Number of national sectoral standards with climate resilience incorporated	Focus sectors would be selected according to the governments' priorities. Policy actions or adaptive design and operational maintenance for two out of seven thematic areas are adopted for investment in three focus countries.	Annually	Own source	Deliverable	ADPC
Percentage of officials trained in targeted unit/departments to apply climate	Relevant unit/departments in the target sectors will	Annually	Own Source	Policy dialogues/stakeholder	ADPC/RIMES



resilient standards and data analytics in policies, planning and investments	increase officials to learn the regional guidelines and national standards to apply climate resilient adoptive design as well as apply the RDAS and NDSS into sectoral policy planning more climate-risk informed.			consultation/questionnaire	
At least fifty percent of the female staffs is trained among the staffs trained within targeted unit/departments	The training activities include at least 50% of female staffs among the targeted unit/departments.	Annually	Own source	Policy/dialogues/stakeholder consultations/questionnaire	ADPC/RIMES
Number of national policies and plans supported to become climate risk informed	National/sectoral policies and plans would be informed with improved access to climate risk information and analytics. It could include: i) national/local adaptation plans including LAPA pilot implementation; ii) NDC financing strategies; iii) Climate smart agriculture policies and regulations; iv) climate resilient infrastructure for rural roads; and v) water harvesting in focus countries.	Annually	Project Management Report	Project Management Report	ADPC/RIMES
Number of community-based organizations trained to plan, design and	This indicator will monitor the progress of capacity	Annually	Own source	Progress monitoring report	ADPC



manage risk-informed community infrastructure	building activities targeting community-based organizations. The target is considered based on the total number of organizations relevant to three select sectors in each country.				
Number of innovative resilient solutions crowd sourced through Climate Innovation Challenge and TechEmerge Resilience Challenge	CARE, financed by DFID through the PARCC Trust Fund, will support innovation challenges across SAR countries that will crowdsource innovative and disruptive technology solutions for resilience through grant awards, matchmaking and pilot-testing through two windows: - Climate Innovation Challenge will promote innovation in SAR through award of grants to eligible and qualifying innovators. This would include problem statements around Climate Data and information including short-term EWS and longer-term climate outlook data. - TechEmerge Resilience	Annually	Own source	Project Management Report	ADPC



	<p>Challenge (ADAPTECH) aims to crowd in private-sector expertise and market-based innovation for resilience through use of disruptive technologies to address climate and disaster resilience challenges. CARE will provide grant funding to winning innovators and provide appropriate support for field testing/pilot activities.</p>				
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ANNEX 1: Implementation Arrangements and Implementation Support Plan

- The project will be implemented by two regional institutions, ADPC and RIMES, eligible for Regional IDA Grants for regional institutions.** RIMES will implement Component 1 and ADPC will implement Component 2. Hence, two PIUs will be set up in each institution for implementation of their respective components. While central PIUs for core functions would be established in Bangkok, country level PIUs led by country coordinators and staffed by sector specialists would be established in Nepal, Pakistan and Bangladesh. A Project level Coordination Working Group (CWG) consisting of representatives from ADPC and RIMES will be set up to facilitate close coordination and collaboration between the agencies on their respective components and activities. Given the need for involvement of respective line departments for the successful implementation and achievement of objectives of CARE, a national coordination mechanism will be set up in each country consisting of Sector Focal Points (SFP) from each participating department and respective convening Ministries of Finance in Nepal and Bangladesh and Ministry of Planning, Development and Reforms in Pakistan. Country level PIUs of RIMES and ADPC would coordinate with SFPs for implementation of project activities in each country and participate in national coordination meetings.
- The two agencies would also build a network of various existing regional and national institutions** specializing in knowledge-sharing on, and research relevant to, climate resilience in South Asia. Some examples of these initiatives are provided in Table 1.

Table 1: Examples of regional and sub-regional adaptation initiatives in SAR Countries

Initiative	Scale / SAR countries involved	Leading implementing agencies
South Asia Climate Smart Agriculture Learning Platform	Regional	CGIAR
South Asia Cooperative Environment Programme (SACEP)	Regional	SACEP
South Asia Water Initiative (SAWI)	Regional	SAWI
Climate Summit for a Living Himalayas and Framework of Cooperation	Bhutan, Nepal, India, Bangladesh	Royal Government of Bhutan, with International Centre for Integrated Mountain Development (ICIMOD) and World Wide Fund (WWF) for Nature
Capacity building for improved monitoring of snow, ice, and water resources in the Indus Basin	Pakistan and Afghanistan	ICIMOD with support from GTZ and ADB
Regional GLOF risk reduction project	Bhutan, India, Nepal, and Pakistan	UNDP
BRAHMATWINN – Twinning European and South Asian river basins to enhance capacity and implement adaptive IWRM approaches	Bhutan, India, and Nepal	Various Asian and European research partners with EU funding
South Asian regional pilot training on community-based adaptation to climate change	Bangladesh and Nepal	Local Initiatives for Biodiversity, Research and Development, Nepal
Floods from the roof of the world	Bhutan, India, Nepal, Pakistan	Implemented by ICIMOD and supported by Swiss Agency for Development and Cooperation (SDC)
Glacial melt and downstream impacts on Indus-dependent water resources and energy	Afghanistan, India, Pakistan	ADB
Too much – too little water: adaptation to climate change in the Hindu Kush Himalayas and Central Asia	India, Nepal, Pakistan	CICERO (Center for international climate and environmental research), UNEP GA (United Nations Environment Programme GRID-Arendal) and ICIMOD
Vulnerability to climate change: adaptation strategies and layers of resilience	Bangladesh, India, Pakistan, Sri Lanka	International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)



Mangroves for the future	India, Maldives, Pakistan, Sri Lanka (and other non-SAARC countries)	Various national governments, multilateral agencies and NGOs
The South Asian Climate Outlook Forum (SASCOF)	Afghanistan, Bangladesh, Bhutan, India, Maldives, Myanmar, Nepal, Pakistan and Sri Lanka	WMO/IMD
ESCAP/WMO Panel on Tropical Cyclones	Bangladesh, India, Iran, Maldives, Myanmar, Oman, Pakistan, Qatar, Saudi Arabia -KSA, Sri Lanka, Thailand, United Arab Emirates – UAE, Yemen	UNESCAP/WMO
Climate Change Gender Action Plan (ccGAP)	Bangladesh, Nepal	International Union for Conservation of Nature (IUCN)

IMPLEMENTATION SUPPORT PLAN

- The CARE ISP has been developed to reflect its unique project activities in three countries, its planned implementation schedule, lessons learned from existing Bank Project and best practices, and successfully mitigating the risks identified at various levels and supporting the risk management proposed in the SORT. Bank team will carry out implementation support missions on a semi-annual basis to monitor progress implementation.
- The Bank team will monitor progress on several fronts including: (i) Mainstreaming CARE’s PDO across different sectors and various government agencies; (ii) Strengthening coordination between the PIUs and the respective line ministries in each country; (iii) Coordination between PIUs, CWG, SFPs as well as the respective line ministries; (iv) tracking key performance indicators as defined in the Results Framework; (v) PIU specific project implementation plans; (vi) independent verification of project activities; (vii) support proper fiduciary and contract management by PIUs of all activities; (viii) ongoing technical advice to both PIUs including training- if/when needed; (ix) monitoring of key legal covenants and (x) facilitating national and regional level dialogue with Transport, Agriculture and Water line ministries and affiliated agencies (such as the public trusts).

Implementation Support Plan (ISP)

3. The ISP includes frequent review of implementation performance and progress, especially given the involvement of two implementing agencies and three country-wide activities under the project. The ISP strategy will use a number of instruments to review progress and respond to implementation issues, including:

- Implementation support missions.** The World Bank task team will conduct semiannual implementation support missions to review overall CARE implementation performance and progress toward the achievement of the PDO. There will be at least two support mission each year. The PIUs will mostly coordinate activities with their country coordinators and local teams on a regular basis and may conduct missions on its own to provide ad hoc support to all three countries as needed. For the Bank Task team, more frequent mission will be required during the first year of the implementation.
- MTR.** An MTR will be carried out in December 2021 during implementation phase. It will include a comprehensive assessment of the progress in achieving CARE PDOs as listed out in the Results Framework and Monitoring Document in the PAD. MTR will serve as a mechanism for revisiting design issues that may require



adjustments and review of technical assistance in areas of gaps/innovation, data validity and data sophistication, and where new approaches/procedures are adopted and implemented to ensure satisfactory achievement of the PDO.

- **Additional Reviews.** The Bank team and PIUs will consider the need for additional analytical works, technical and advisory, and knowledge-sharing activities and organizing of dissemination workshops (if required).

4. The various activities needed for implementation support would require the following resources:

Time	Focus	Skills Needed
First 12 months	<ul style="list-style-type: none"> ▪ Initializing the Project Components ▪ Support to preparatory activities (sensitization, stakeholders and institution consultations and planning, strengthening implementation capacity including M&E) ▪ Completion of procurement for key contracts including review of ToRs and designs, and initiation of activities ▪ Setting up FM and disbursement systems ▪ Development of project management and M&E manual and systems ▪ Guidance on applying safeguard instruments ▪ Development of impact evaluation methodology ▪ Establishing coordination mechanisms with complementary teams ▪ Review of annual work plans and disbursement schedule ▪ Cross-country and cross-sector progress review 	<ul style="list-style-type: none"> • TTL/Project Management • Co-TTL • Procurement • FM/ Accounting • Economist • Environmental Specialist • Technical experts in three sectors: Transport, Agriculture/Livestock, Water Resources
12–84 months	<ul style="list-style-type: none"> ▪ Procurement of contracts for components identified for later phases ▪ Review and finalization of designs ▪ Initiation of selected works and studies ▪ Contract Management ▪ Operations and Project Management ▪ Monitoring and evaluation ▪ Environmental and Social Safeguards Monitoring ▪ Cross-country and cross-sector progress review to distill the knowledge on one hand and make midterm adjustments if needed. ▪ Review of annual work plans and disbursement schedule 	<ul style="list-style-type: none"> • Data Analyst • Big Data Specialist • Climate Change Specialist • Safeguards Specialist • Gender Specialist

Skill Mix Required

Skills Needed	Number of Staff Weeks	Number of Trips	Comments
TTL and Co-TTL/ Project Management	20 weeks per year	2 or more trips per year (only during the first year of	Full-time split between two people



		implementation/ per year)	
Procurement	15 weeks per year	3 trips per year	Half-time of local consultant 25 percent of staff time
FM	4 weeks per year	2 trips per year	Country office based and HQ based
Environmental Safeguards	16 weeks per year	3 trips per year	Country office based and HQ based
Social Safeguards	8 weeks per year	2 trips per year	
Technical/ operational experts for technical assistance to oversee technical aspects and implementation in Agriculture (including livestock) sectors	10 weeks during the first year of implantation	2 or more trips only during the first year of implementation/ per year	to oversee technical aspects and implementation in Agriculture sub-sectors
Climate Change Specialists		2 or more trips only during the first year of implementation/ per year	
DRM Specialist		2 or more trips only during the first year of implementation/ per year	
Data analyst		2 trips per year with constant liaison with the PIUs data team	Significant time required for monitoring data sources; data flow in real-time, and data sync. If needed, refining survey data.
Citizens Engagement / GAAP	2 weeks per year	1 trip per year	To provide guidance on citizen's engagement and GAAP monitoring efforts
Gender Specialist	2 weeks per year	1 trip per year	To mainstream gender considerations into project activities, including capacity building and enhancing employment opportunities, and improving conditions for women facing climate risks



ANNEX 2: Detailed Project Description

1. Components: The project aims to achieve the PDO through three components viz. (a) Promoting Evidence-based Climate Smart Decision-Making; (b) Enhancing Policies, Standards and Capacities for Climate Resilient Development and (c) Project Management. The below table summarizes the various activities to be financed by the project under Components 1 and 2.

Table 3: Summary of Activities

ACTIVITIES	COST (US\$m)	Pakistan	Bangladesh	Nepal
Component 1: Promoting evidence-based climate smart decision-making				
1.1: Expanding SAR Regional Resilience Data and Analytics Services (RDAS)	3.5	Develop public-domain RDAS Platform with climate and sectoral data for resilience for all SAR countries. Develop a Data and Analytical Services Catalog and facilitate use of the system developed.		
1.2: Strengthening national-level sectoral decision support systems (DSS) for the Participating countries²⁴	6	Develop <i>interactive dashboards</i> to facilitate access to relevant data and analytics to support decisions for targeted stakeholders, leveraging the public Data and Analytical Services Catalog in the Subcomponent 1.1 and other public/confidential data/analytic services developed as part of this sub-component. Facilitate use of systems developed with appropriate IT platforms.		
		(1) Develop DSS for Ministry of Planning (MoP), Development and Reforms incorporating climate indicators in the planning process to track climate resilient projects; (2) Develop DSS for Ministry of Finance to serve as a dynamic fiscal risk assessment tool for climate hazards; (3) Improve the existing DSS for Sindh Irrigation Department to include drought risk management; (4) Customize Specialized Export System for Agro-meteorological Early	(1) Enhance functionality of existing DSS: Bangladesh Agro-Meteorological Information System (BAMIS) for agriculture, and customize SESAME for livestock sub-sector; (2) Improve the “Online Road Network” and transport DSS with risk information, early warning, climate database and a dynamic asset database; (3) Improve FloCAST DSS with integrated exposure information and hydromet data. (4) Develop the Data Portal on River Hydro-morphological and climatological information including river pollution, water resources and	(1) Downscale DHM’s “climate outlook” for implementation of LAPAs, sectoral programs; (2) Improve dataflows and functionalities of existing Agriculture Management Information System (AMIS) for Ministry of Agriculture and Livestock Development and roll out AMIS to local/provincial level to support local agriculture extensions and advisories to farmers; (3) Automate collection and management of hydrological and climate data and link DHM APIs with the user-department DSSs

²⁴ Please see Annex 3 for specific data sets to be provided through the DSS sub-component.



		Warning for Climate Resilient Agriculture (SESAME) ²⁵ for Punjab Government.	regional weather data harmonization, including advanced analytics. (5) Develop a comprehensive Water Data Portal on climate risks (and digital M&E to support the 2021 Delta Plan) for integrated water resources management (6) Develop integrated climate planning and screening portal with their own interface, common for Finance, ERD and Planning.	for utilization of hydromet data analytics; (4) integrate existing hazards/risk maps to support on-going hazard/risk assessments for resilient rural/local roads network; (5) Improve MoF's PFM information system for climate budget allocation, tracking expenditure, monitoring sustainability and assessing investment results in climate-related sectors
1.3: -Trainings for Climate-Informed Decision-Making	0.5	(1) Virtual and other training of potential RDAS user groups in all SAR countries. (2) Training on respective DSS for policymakers and operational users from planning, finance, agriculture/livestock, water, transport and DRM in Nepal, Bangladesh and Pakistan.		
Component 2: Enhancing Policies, Standards and Capacities for Climate Resilient Development				
2.1: Advisory services for policy and investment interventions	5	(1) Utilize the existing Climate Change PER – policy, institutional and public expenditure review – to identify gaps and sequence an action plan for climate and disaster risk-informed investment, appraisal and approval framework. (2) Utilize World Bank's Climate Change Fiscal Risk Analysis tool to support design of climate-related fiscal-risk mitigation measures. (3) Conduct district-level climate vulnerability assessments in three participating countries.		
		(1) Scale up the climate smart agriculture strategic framework with focus on agro-climatic zoning for Punjab Province; (2) Agricultural policy analysis to support climate-resilient policy actions in Punjab Province; (3) Formulate climate indicators to incorporate in the planning policy and documents; (4) Develop national climate-change financing framework implementation plan; (5) Support development of Sindh ground water strategy for drought affected areas;	(1) Strengthen climate smart agriculture strategy with focus on livestock, agro-climatic zoning and monitoring framework; (2) Agricultural policy analysis to support climate-resilient policy actions; (3) Develop a climate-resilient infrastructure strategy for rural roads; (4) Develop Bangladesh Climate Fiscal Framework (BCFF); implementation plan (5) Complement the Water Sector's broader policy framework to include the climate change models and analytical works to inform the Water Accounting. (6) Support the drafting of the Digital-based M&E policy framework under the Delta Plan implementation.	(1) Develop a handbook on climate resilience and adaptation for the Ministry of Agriculture and Livestock Development; (2) Conduct analytical work to establish the scientific base for agro-climatic zoning policy; (3) Agricultural policy analysis to support climate-resilient policy actions; (4) Develop LAPA in one province as a pilot for potential scale-up; (5) Develop a strategy for water harvesting; (6) Develop an implementation plan to roll out the climate change financing framework in selected provinces; (7) Support the integration of the updated Climate Change Policy 2019 into developing resilient road networks, slope

²⁵ A web-based DSS portal for Agriculture sector that provide inputs and advisories to support decision-making at critical stages of the crop lifecycle for both governments and farmers. Developed by RIMES, SESAME integrates weather and climate information with four different time scales, crop sensitivity information, agro-climatic data and farmers' local knowledge.



				stabilization and protection measures; (8) Support the development of a hazard-risk and exposure-based scale-up plan for implementation of advanced bio and non-bio engineering slope stabilization solutions for Department of Roads
2.2: Promoting Climate Resilient Design and Standards	2	Develop regional guidelines for all SAR countries (finance, planning, agriculture, transport, water)		
		(1) Develop guiding document on application of CSA technologies and agro-climatic zoning	(1) Revision of the Construction Practices and Procedures Manual to incorporate climate-resilient design and practices, including for strategic and rural roads; (2) Develop country- guiding document on climate-smart agriculture and livestock	(1) Support the revision of Nepal Roads Standards 2070 and Nepal Rural Roads Standards 2071 to include climate considerations for climate-resilient design of rural/local roads network (2) Adapt climate change budgeting and planning guidelines developed by MoFE to priority sectors; (3) Develop guiding document on application of CSA technologies and agro-climatic zoning
2.3: Implementation Support to Climate-Risk Management Solutions: Capacity building and technical support	14	(1) Provide training to increase understanding of climate-resilience adaptive policy making, design and solutions in priority sectors (transport, water and agriculture). (2) Adoption of technology solutions in focus countries; support for creation of climate-smart institution, governance, and finance; establishing a mechanism to support national level centers of excellences and universities for technical collaboration with line ministries; diagnosis and adaptive design. (3) Technical support to Ministries of Finance and Planning for climate-informed macro-level analysis, modeling, and climate-informed fiscal risk management. (4) Technical support to assist countries in gaining access to international climate finance including support accreditation process for national/sub-national entities to access GCF		
		(1) Technical support and capacity building for implementation and M&E of adaptation activities in NDCs at the sub-national level and NAPs at the sub-national level as per Cancun Adaptation Framework. (2) Capacity building of Sindh Irrigation Department for drought risk management; (3) Capacity building for Punjab provincial government officials on agro-climatic zoning; (4) Training of Trainers (TOT) program	(1) Provide M&E training in select sectors to better manage the portfolio and impact of activities supported by climate change; (2) Provide capacity building to budgeting officers to prioritize investment and determine tax incentive and subsidies with additional investments for climate resilience; (3) Capacity building of government officials on CSA policy, agro-climatic zoning and climate financing for agriculture and livestock sector; (4) Training and capacity building to disseminate CSA technologies at three levels	(1) Provide training to local governments on climate change adaptation, expenditures, budgeting and resilience in support of the federalization process; (2) support the capacity building and awareness of existing and new engineers in the Department of Roads (DoR) on climate resilience, utilization of geo-hazard assessments, hazard maps and climate data for undertaking climate-resilient design and construction. (3) ToT for DoR to train contractors and local



		for local agriculture extension officers to disseminate locally available CSA technologies for farmers.	(national, sub-national and Corporative Societies/lead farmers). (5) Enhance the capacity of the MoWR, WARPO, and BWDB on sector specific policy formation, reform of the existing policy, necessary policy making and monitoring the impacts from adapting climate-smart and resilient approach.	engineers at the provincial level on climate-risk informed design and construction; (4) Capacity building of national and provincial officials on CSA; (5) TOT for Corporative Societies, CSOs and lead farmers to disseminate locally applicable CSA technologies.
2.4: Innovation for Climate Adaptation and Resilience	3 (PARCC TF financing)	Promote innovation and adoption of disruptive technology in South Asia Region (SAR) through award of grants to eligible and qualifying innovators.		

Component 1: Promoting Evidence-based Climate Smart Decision Making (US\$10 million)

- Over the past decade, there has been significant growth of various kinds of high-frequency data and associated analytical capacities that are critical to building a better understanding of climate information, hazards, vulnerabilities, and resilience factors. The aim of this component is to enhance access to line ministries and departments to all relevant data required for climate risk-informed planning and investments, including, hazard and climate variability data, weather patterns and any other sector-specific data. To this end, the component will support the development of a Regional Resilience Data and Analytics Service (RDAS) Platform and a series of national-level sectoral Climate Decision Support Systems (C-DSS).
- Sub-component 1.1: SAR Regional Resilience Data and Analytics Services (US\$3.5 million):** The Resilience Data and Analytics Services platform (RDAS) will be a public-domain cloud-based and AI-enabled data and analytics platform that will leverage a range of available data and analytical services or relevance to climate-smart development in the South Asia region. It is expected to provide all relevant climate and sector information enabling South Asian countries to make informed decisions and policies for climate resilience, backed by the latest scientific data with higher quality and accuracy. The RDAS, in addition to existing climate-related observation and early warning systems in the region, will also support overlaying different data sources, across climate and socio-economic parameters, to specify hotspots of climate vulnerability across timescales and support planning and investment decision making. This RDAS will leverage existing data systems in countries and sectors and will deploy tools for analysis and interpretation of global and regional circulation models and generate tailor-made downscaled information scenarios for the SAR countries. As a dynamic platform, it will respond to evolving data needs from sectors and generate, curate and host new climate and thematic data.



- 4. **RDAS Users:** Given the public-domain nature of the RDAS, it is expected to be used by a wide range of stakeholders – from government, academia, researchers, CSOs, private sector, and the general public. A detailed stakeholder mapping will be carried out during development of RDAS.
- 5. The following data types and datasets are envisaged as part of the RDAS. An initial user-needs analysis was also undertaken (See Table 1) and will be updated to reflect sectoral service data and analytics gaps. A mapping of existing portals and decision-support systems that in all three focus countries has also been undertaken (Annex 4).

Table 1 - Data Types and Datasets as part of the RDAS

Data type	Details
1. Meteorological parameters	Synoptic observation data: Rainfall and temperature Gridded reanalysis data: Rainfall, temperature, relative humidity, wind speed Forecast data: Rainfall, temperature, relative humidity, wind speed, evaporation, cloud cover, sea level pressure
2. Hazards	Hazard maps for different natural hazards and return periods
3. Climate change scenarios	Scenarios of how climate change will affect the intensity and/or return periods of hazards
4. Hydrology	Observation data: Daily discharge and water level Forecast data: Discharge and water level Rating table
5. Hydraulic structures	Location of dams, reservoirs, weirs, bridges, embankments; inflow and outflow data, storage-elevation relation, river cross-sections
6. Elevation	Topography: Digital Elevation Model (DEM), ground elevation maps, GPS/level survey data, slope data Bathymetry: Digital Elevation Model (DEM), nautical chart maps, sounding data
7. Geology	Land use, land cover, soil layers, soil maps, soil suitability, agro-ecological zoning
8. Agriculture	High resolution land use maps differentiating crop types; cropping pattern, crop calendar, crop yield projection, irrigation facilities and schedules, pesticide-fertilizer-yield data; forest cover maps (from land use map), land degradation data
9. Infrastructure assets	Network maps for primary, secondary, residential and rural roads; locations for critical transport assets, incl. ports, bridges, rail, airports; critical facilities (health care facilities); water treatment plants.
10. Political	Administrative units and boundaries
11. Population	Population density, urban and building footprints from land use maps;
12. Socio-economic vulnerability	Vulnerable groups, such as Population aged 0-14, 65 and older, female-headed households; and proxies of socio-economic vulnerability, such as poverty maps, income level and income types, illiteracy and health care access; Social protection coverage, financial inclusion
13. Asset vulnerability	tsunami vulnerability curves; building fragility curves, damage curves for public assets and infrastructure

- 6. **RDAS Platform development:** The RDAS platform would be co-developed with users to provide data storage, information management, data processing and analytics, interface and visualization. RDAS development will include identification of existing data sources, data audit (quality and utility) and data acquisition. The RDAS infrastructure will use cloud-based platforms that utilize Open Geospatial Consortium (OGC) compliant standards and appropriate APIs to facilitate the use of online data and analytic services, and



associated query and visualization. The system will be designed to be open and public-domain to facilitate wide use and leverage the growing world of public domain data and analytics.

- **Data and Analytical Services Catalog:** This activity will help collate existing available public data services from relevant global, regional and national sources. This will include the use of an exponentially growing range of data services (based on in-situ monitoring, earth observation, crowdsourcing or modeling results) and analytical services (e.g. using free cloud analytics). RIMES will utilize the existing regional non-GTS (Global Telecommunications System) data-sharing arrangement with participation of 9 countries including Bangladesh and Nepal. This regional data-sharing arrangement will ensure more local data availability for injection into RIMES and participating countries to generate improved and more accurate data. RIMES will also build upon the Climate Data Sharing & Analysis System for Pakistan. RIMES will also leverage its partnerships and working arrangements with global, regional and national institutions, open global and regional databanks, such as the World Bank Open Data. This activity will also support countries (where there is agreement) to make the data they have in paper or desktop formats to be available as open public services, through support for activities on data rescue, formatting, and online OGC services or API facilitation for public access. A data and analytical services catalog will be developed with appropriate metadata. Public-domain knowledge resources (e.g. relevant key articles, reports, videos and websites) will also be collated (with inputs from ADPC) as part of this activity. This catalog will be used not only for the RDAS (and the DSS dashboard development in Sub-Component 1.2, but also be available for other portals, apps, online blogs, interactive documentation, and competitions (e.g. *hackathons*, data jams) to leverage more use of these data specially to promote improved understanding and decision making for climate smart development.
- **Data analytics and visualization:** The data analytics platform will support the access and interactive analytics and visualization of the services in the Data and Analytical Services Catalog. The system will also support access of these services by other online systems using standard protocols (e.g. OGC standards, well-documented APIs) including for use in machine learning/AI algorithms. Overall the analytics will support and provide a quick decision-making environment to high level to lower level users. Interactive user applications and dashboarding features will be made available using modern data science to support development of other regional, national, and sub-national decision support systems and dashboards.
- **Data Information to action:** Building on the existing frameworks for climate services, the project will facilitate the process of user interface between national hydrometeorological agencies and sector/line ministries, and further down the value chain of climate services, co-development of user-tailored climate services for regional and national policy-makers, planners, and communities.
- **Development Process:** The RDAS dashboard (web and mobile App versions leveraging existing services as much as possible and using cloud services for any additional hosting and analytics) will be prototyped in the early stages of the project and the team will engage in regular stakeholder consultations (mostly virtual but also leveraging any stakeholder events) with a regional expert team (drawn from all the SAR countries and representing different use aspects) to continuously refine the design and functionality.



7. **Sub-component 1.2: Strengthening national level sectoral decision support systems (DSS) for the Participating countries (\$6 million):** Preliminary assessments of regional and national data platforms and decision support systems identified some key gaps that pose challenge to climate-informed decision making in various sectors. The assessment highlighted that while there are portals that provide relatively good sectoral information, there is limited if any dynamic visualization/overlay or integration of weather/climate data with exposure and other sector-specific information for automated location-specific impact forecasting and response advisory generation. There is currently no DSS that integrates and processes a comprehensive amount of climate data (i.e., GCM, RCMs, satellite data, historical observation, global/regional NWP models, etc.) for multiple sectoral applications by various users. In terms of system functionalities, compatibility and sustainability, most portals and DSS that are currently available have relatively limited functionalities, generally do not have a mobile app feature, nor continued support ensuring bug fixes and system upgrades as technologies/systems advance.
8. This sub-component will focus on supporting national-level data access and developing decision support systems (DSSs) at national level to enable governments to utilize global, regional, national and local data for evidence-based decision making under uncertainty in key sectors – Finance, Planning, and Budgeting, climate smart agriculture and livestock development, integrated water resource management and resilient infrastructure (transport). An initial review of existing DSS / Portals in focus countries as part of the gaps and needs assessment was conducted by RIMES and identified at least 27 existing DSSs being currently utilized by agriculture, roads and water sectors and hydrometeorological service providers. Modified DSSs will also enable Ministries of Finance and Planning to utilize data for assessing and projecting losses and damages from climate change and establishing evidence-based decision-making process for long-term climate responsive planning and budgeting. This sub-component will also support Ministries of Finance to improve countries' Public Finance Management (PFM) information systems to address climate finance by tracking and reporting respective budget allocations to expenditure reporting.
9. In particular, the work under this component will involve creating modern data and analytics *dashboards* customized for use by various stakeholder groups. Attempts will be made to cater to a wide range of stakeholders (e.g. using public versions), but also for secure access to some government stakeholders that involves more sensitive data and analytics. The sub-component will also finance supporting small investments to improve the access platforms for these dashboards such as relevant IT Infrastructure (e.g. desktops, laptops, touchscreens/touchables) as well as appropriate online hosting (e.g. cloud services) where needed.
10. RIMES will leverage its existing agreements for more secure data – e.g. to utilize the existing regional non-GTS (Global Telecommunications System) data-sharing arrangement with participation of 9 countries including Bangladesh and Nepal. This regional data-sharing arrangement will ensure more local data availability for injection into RIMES and participating countries to generate improved and more accurate data. RIMES will also build upon the Climate Data Sharing & Analysis System for Pakistan.
11. The target users of the data and analytics dashboards would be strategic and sectoral ministries within SAR governments – e.g. Ministries of Finance, Planning, Transport, Water and Agriculture – and other non-government institutions and universities supporting climate-resilient policy, planning, research and investment design in respective countries.



Data and Analytics Support to CARE participating Countries under Component 1.2

NEPAL

12. **Federalization, downscaling and sharing of data:** Federalization of Nepal has made it imperative to service data needs for localized resilience building including access to localized climate data, information and analytics. The project will support downscaling of current “Climate Outlook” being developed by Department of Hydrology and Meteorology to facilitate local planning and implementation of Local Adaptation Plan of Action. The project will also support the scale up of Climate Change Management Information System, currently being piloted in Karnali province, to all seven provinces. The project would also support and facilitate data flows to provinces, municipalities, local agriculture extensions and farmers for better information access and knowledge transfer by supporting the Agriculture Management Information System (AMIS) and Kisan Call Centers (KCC) that were established to facilitate agro-meteorological information and advisory services to farmers. The project will also support data linkage, sharing and utilization of existing hydrological and climate data and analytics, specifically with Ministry of Agriculture and Livestock Development, Ministry of Energy, Water Resources and Irrigation, and Department of Roads, for risk-informed planning and design. The Project will support Ministry of Finance to improve its Public Finance Management (PFM) information system to address climate finance by allocating the budget, tracking the expenditure, monitoring sustainability and assessing investment results in whether/climate-related sectors.
13. **Decision support for Agriculture:** CARE will complement GoN’s Rural Economic and Enterprise Development (REED) Project by supporting the improvement of existing agriculture DSS: Agriculture Management Information System (AMIS) to provide access to weather and climate information of different timescales (i.e., historical, daily, 3-day, 10-day, monthly, seasonal and climate projections) combined with sectoral and market/economic data, then processed and presented for use by policymakers and operational users. In addition, CARE will help the MoALD to roll out the AMIS at provincial/local level to strengthen the advisory and information dissemination to local farmers. Information and advisories from the DSS can be accessed and used by i) local farmers across Nepal in farm operations decision-making, ii) DOA staff in crop selection/management for enhanced productivity, and iii) Ministries of Planning, Finance and Agriculture in developing climate-smart agriculture strategies.
14. **Similar analytics, decision-making timelines and advisory processes will be provided to water, transport and disaster management sectors.** In the transport sector, the DSS will integrate existing hazards maps and support on-going hazard/risk assessments of roads, especially supporting the resilience of the rural/local roads network. Currently, only eight roads have hazard maps and risk information. There is a need for risk assessment targeting key road assets, to put in place necessary adaptation strategies. Results can be incorporated into existing decision-making support system. Additionally, a new Road Asset Management System (RAMS) is to be developed in Nepal under a new World bank transport project. RAMS will be initiated in early 2021, to aid in prioritization of maintenance work. The development of the CARE DSS will strongly compliment RAMS through supporting risk analytics and decision making under uncertainty. The CARE DSS will support the Transport Ministry’s decision-making for prioritization of roads and bridges maintenance as well as new construction works. For water sector, the DSS will assist in hydrological and climatological data collection, storage, management, processing and analysis for use in decision-making. In disaster management sector, SMART DSS will integrate historical disasters data and existing hazard maps with exposure information to contribute to the development of comprehensive multi-hazard risk assessments.



BANGLADESH

15. **CARE will support the Department of Livestock Services (DLS) and Department of Agriculture Extension (DAE) in incorporating data generation and data collection good practices** (such as Climate Smart Agriculture data portals) and scientific studies at regional/national/local levels to inform development and continuous updates and maintenance of climate smart agriculture/livestock strategy across the country. Existing DSS for Agriculture sector, Bangladesh Agro-Meteorological Information System (BAMIS) will be improved with weather and climate information of different timescales, similar to Nepal. In addition, the SESAME, DSS package for Agriculture sector developed by RIMES, will be customized for livestock sub-sector to help DLS's decision making and advisories for farmers to reduce climate and disaster impacts and improve productivity of livestock sub-sector. These two DSS will provide support to mid- and high-level users from two departments for medium- to long-term planning. The data will be leveraged for researches, extension and adoption of innovative agricultural technology and solutions, supported under the National Agricultural Technology Program Phase II.
16. **National DSS for transport, water and disaster management sectors will also provide the requisite information and analysis for making critical decisions** for different users at various levels including policymakers in planning, finance and sectoral ministries and operational users in allied agencies/departments and local governments. Additionally, will develop and integrated climate planning and screening portal with its own interface, common for Finance, ERD and Planning. The "Online Road Network" and DSS for transport sector will map high-risk locations and critical infrastructures and inform investment planning, creating a dynamic asset database. The DSS will additionally support the Roads and Highways Department's decision-making for prioritization of roads and bridges maintenance as well as new construction works. FloCAST DSS for water sector will be used to integrate both hydro-meteorological and hydro-morphological data (on rivers, water resources, weather, climate) for easy access, analysis and use in decision-making. The stakeholders in the transport sector, inclusive of government counterparts and Bangladesh CMU see the need to generate high-quality scientific facts to support the climate resilient approach. This will involve the generation and collection of data through scientific studies at regional/national/local levels to inform development and continuous updates of climate resilient planning, design, construction, operation and maintenance in the transport sector.
17. For the Water sector, the DSS platform will also assist in Hydro-morphological information and climatological data collection, storage management, processing, analysis and leading to a decision-making. Therefore, it will develop a data portal on River Hydro-morphological information, River Pollution, and Water Resources and the regional weather data synchronization under DSS Platform. Additionally, CARE will complement the development of a comprehensive Water Data Platform for climate risks and disaster preparedness in connection with the DSS. The National DSS for Water sector will provide automated collection and management of hydrological and climate data that can be used as inputs for the Water Data Portal for the Bangladesh Water Development Board (BWDB), IWM, and WARPO in the MoWR and will be shared across sectors including the GED at the Planning Commission. Additionally, a Dashboard can be developed for user consultations with detail scoping and targeted users and also identification of key decisions; it will further develop a public & private Data-Analytical Services Catalog with Metadata which will link with RDAS Catalog. Knowledge products such as reports, videos, and websites with brief summaries/metadata can be generated for policy makers/practitioners use; A preliminary design of the Dashboard and prototyping in the first quarter will be essential and can lead the way for the actual design and implementation of the portal through consultations and rollout.



18. CARE work will inform the Digital-M&E for the Delta Portal under the Bangladesh Delta Plan 2021 which is anticipated to be a joint work of the MoWR and the Planning Commission under the Ministry of Planning (MoP). Further, it will leverage regional, country, and sector-specific datasets as a platform for inputs to upgrade and process existing data on river erosion and associated challenges to complement the work of the Jamuna River Economic Corridor Development Project and Dhaka Rivers Ecological Restoration Project (*Complimentary link with Jamuna River Economic Corridor Development Project and Dhaka Rivers Ecological Restoration Project*). For illustrative purposes, a Bangladesh Delta Dashboard could provide easy and customized access to a range of multi-disciplinary data provided from multiple sources and functionality to analyze and visualize as illustrated next. It is likely that other such dashboards to support other target agencies/groups could also draw upon some of these types of data as well as many others in order to provide customized access and functionality for decision support.

Bangladesh Delta Dashboard: Illustrative Data & Functionality

Historical Trends and Future Projections:

- *Climate* (historical climate, ET, climate change scenarios – temp, pptn, sea level rise, etc. and hydrological implications)
- *Water Resources* (surface and ground water resources, water levels, flows, forecasts, river bank lines, *baors*, *beels*, lakes, ponds, bathymetry)
- *Disasters* (floods, droughts, cyclones – hazard/exposure/risk)
- *Land* (detailed elevation, soil characteristics, lithology, geology, landcover, agriculture – incl. rainfed and irrigation, chars, delta/coastline/accretion and erosion zones; satellite imagery – especially free)
- *Environment* (surface and groundwater pollution sources, water quality incl. sedimentation and salinity, forest/mangroves, ecotourism, fisheries/ aquaculture)
- *Social* (demography/census, settlements, occupations, poverty)
- *Economic* (gridded gdp, gas fields, transport incl. inland waterway facilities, administrative, EEZs, crop/transport prices)
- *Water and delta-related Investments* (incl. storage, riverine and coastal embankments, diversions, tubewells, water supply and wastewater treatment infrastructure, etc.) with appropriate attribute data

Functionality:

- Open Access (additionally a secure version if necessary) responsive-design web portal and mobile App (Android and iOS) to visualize and interact with data –accessible on computers, tablets, smartphones and touchscreens/touchables
- Updatable data and analytical services catalog with appropriate metadata
- Interactive knowledge base (relevant articles, reports, videos, websites)
- Spatial and temporal data visualization (interactive maps and graphs, swipe tools, animations)
- Spatial analytics (e.g. for selected area, pre-defined admin or hydrological or other areas, selected shapefiles) – incl. use of Google Earth Engine or other free cloud analytics
- Ability to export catalog data services and visualizations as images, spreadsheets/CSV where possible, deep URL links and embeds in other portals, mobile Apps, e-books, storymaps or blogs
- Scenario visualization using the data and existing model outputs
- Help tools (e.g. interactive documentation, screen-capture videos)

PAKISTAN

19. In Pakistan, the Ministry of Planning, Development and Reforms has highlighted data gaps for mainstreaming climate resilience into development process. Various line departments including the Irrigation Department Sindh, Ministry of Finance, Agriculture Department of the Punjab Government, Ministry of National Food Security and Research (MNFSR), and Pakistan Agricultural Research Council (PARC) also highlighted the data needs in respective sectors which can be serviced through the RDAS as well as improving the existing DSSs, or developing new DSSs. There is also need for better climate-resilient modeling and long-



term weather outlooks which could support sectors and existing systems, for example, drought monitoring. Sectoral DSS will build on existing data and will be customized in line with the priorities of the ministries and allied agencies. The DSSs will integrate and manage available data in one dashboard for easy access (on computers, touchscreens, smart devices), analysis and application in planning and decision-making among users. The DSS for Ministry of Planning, Development and Reforms and P&Ds in Baluchistan and KP will incorporate climate indicators into the planning process to track climate resilient projects. The DSS for the Ministry of Finance will serve as a dynamic fiscal risk assessment tool for climate hazards. In Agriculture sector, a dedicated DSS will be developed to equip Department of Agriculture of the Punjab Province to be able to make risk-informed decisions in timely manners and provide appropriate advisories for farmers to reduce climate and disaster impacts for Agriculture sector. The existing DSS for water with the irrigation department in Sindh will be further improved to supplement flood management information with ground water data which could serve as a tool for drought management in the Province. Additionally, it will develop the digital groundwater database and the digital Atlas for the Sindh province.i

20. **Sub-component 1.3: Trainings for climate-informed decision making (US\$0.5 MILLION):** This sub-component will support all users of the DSS to systematically utilize the information and maximize use of the DSS for climate-informed planning and decision-making in their sectors. The following activities will be undertaken as part of the sub-component:

- a) **Overall:** There will also be activities related to facilitating the use of the systems developed. Training material will be developed using hardcopy and multi-media interactive documentation. A virtual helpdesk will be set up to facilitate troubleshooting and to organize virtual training and learning events. A maintenance, sustainability, updating, and scaling-up plan will also be developed to facilitate the future effectiveness of the systems developed. Outreach will be facilitated by online communities of practice and strategic institutional linkages (e.g. to academia, research agencies, and other globally and regionally recognized appropriate knowledge institutions).
- b) **Regional Training on RDAS.** Regional trainings for participants from each SAR country focusing on the RDAS and its information products and outputs, which can be by all countries in South Asia. These will include the dissemination of a wide range of knowledge packaging (e.g. multi-media interactive e-books, storymaps, etc.), as well as appropriate outreach mechanisms (virtual and face-to-face events, training courses, competitions, etc.) to better utilize the data and analytic platform and services developed.
- c) **National level RDAS-DSS Training for Policymakers.** Trainings for policymakers from Planning, Finance, Agriculture, Water, Transport and Disaster Risk management for participants from Nepal, Bangladesh and Pakistan will be organized. The training will focus on the DSS component used for sectoral policy making and planning. The RDAS training will orient policymakers on the features, the data and analytics available within RDAS and its applications related to sectoral impact analysis. The DSS training will orient policymakers and/or their advisors on the functionalities and process of operating/using the DSS to generate information for integration in development plans and/or investment decisions.
- d) **National level DSS Training for Operational Users:** A Training of Trainers (ToT) approach will be used for training operational users from agriculture, water, transport, finance, planning and disaster management departments. In the context of Bangladesh Water Sector, CARE will provide capacity development and ToTs to officials at BWDB, GED, Planning Commission, and MoWR to help develop Government's understanding and to formulate actions from using the DSS platform. Similarly, ToTs will be carried out on Digital M&E for the Delta Portal – the ToTs will demonstrate how to read data and extract data analytics for decision making under the Delta Plan 2021.



Component 2: Enhancing Policies, Standards and Capacities for Climate Resilient Development (US\$24 million)

21. **Sub-component 2.1: Advisory services for policy and investment interventions. (US\$5 million):** The project will provide upstream support to focus countries in developing or strengthening national, local and sectoral adaptation policy, regulation, action and investment plans. This approach combines adaptive policymaking with climate risk-informed budgeting and development planning. Specific policy interventions will be prioritized in finance, planning and technical line ministries (Climate change, Transport, Water and Agriculture/Livestock) to diagnose, address and institutionalize climate resilient planning, investment design, implementation and monitoring. The country-specific policy areas of support provided below are indicative and will be firmed up in a detailed work plan during appraisal.
22. This support would include, but not limited to (i) harmonizing climate change strategies with development plans; (ii) identifying climate change related risks and vulnerabilities of the sector's systems and assets based on probabilistic and downscaled climate data, including scaling-up coverage of existing hazard and risk maps for critical assets, at the sub-national level (iii) supporting development of national and local risk-informed adaptive action plans²⁶ and (iv) sectoral climate-smart investment strategies. These interventions would be based on priorities identified by countries upstream in their updated NAPs and a review of existing policies and action plans.
23. **Policy support to Ministries of Finance and Planning:** The project will provide support to ministries of finance and planning in identifying, prioritizing and designing policy initiatives and reforms to enhance mainstreaming of climate resilience in policy, planning, and budgeting. This will include helping design a strong performance oriented domestic budget which not only integrates climate risks and reduces greenhouse gas emissions, but also provides the enabling environment to align international and private financial flows. CARE will also support to develop an implementation plan to roll out existing policies like the *Climate Change Financing Framework (Nepal and Pakistan)* and *Bangladesh Climate Fiscal Framework (BCFF)*. Climate Expenditure Reviews and Climate Budget Tagging will be promoted to enable countries to identify and routinely measure climate relevant expenditure within the existing budget system. CARE will also support the utilization of fiscal-risk analysis tool being developed by the World Bank for assessing fiscal sustainability in Nepal and Bangladesh and apply to Pakistan. The tool will help construct probable paths of key fiscal variables – the budget balance, debt stock and debt service costs in the face of climate-related shocks and under alternatives strategies for financing responses to climate shocks. The simulations will provide information that will facilitate the design of appropriate policy measures to mitigate fiscal risks from climate change.
24. CARE would support the utilization of *Climate Change Public Expenditure and Institutional Review* – to carry out a comprehensive policy, institutional and public expenditure (and public financial management) analysis to sequence an action plan for climate and disaster risk informed investments; creating coordination, investment appraisal and approval framework.

²⁶ Dynamic adaptive policy pathways (Haasnoot et al. 2013) that uses transient scenarios representing a variety of relevant uncertainties and corrective actions to handle vulnerabilities²⁶. It avoids “locking-in” a single strategy by including alternatives that can be implemented. Dynamic adaptive plans provide a set of actions or decisions based on problem, objectives, uncertainties, targets, and monitoring systems.



Policy Support to CARE participating Countries under Component 2.1

25. **NEPAL:** The project will support the integration/operationalization of the recently updated Climate Change Policy 2019, development of NAP and LAPAs, Climate Change Gender Action Plan into developing climate resilient and smart agricultural systems, water resource management and flood mitigation systems and green and resilient road networks, slope stabilization and protection measures. The project will support the development of a strategy for Ministry of Energy, Water Resources and Irrigation to automate collection and management of hydrological climate data and data sharing across sectors. CARE will support enhancement of national standards and guidelines on climate resilient planning for roads and bridges investments, including stocktaking the current status of slope stabilization and protection using nature-based solutions and the development of a hazard-risk and exposure-based scale-up plan for implementation of advanced non-bio and bio engineering slope stabilization solutions and other mitigative climate-resilience engineering measures for the Department of Roads. In Agriculture sector, CARE will help Ministry of Agriculture and Livestock Development to strengthen the policy framework to implement climate-smart agriculture. The activities to support Climate Smart Agriculture will be in support of the preparation and implementation of Nepal's Climate Smart Agriculture Investment Plans (CSAIP)²⁷. Critical policy actions will be identified as the basis to implement necessary sector reform to transform Agriculture sector climate-resilient.
26. **BANGLADESH:** Bangladesh has a comprehensive set of policies and plans on climate action and adaptation that require strengthened implementation and mainstreaming within key sectors for resilient planning and investments. CARE will strengthen the existing Climate Smart Agriculture Strategy including monitoring framework with focus on livestock. Furthermore, CARE will support agricultural policy analysis to identify critical policy actions to make the Agriculture sector climate-informed. These activities will help strengthen the policy framework to implement recently developed Climate Smart Agriculture Investment Plans by the Government, with support from the Bank. This will complement the climate-smart livestock development that has been advanced under the ongoing Livestock and Dairy Development Project (LDDP). It will also support the development a climate resilient infrastructure strategy for rural roads, including mapping and prioritization of vulnerable locations along the key transport corridor and informing investment plans. This scoping exercise is crucial to the success of this project component and will additionally include reviewing existing climate related risks, collecting and evaluating existing geospatial climate related data on rural roads. Consultations will be performed to finalize risk assessments and develop hazard-specific climate change scenarios and strategy for Roads.
27. CARE will primarily complement the Water Sector's broader policy framework to include the climate change models and analytical works to inform the Water Accounting which will further include policy works and analysis on how to understand and distribute the climate-related risks between the government, communities, and the market. It will further support the drafting of the Digital-based M&E policy framework under the Delta Plan implementation.
28. **PAKISTAN:** The project will develop and incorporate climate indicators in the planning policy and documents (PC1). It will also develop a financing strategy for NDC implementation focusing on adaptation priorities and scale-up the existing climate smart agriculture strategic framework for the Department of Agriculture in

²⁷ The preparation of CSAIP will be financially supported through the NDC Support TF. For implementation of CSAIP, an investment project is currently foreseen by the World Bank's Agriculture GP.



Punjab to cover a range of different farming crops, livelihoods and aquaculture. This will include development of framework for agro-climatic zoning informed by climatic and agro-economic data including those become available through CARE. This will enhance the climate resilience of the agriculture sector in Punjab province through the synergy with achievements being made under the ongoing Punjab Irrigated Agriculture Productivity Program. CARE will support agricultural policy analysis to identify critical policy actions to make the Agriculture sector in Punjab climate-informed. Additionally, the project will support development of a ground water strategy for Sindh in collaboration with the Sindh Irrigation Department. As part of the work, it will review documents on IWRM approach in Sindh province including water demand and supply on groundwater resources.

29. **SUPPORT TO NDCs and NAPs:** The project will also provide policy intervention and knowledge support to the adaptation priorities of focus countries, as outlined in their nationally determined contributions (NDC) and National Adaptation Plans (NAPs) (once NAPs are finalized). Some of these adaptation priorities include:

COUNTRY	NDC ADAPTATION PRIORITY
Bangladesh	• Inland monsoon flood-proofing and protection
	• Climate resilient infrastructure and communication
	• River training and dredging (including excavation of water bodies, canals and drains)
	• Stress tolerant (salinity, drought and flood) variety improvement and cultivation (including livestock and fisheries)
Nepal	Community-based flood risk and GLOF risk reduction strategy
	• Building climate resilient watersheds in mountainous eco-regions, building resilience to climate related hazards, mainstreaming climate change risk management in development, and building climate resilient communities through private sector participation.
	• Enhancing water resource management through: i) Integrated watershed management; ii) Water conservation; iii) Development and optimization of water resource allocation, implementation of strict water management regulations and utilization of unconventional water resources such as recycling of used water and harvesting rain water and flood water
Pakistan	• Strengthening risk management system for the agriculture sector
	• Comprehensive Climate Smart Agriculture program
	• Building climate-resilient infrastructure with focus on improved and safe operation of water-related infrastructure and better management of energy transmission, supported by innovations in urban planning for synergistic implementation of mitigation and adaptation actions.

30. **Regional knowledge sharing and policy dialogue:** The project will undertake knowledge-sharing activities to enhance the understanding and South-South learning across on what constitutes effective adaptation action across government institutions in SAR countries around climate information, sector-related climate guidance notes, sector resilience best practices, vulnerability to natural hazards, and adaptation pathways for different countries. A Regional Resilience dialogue mechanism will be either established, leveraging existing regional climate forums for policy dialogue and knowledge. Key activities would include (i) sharing information on common climate risks and challenges; (ii) best practices on planning and regulations; (iii) developing climate resilience policy reform roadmaps. Policy dialogue events will bring together all relevant stakeholders that influence the climate resilience agenda across the region including climate and weather experts, sector experts, scientists and engineers, regulators and financial stakeholders. In addition, good practice guidance notes will be developed to summarize good practice in mainstreaming adaptation at the sector, national and regional levels, with related regional roadshows to disseminate new knowledge derived from the project.



Sub-component: 2.2: Promoting Climate Resilient Design and Standards (US\$2 million):

31. **Regional guidelines (US\$0.5 million):** Guidelines on climate resilience will be developed for key thematic areas, based on gaps and priorities identified in the respective sectors. Implementing agencies would work closely with line ministries, through mobilization of key experts, to ensure guidelines developed at the regional level are contextualized to the national and sectoral context. Expert groups for each of the identified sector at the regional level will be formed to facilitate dissemination of global models and prepare the regional guidelines. These regional guidelines, including resilience benchmarking, would be expected to guide transformation of sector standards, policies, planning and investments
32. **National Standards (US\$1.5 million):** The project will support the modification of existing standards and regulations to account for a range of factors, including climate conditions, geophysical hazards, environmental and socioeconomic trends, local construction practices, and policy priorities. They also need to be revised more regularly than is the case today to consider climate change and other long-term trends. For strengthening existing standards to incorporate climate resilience. The development of the technical guidelines and standards would be complemented with the ability to utilize and implement them. This would be undertaken by embedding technical experts in line departments (where required), on the job training, mentoring, and workshops.

Country-Specific Support under Component 2.2

33. **Nepal:** CARE will develop national guidelines for climate resilient planning for roads and bridges and support the revision of Nepal Roads Standards 2070 and Nepal Rural Roads Standards 2071 to include climate considerations for climate-resilient design, specifically supporting the resilience of the rural/local roads network, prioritizing consultations with relevant counterparts (DOL and provinces) to ensure their commitment in addition to MOPIT. Ministry of Finance introduced the Climate Change budget code in 2012 that helps the GoN track climate public expenditure and thereby facilitate prioritization of allocating development investment on the most vulnerable areas and key sectors. To enhance the implementation of CCBC, the Ministry of Forests and environment has developed a draft Climate Change Budgeting and Planning guidelines. CARE will also rollout guidelines, tools and other how-to guidance on integrated watershed management. In Agriculture sector, CARE will develop country-specific guiding document on CSA by detailing i) at national level on agro-climatic zoning, as well as ii) at the local level on locally suitable CSA practices aimed at increasing agricultural productivity and incomes of farmers that are currently not available. CARE will complement the pipeline Agriculture projects through development of guidelines (handbook) on Climate Resilience and Climate Adaptation for the Ministry of Agriculture and Livestock Development, and their affiliated agencies, reflecting the pathway to support the federalization process. The project will support the development of similar guidelines across all relevant sectors.
34. **Bangladesh:** In the transport sector, CARE will support the Revision of the Construction Practices and Procedures Manual to incorporate climate-resilient design and practices, including for strategic and rural roads. The ultimate objective is to develop a climate resilient road construction action plan whereby the GoB could use a set of practical recommendation to improve the design and construction practices of road construction to enhance resiliency and climate adaptation practices into the overall transport sector of Bangladesh. In Agriculture sector, CARE will develop country-specific guiding document on agro-climatic zoning as well as locally applicable CSA practices and technologies including livestock sub-sector. For the water sector CARE will develop guidelines for applying IWRM in the context of a changing climate (drawing on the



Delta plan and the River Management Policy).

35. **Pakistan:** SOPs and guidelines on climate resilience need to be developed and institutionalized for key sectors. In Agriculture sector, CARE will develop country-specific guiding document on climate-smart agriculture for the Punjab Province, with focus on agro-climatic zoning, to implement the high-level concept of CSA presented in the Punjab Agriculture Policy (2018).

Sub-component 2.3: Implementation support to climate risk management solutions (US \$ 14 million):

36. The project's assessments have highlighted weak capacity among sectoral ministries and departments (as well as the finance and planning agencies) to access and interpret the latest climate information for mainstreaming climate change into programme and project design and implementation. The sub-component will support sectoral line ministries and provincial/local governments to systematically integrate resilience measures into sectoral policy making, investment planning, design and implementation. In addition, the sub-component will build capacity of community-based organizations (e.g. cooperative societies, women groups and etc.) to plan, design, construct and manage community infrastructure resilient to climate and disaster risks.
37. **Capacity building (US\$4 million):** CARE will support the capacity building, including ToTs, of national and local governments to analyze, plan, design, manage and maintain climate-resilient assets and to utilize data, data-platforms, tools, knowledge and climate smart technology adoption. The capacity building of Water Users Associations and agricultural extension services will also be supported for climate-related risk analysis, planning and services.

Country Specific Capacity Building Support

38. CARE will support some overall capacity-building at the regional level, but more specific deep-dive support for selected aspects of selected countries (Bangladesh, Nepal, and Pakistan). This work will include support for better integration of short and longer-term climate risks in strengthening the selected information, institutional, and investment frameworks of these countries for relevant sets of stakeholders. Synergy across sectors, countries, and with the work in Component 1 will be leveraged as part of this work.

Nepal

- **Capacity building of local governments:** The *Government of Nepal Policy Note for Transition to Federalism* (August 2019) highlights key areas of capacity building needs within the local governments. The assessment highlighted that local governments had only 3 percent of adequate personnel, 5 percent of adequate resources and 18 percent of adequate knowledge on disaster risk management (DRM), and 6 percent of adequate personnel, 5 percent of adequate resources and 16 percent of adequate knowledge on environment. CARE will support the GoN in developing these capacities in the areas of climate change adaptation and resilience that straddles DRM and Environment sectors. It will also attempt to address the capacity gap in local governments to monitor performance of climate-related activities and projects. Another important area of capacity and institutional enhancement is the need for a comprehensive database for tracking the fiscal and service delivery performance of provincial and local governments in Nepal. CARE will support local governments in building their capacity to track climate-related fiscal flows, climate budgeting and overall integration of climate risks into PFM practices at subnational level.



- **Transport sector:** the project will support the capacity building and awareness of existing and new engineers in the Department of Roads on climate resilience, utilization of geo-hazard assessments, hazard maps and climate data for undertaking climate-resilient design and construction. The project will also support training of trainers for building DoR's capacity to train contractors and local engineers at the provincial level on climate-risk informed design and construction. CARE will provide training to increase understanding of climate-resilience adaptive design and solutions in transport. Ministry of Physical Infrastructure and Transport is planning to establish a training center for both private and public engineers to build the capacity for multi-hazard resilient roads. CARE will assist in the development of curriculum, modules and training materials on climate resilient planning for roads, including capacity building reports for climate resilient transport infrastructure.
- **Agriculture sector:** Support will also be provided to build capacity of both national and provincial level agriculture departments and cooperatives to assess climate risks and strategize risk-mitigation approaches for local farming communities. In addition, CARE will strengthen capacity of agricultural extension staff to train farmers and implement the climate-smart agriculture and climate risk mitigation strategies. National level support will help enhance the capacity of ministry to strengthen climate-smart agriculture policy framework and monitor the result effectively. This will help the Government design a comprehensive climate-smart agriculture investment plans that can be supported by the Bank as well as other development partners in the future. This set of activities will contribute to strengthen the capacity of the Ministry of Agriculture and Livestock Development to advance climate resilience in Agriculture sector, through the synergy with the proposed REED.
- **Water Sector:** CARE will also support the capacity building of Ministry of Energy, Water Resources and Irrigation, to utilize climate and hydrometeorological data for planning and investment design for integrated water resources management.
- **Finance and Planning:** The climate change budget code, introduced by the Ministry of Finance in 2012, tracks budget allocations to climate change-relevant programmes and projects in the annual development plan at national level. As the next step, CCBC needs to be introduced to provincial level and CARE will help in capacity building of government officials at provincial level. The Government of Nepal introduced its Climate Change Financing Framework (CCFF) in 2017. CARE will help the Government in building of government officials responsible for budgeting and planning for successful implementation of the framework.

Bangladesh

- **Transport Sector:** CARE will support the Ministry of Road Transport and Bridges as well as the LGED as well as in other pertinent sub-sectors of the transport sector in capacity building, training of teachers, and awareness raising on climate resilient infrastructure within the sub-sectors of the transport sector. To ensure successful deviation from the conventional approach, counterpart engagements (particularly for the private sector) would be a key during the operations and maintenance of constructed climate resilient infrastructure. There will be training to increase understanding of climate-resilience adaptive design and solutions in transport and support on translating climate resilience policy into interventions. Activities will include providing M&E training to better manage the portfolio and impact of activities affected by climate change.



- **Agriculture Sector:** CARE will provide capacity development and training of trainers (ToTs) support to Government of Bangladesh to be able to formulate actions to benefit small-holder farmers, agribusinesses on climate smart agriculture and establish a climate resilient data center for the agriculture industry. CARE will also support the capacity building of DAE and DLS to utilize climate and hydrometeorological data for sector reform, policy making, planning, monitoring and investment design. This will complement the capacity building efforts being made for the target counterparts as part of ongoing LDDP and NATP II.
- **Water Sector:** CARE will enhance the capacity of the MoWR, WARPO, and BWDB on sector specific policy formation, reform of the existing policy, necessary policy making and monitoring the impacts from adapting climate-smart and resilient approach.
- **Finance and Planning:** CARE will support the Ministry of Finance and respective line ministries in strengthening capacities of budgeting officers to prioritize climate and disaster risk informed investments.

Pakistan

- **Agriculture Sector (Punjab):** CARE will build capacity of government officials on the concept of agro-climatic zoning and its implementation to maximize production while minimizing climate and disaster impacts to Agriculture sector through zone-specific optimization strategy supported by various datasets. This capacity building effort will be primarily focused on Department of Agriculture in Punjab Province, while the similar effort can be made available for other provinces in close coordination with ongoing projects such as: Khyber Pakhtunkhwa Irrigated-Agriculture Improvement Project; Sindh Water and Agricultural Transformation Project; PK Sindh Irrigated Agriculture Productivity Enhancement Project.
- **Water Sector (Sindh):** Updating water use efficiency and technical needs assessment, crop diversification assessment, livelihoods diversification in the fishery. The project will also support capacity building of Sindh Irrigation Department for drought risk management.
- **Finance and Planning:** CARE will provide support to build capacity of governmental entities to access international climate finance. CARE will also help update Fiscal Disaster Risk Assessment and developing implementation plan. In addition, CARE will support training and capacity building on planning tools such as climate risk modeling, fiscal impacts assessment including development of financial catastrophe risk models, climate budgeting, etc.

39. **Technical Support (US\$10 million):** CARE will provide technical support to specific programs and projects of the governments in Nepal, Bangladesh and Pakistan in the following areas:

- **Adoption of Technology solutions (US\$1 million):** The project will promote the adoption of technologies for making priority sectors climate smart through (i) support to the innovation ecosystem – incubators, start-ups and SMEs (ii) exploring and promoting relevant technologies and (iii) promoting nature-based solutions to make infrastructure more resilient. It will also support developing a technology baseline for other projects like REED to promote technologies and practices that would create opportunities for on-



farm and off-farm sectors to address climate change challenges, contributing to adaptation and mitigation in the sector.

- **Climate-smart Institution, governance and finance (US\$1.5 million):** (i) climate cells/cadres in line departments (ii) sub-national/local level for establishing a climate change cell as part of the provincial planning and development departments in selected provinces (iii) institutional strengthening to improve planning and inter/intra-agency operational coordination and (iv) support climate-smart local governance. The project will support the establishment and strengthening of (i) Regional Center on Adaptation, Dhaka; (ii) Climate Change Research Center under MoFE, Nepal and; Climate Change/Flood Cell and Climate Research Institute in Pakistan.
- **Research and Development (US\$1.5 million):** Establish a mechanism of support to national level centers of excellence and universities for technical collaboration with line ministries. The aim would be to provide a steady stream of research and actionable knowledge that responds to sectoral - climate smart agriculture, integrated water resources management and resilient infrastructure – priorities, challenges and application in planning and investments, in making reliable cost projection related to climate change related actions.
- **Diagnostics and adaptive design (US\$4 million):** (i) infrastructure asset design modification based on climate risk profile (ii) review and modify current practices to adaptive and resilient standards and climate-smart solutions for urban and rural infrastructure construction, integrating/mainstreaming cost-benefit analysis of investing in infrastructure resilience (iii) develop guidelines on maintenance techniques, rehabilitation/retrofitting measures to make infrastructure resilient to increased intensity and frequency of extreme weather events.
- **Climate-informed macro-level analysis and fiscal risk management (US\$1 million)** - The project will provide support to Ministries of Finance and Planning to better analyze and manage climate risks and opportunities, and their growth, poverty and fiscal implications. It will do so by adapting standard analytic processes, such as macroeconomic modeling, debt sustainability analysis, poverty diagnostics, public expenditure reviews, public procurement guidelines and access to climate finance, to encompass climate concerns. This will include demonstrating the economy-wide benefits of early climate change actions.
- **Disaster risk financing strategies, including incremental costs assessments for climate resilience (US\$1 million):** The project will support the assessment of contingent liabilities associated with post-disaster cash transfer programs and restructure their financing sources to ensure efficient access to funds in the event of a Disaster. It will also support Nepal, Bangladesh and Pakistan in developing insurance solutions to provide for liquidity post disaster for the Government/ministries to be able to reconstruct the damaged assets immediately after the disaster and mitigating the economic and social impact caused by delays in fixing the damaged infrastructure due to lack off or inadequate funding. The Project will also examine the feasibility of setting up a Regional Disaster risk Financing and Insurance Pool to optimize the cost of disaster insurance as a result of diversifying risk within the Regional Cat Pool. CARE will also support Ministries of Finance in mobilizing alternative sources of financing to promote investments in resilient infrastructure including mobilizing funds from dedicated sources like the Green Climate fund, special Climate Change Fund, Adaptation Fund, etc.



40. **Sub-Component 2.4: Innovation for Climate Adaptation and Resilience (US\$3.0 million):** This sub-component, financed by DFID through the PARCC Trust Fund, will support innovation challenges across SAR countries that will crowdsource innovative and disruptive technology solutions for resilience through grant awards, matchmaking and pilot-testing. This sub-component is expected to involve a number of actions (e.g. detailed challenge formulation, challenge call, judging, award, presentation of results, documentation, and outreach) in phases and is expected to stimulate innovators (especially the youth) to explore more climate-smart approaches to development in the region.

- *Climate Innovation Challenge* will promote innovation in South Asia Region (SAR) through award of grants to eligible and qualifying innovators. This would include problem statements around Climate Data and information including short-term EWS and longer-term climate outlook data. The *Climate Innovation Challenge* will therefore aim to facilitate innovative solutions for their application and scale-up across different sectors, and tiers (national, sub-national and local/community) for greater impact.
- *TechEmerge Resilience Challenge (ADAPTECH)*: This activity will be undertaken in collaboration with the International Finance Corporation (IFC) with an aim to crowd in private-sector expertise and market-based innovation for resilience through use of disruptive technologies to address climate and disaster resilience challenges. After a comprehensive needs-assessment, an open global call will be launched to source relevant proven well-tested solutions, that can be customized for the region. With the support of a network of technical advisors, the most relevant innovators will be selected and matched with beneficiary users to adopt and implement local pilot projects and form new partnerships. CARE will provide grant funding to winning innovators and provide appropriate support for field testing/pilot activities.

41. This sub-component would be coordinated through a “Grants Manager” in the PIU reporting directly to the Project Director for successful implementation. The Grants Manager will also act as the Secretary and member of the Jury which will be established for reviewing and selecting proposals obtained through a process for “call for proposals”. The jury will comprise of ADPC, representatives from participating countries and technical experts. The jury will select high-performing innovators with proven technologies that can meet the needs of participating local organizations. Jury composition and awards would require no objection by the Bank for finalization. Details are specified in the Project Operations Manual (POM). In addition to implementation and administration of the sub-component as outlined in the POM, ADPC would also undertake: (a) regional progress review workshops; (b) document best practices and lessons learnt and (c) prepare a Communication and advocacy.

Component 3: Project Management and Specialized Support (US\$5.5 million)

42. **This component will finance establishing and operating the ADPC and RIMES Project Implementation Units (PIUs).** RIMES will be allocated US\$2 million and ADPC will be allocated US\$3 million. This also includes financing consultancies required for the preparation and supervision of specific activities, monitoring and evaluation, trainings, exposure visits, internships (that can also be financed by the other Components), studies for knowledge generation and sector-specific climate impacts and related interventions, inclusive and gendered practices in climate resilient planning and investments. Additional US\$0.5 million will be allocated to APDC, financed through the PARCC TF, to administer activities under Sub-component 2.4.



ANNEX 3: The Regional Case for CARE

1. SAR countries have a shared geography, including the annual monsoon as well as the Karakoram-Hindu Kush-Himalaya mountain range and its associated ten river basins, linking the region by its provision of water, food, and energy to more than 1.9 billion people. Climate change does not adhere to ecological or jurisdictional boundaries and will affect all SAR countries. It is one of the most critical development challenges in SAR with the potential to roll back hard-won development gains and push large numbers of people into poverty. CARE aims to facilitate cooperation between SAR countries at the regional or sub-regional scale to reduce transboundary impacts of climate change and pool resources to meet common challenges.

2. However, there are key challenges related to climate-informed planning and investment processes in SAR, mainly due to lack of data availability and sharing, low-to-medium readiness to dealing with climate risks. Collective regional efforts to address climate risks will provide economies of scale, reduce transaction costs, improve shared learning and have an overall multiplier effect by creating momentum and enabling cooperation.

3. These benefits cannot be reached through fund allocation and implementation only through national programs but will require a regional approach owned and implemented by regional organizations. Currently, South Asia being the least integrated region, there is no inter-governmental regional mechanism that actively focuses on region-wide climate resilience support. Implementation through regional agencies will support national and local efforts, while sharing regional information, knowledge and even cross-capacities. By investing in these regional organizations, CARE will help develop a model and set the stage for support for climate adaptation in SAR for many years to come. In the next 3-4 years, South Asia will be equipped with two inter-governmental regional institutions (ADPC and RIMES) ready and capable of supporting the SAR countries in adaptation and climate resilience, even beyond the project life. The Regional IDA Grant financing modality allows the already resource-constrained yet climate-vulnerable IDA countries to obtain these dividends without diverting sparse development resources.

4. CARE will facilitate regional collaboration among these priority countries in SAR and support them in regional data and knowledge sharing and develop regional standards for resilient infrastructure. The Project would have two very distinct regional outcomes including regional data collaboration and regional guidelines for climate resilient sectors. Both activities would require extensive collaboration between sectors and departments at the national level and countries at the regional level through a two-way knowledge sharing process which would be facilitated through CARE. The regional data sharing models and regional guidelines are also intended to inform other regions through RIMES in Africa and ADPC in East Asia. The project will have social and economic benefits by providing information for more efficient operation of weather- and climate-dependent sectors and help mitigate weather-related risks. This would be achieved by strengthening the capacity of institutions to use, access and share climate and weather information and data to strengthen the design and planning process for more resilient investments. To this end, a regional approach will allow countries to spend their money more efficiently, pool their resources on climate change, and share this collective knowledge with governments, NGOs, the private sector, and citizens.



5. CARE Project supports existing regional adaptation initiatives. For example, it responds to a request received from the South Asia Association for Regional Cooperation (SAARC) to support the SAARC Roadmap on regional cooperation for climate change adaptation. CARE will support specific activities and priorities outlined under the roadmap that aims to (i) build development pathways that are climate resilient, (ii) align regional cooperation on adaptation with national development priorities, (iii) build on existing regional institutions and initiatives, and (iv) emphasize knowledge sharing to build trust and develop networks. For example, in addition to regional data and guidelines support, CARE will support creation of a regional knowledge network for collaborative research on climate change impacts; support creation of a capacity building programme for government officials at all levels including local authorities to integrate action on climate change into development strategies; and involve community level participation in implementation and monitoring of adaptation action.

Table 1: CARE Regional IDA Project Eligibility

<i>Regional Dimension</i>	
i. The project involves three or more countries, all of which need to participate for the project’s objectives to be achievable, and at least one of which is an IDA-eligible country. The minimum number of countries required to participate is reduced from three to two if at least one IDA-eligible FCS country participates in the project.	<p>All SAR countries will benefit from regional activities under Sub-components 1.1, 1.3. and 2.2. In particular, three IDA countries, namely Bangladesh, Nepal, and Pakistan, are strongly committed to, and will benefit from support for mainstreaming adaptation and climate resilience into national development plans in priority sectors, under all components.</p> <p>The direct support on sub-component 1.2, 2.1 and 2.3 is focused on the three countries Bangladesh, Nepal and Pakistan. This distinction is primarily driven by the need to channel limited project resources to up to three highly climate vulnerable IDA countries to help them benefit from regional efforts under CARE on data, knowledge, guidelines, policy and capacity building for integration of climate resilience across key sectors and priority development agenda.</p>
<i>Spillover Effects and Benefits Across Region</i>	
ii. The project would have benefits, either economic or social, that spill over country boundaries, e.g., it would generate positive externalities or mitigate negative ones across country boundaries.	CARE will not only develop a regional public product, an important resilience data and analytics services platform accessible for all SAR countries but also establish a regional resilience dialogue mechanism that provides a sustainable knowledge-sharing platform for all relevant stakeholders and leverages existing regional climate forums for policy dialogue and knowledge across SAR. In particular, CARE would provide benefits across SAR by: i) sharing information on common climate risks and challenges; ii) promoting best practices on planning and regulations especially for common issues like coastal resilience, GLOFs etc.; iii) developing climate resilience policy reform roadmaps; (iv) strengthening capacity of two critical intergovernmental regional institutions that would be equipped to support countries in achieving their climate resilience and adaptation goals.
<i>Regional and Country Ownership</i>	
iii. There is clear evidence of country and regional ownership of the project, demonstrating the commitment of the majority of participating	CARE has already obtained strong support and endorsement from SAR countries through the RIMES’ Council and ADPC’s Regional Consultative Committee (RCC). In addition, all three countries have agreed to have a dedicated national coordination mechanism consisting of sector focal points from each beneficiary department, convened by Ministry of Finance/Planning. A coordination meeting under this mechanism review progress and advise CARE to keep aligned with each country’s



countries.	priority and ongoing initiatives to mainstream climate resilience and adaptation into policy planning and investment
<i>A Regional Platform</i>	
iv. The project provides a platform for a high level of policy harmonization between countries and is part of a well-developed and broadly-supported regional strategy.	<p>CARE will establish a regional resilience policy dialogues through the ADPC's Regional Consultative Committee (RCC) mechanism of ADPC and RIMES' Council to share access to improved data and knowledge generated and regional guidelines. All SAR countries will be also invited to join the regional dialogue focusing on ministries of finance, planning and climate.</p> <p>CARE will support regional integration through region-wide data and knowledge sharing and generation, development of regional standards and guidelines and common policy reform approaches. In addition, CARE would support ongoing regional initiatives and promote regional dialogues and knowledge sharing within and outside the Bank, i.e. SAARC Roadmap on regional cooperation, which came out of SAARC's Thimphu Declaration on Climate Change in 2010 and coordination with various adaptation related existing regional initiatives.</p>

Table 4: CARE Beneficiary Countries

	Component	Afghanistan	Bangladesh	Bhutan	India	Nepal	Maldives	Pakistan	Sri Lanka
Promoting Evidence-based Climate Smart Decision Making	1.1	X	X	X	X	X	X	X	X
	1.2		X			X		X	
	1.3	X	X	X	X	X	X	X	X
Enhancing Policies, Standards and Capacities	2.1		X			X		X	
	2.2	X	X	X	X	X	X	X	X
	2.3		X			X		X	
	2.4	X	X	X	X	X	X	X	X



ANNEX 4: Gap Analysis – Existing Portals and Decisions Support Systems in SAR

Portal/DSS	Developer	Status	Functions	Target Users	Gaps to be addressed by CARE
BANGLADESH					
AGRICULTURE					
1	BAMIS Bangladesh Agro-Meteorological Information System GoB/ World Bank	Active/ operationally available	- Data aggregation from various sources - Publish agromet advisory	- Extension Workers - Farming Community	Include dynamic risk maps, Specific climate advisories and analytics, data linkage with RDAS
2	Climate Information Management System BARC Bangladesh Agricultural Research Council	Active/ operationally available	- Storage and basic analysis of climate data	- Agriculturists - Researchers - Farming Communities	Enhance visualization; add downscaled climate data from RDAS and other sources. Link with SESAME
TRANSPORT					
5	Online Road Network RHD Roads and Highways Department	Active/ operationally available	- Provide information on roads, bridges and culverts	- RHD professionals - Policymakers - Planners	Improve the network and connectivity with risk information, early warning, RDAS, climate database (observed and future) and a dynamic asset database; enhance visualization
6	Road Maintenance and Management System RHD Roads and Highways Department	Active/ operationally available	- Provide information on road network and its status	- RHD professionals - Planners	- Improve the network and connectivity with risk information, early warning, RDAS, climate database (observed and future) and a dynamic asset database; enhance visualization
AGRICULTURE					
7	SESAME RIMES	Active/ Pilot	- Provides agromet advisories to farmers	- Extension workers - Farming communities	Enhance accessibility at policy, technical and farmer-user level. Link it with RDAS data and analytics.
WATER					
9	FFGS Flash Flood Guidance System RIMES	Active	- Providing warning on flash flood.	- Forecasters	Scale up to cover multiple locations (currently only covers two)
10	Long Range Flood Forecasting System RIMES	Active/Operationally available	- Ensemble streamflow prediction for major river basins	- Forecasters - Disaster managers - Sectoral agencies	Scale up to cover multiple river basins (currently only covers two). Expand access to other sectors, beyond the Flood Forecasting & Warning Centre. - Integrate exposure information
PAKISTAN					



Portal/DSS	Developer	Status	Functions	Target Users	Gaps to be addressed by CARE	
AGRICULTURE						
12	NO DSS available with department for now	PARC Pakistan Agriculture Research Council (PARC)/Irrigation Department Rawal Dam-Islamabad	-	-Use Helpline 0800-84420 for updating farmers about situations	-	Develop new DSS to for PARC
NEPAL						
AGRICULTURE						
15	Agriculture Management Information System (AMIS)	PPCR (World Bank)	Active	-Provides agro-advisories -Has agro-call centers and digital display boards	-Farmers	Improve dataflows of AMIS to local agriculture extensions and farmers
TRANSPORT						
16	DSS for Improving the Resilience of Nepal's Strategic Roads Network	World Bank and Nepal Department of Roads	Complete	-Support prioritizing investments in strategic road infrastructure. The DSS integrates hazard and socio-economic data to identify sites of highest vulnerability. -The geographical scope of the project is the eight road corridors	-Nepal Department of Roads -Nepal-India Regional Trade and Transport Project	Build on this existing DSS, increasing geographic and technical coverage
17	Nepal Hazard Mapping and Risk Assessment			-Maps infrastructure, geological data, hazards, hydromet, population, etc. for Nepal	-Open Data -Nepal Transport Ministries	CARE to further build upon this existing dataset, to develop a more pertinent and granular decision support system in transport.
WATER						
18	FloCAST	RIMES	Active	-Discharge and water level information based on 3-days WRF forecast. -Operational for Narayani and Karnali river basins	-DHM operational staff	-Scale up the system to include more than two river basins. -Link DHM APIs with the user-department DSSs for data linkage, sharing and utilization of hydromet data analytics. -Integrate exposure information



ANNEX 5: Summary of the Project’s Financial Management Arrangements

FM Staffing	The existing FM team of ADPC and RIMES will be responsible to maintain the financial management arrangements acceptable to the Bank. Each entity will hire one financial management specialist from the grant proceeds to support the existing team. The Bank will organize a training session as part of project launch to acquaint the FM staff with the World Bank FM and Disbursement requirements. Some activities under Component 1 and 2 will be implemented by the existing staff/experts of ADPC and RIMES. These activities and associated costs will be identified in the annual work plan of both implementing entities. It has been agreed that ADPC and RIMES can spend up to 15% of the total component 1 and 2 allocation on salaries and associated operating expenses for the program activities they will implement employing their existing staff/experts.
Budgeting	Both entities will prepare detailed cost estimates for the project life with annual breakup that will be agreed at appraisal. Before start of each financial year, ADPC and RIMES will furnish their annual budgets in agreed format to the Bank for review and approval. The budget will identify salaries of the entities’ existing staff and administrative expenses proposed to be charged to the project, if any, and the basis for charging these expenses to the project.
Accounting and Reporting	Separate books of accounts for the project will be maintained by both the implementing entities in accordance with their existing accounting framework which is acceptable to the Bank. Both entities will furnish quarterly IFRs to the Bank within 45 days of the close of their fiscal semester.
Internal Controls	<p>The Project Operations Manual (POM) will include details of the Bank’s fiduciary requirements and will be followed. The project will employ a significant number of individual consultants, and the POM will include details on the procurement and contract management processes for the individual consultants. For other expenses including training and travel, the existing policies and procedures of the entities will be applicable which will be referred in the POM. ADPC and RIMES have prepared the draft POMs that will be approved by the project effectiveness.</p> <p>For the Climate Innovation Challenge and TechEmerge Resilience Challenge (ADAPTECH) under Component 2.4, ADPC will disburse the grants to the beneficiary entities / individuals to finance expenditures in relation to the solutions provided by them as detailed in the operations manual. The funds would be transferred to their respective Bank AccountsThe Bank will consider only the actual expenditure incurred by the grant recipient as eligible expenditure. The operations manual will provide details of the expenditure eligible under the climate innovation challenge and ADPTECH grants. Moreover, the operations manual will detail procurement and financial management procedures for the grant recipients. Every quarter, the grant recipients will submit utilization reports to ADPC, who will verify the expenditure incurred and report to the Bank in SOE for documentation. The expense incurred by the grant recipient will be subject to audit by the ADPC auditors. Any amounts disbursed</p>



	for grants and not spent by the recipient by the project closing date should be refunded to the Bank.
Audit	RIMES will prepare separate annual financial statements for their component of the project that will be audited by private sectors auditors, acceptable to the Bank. ADPC will include a separate disclosure of the project, acceptable to the Bank, in its entity financial statements and the project will be audited as part of overall ADPC audit. The Bank has shared the TORs for the project audit which are acceptable to the implementing entities. The fiscal year of both the entities closes on December 31, and they will submit the acceptable audited financial statements along with the Management Letter issued by the auditors to the Bank within six months of the close of the fiscal year. The first audited financial statements and the management letter will be due on June 30, 2021.
Disbursement	<p>Advance and Direct Payment will be the main disbursement method used for the project. Both implementing entities will open segregated designated account for the project funds, in a commercial bank acceptable to the Bank. The designated accounts will be denominated in US Dollars. Both the implementing entities will be required to document the expenditure with the Bank on quarterly basis. Statement of Expenditure (SOE) will be the basis of expenditure documentation with the Bank, where the implementing entities will report on the expenditure incurred from the earlier advance. The Bank will document eligible expenditure based on the review of the SOE and will replenish the account.</p> <p>All payments will be processed at ADPC and RIMES offices in Bangkok, the other country offices will not maintain advances or bank accounts. For any project related expenditure incurred at the country level, the respective office will provide the documentation to ADPC and RIMS Bangkok to make the payment directly to the vendor.</p>

Annex 6: Summary of Procurement Assessment and Arrangement

Assessment of IAs' Procurement Capacity

1. The Bank has assessed both Implementing Agencies' capacity to carry out the procurement under the Project. **ADPC** has a full-fledged dedicated procurement and contract management unit. It has been responsible for procuring the services of individual consultants, consulting firms, equipment, software and data, etc. Over the last five years alone, ADPC has hired more than 500 individual consultants for deployment in eight countries and engaged the services of more than 60 consulting firms and organizations. The approximate budget exceeded US\$7 million for the completed activities so far.
2. **RIMES** has implemented different projects over the last ten years with increasing in scope and budget from various types of donors: governments to development and technical partners, NGOs, and business entities. In the past five years, total cost of projects that RIMES implemented averaged US\$1.8 million annually. RIMES has mostly handled low-value low-risk contracts that involved only request for quotations for goods and non-consulting services, simple methods for employment of consulting services, and occasional direct procurement, etc.
3. Both agencies have undertaken Bank-funded consultancy assignments but do not have prior experience in organizing and managing implementation of a project of such size as Borrower/Recipient in relation to the Bank. Overall, their procurement capacity and internal controls are considered adequate, provided the agreed mitigation measures are implemented. Both agencies' procurement risk is rated at **Substantial**.
4. The detail procurement capacity and risk assessment are recorded through P-RAMS tool of the Bank's operational portal. Mitigation measures agreed mainly include the following:

Sr. No.	Risk Description	Mitigation measures/actions	Action by	Time of completion
1	Need to strengthen capability of handling procurement and contract management of complex transactions	Hire individual consultants with experience in handling Bank-financed procurement and contract management	RIMES and ADPC	June 2020
2	Need to adopt standard procurement documents under this project with Bank's agreement	Share, if any existing, and draft new standard procurement documents, including RFQ, CQS, ICs, and contract forms, etc. and submit them for Bank review	RIMES and ADPC	June 2020
3	Staff are not familiar with Bank's Procurement Regulations and use of STEP	Bank task team will provide such training to relevant staff at RIMES and ADPC	World Bank	Before or during project launch



Assessment of IAs' Procurement Manuals

5. Being international organizations, they do not follow the public procurement law of Thailand where their headquarters are located. They recently strengthened their procurement and contract management systems through adopting institutional Financial Regulations and Procurement Manuals. In accordance with paragraph 5.3 of the Bank's Procurement Regulations, when approaching the national market, the country's own procurement procedures may be used. Under this project, in place of a country's procurement procedures, the agencies have adopted or will adopt a Procurement Manual, which defines, among others, the agency's open competitive procurement arrangement.

6. **RIMES:** It adopted a Procurement Manual in 2019. Bank has assessed the Open Tender Procedure defined in RIMES' Procurement Manual. When the local market is approached, this Open Tender Procedure may be used, subject to paragraph 5.4 of the Bank's Procurement Regulations and the following conditions:
 - 1) Only the model procurement documents for Open Tender Procedure agreed with the World Bank shall be used for bidding.
 - 2) Procurement will be open to eligible firms from any country. This eligibility shall be as defined under Section III of the Procurement Regulations. Accordingly, no bidder or potential bidder shall be declared ineligible for contracts financed by the Bank for reasons other than those provided in Section III of the Procurement Regulations.
 - 3) The request for bids/request for proposals document shall require that Bidders/Proposers submitting Bids/Proposals present a signed acceptance (in the form attached) at the time of bidding, to be incorporated in any resulting contracts, confirming application of, and compliance with, the Bank's Anti-Corruption Guidelines, including without limitation the Bank's right to sanction and the Bank's inspection and audit rights.
 - 4) Procurement Documents include provisions, as agreed with the Bank, intended to adequately mitigate against environmental, social (including sexual exploitation and abuse and gender-based violence), health and safety ("ESHS") risks and impacts.

When RIMES' other procurement arrangements other than the Open Tender Procedure are applied, such arrangements shall be subject to paragraph 5.5 of the Procurement Regulations. Procurement of consulting services under this project shall be completely subject to the Bank's Procurement Regulations.

7. **ADPC:** It has drafted a Procurement Manual but has not adopted pending approval by its Board. Once the Manual is adopted, the open competitive procurement arrangement as set forth in the Manual may be used when the local market is approached, subject to paragraph 5.4 of the Procurement Regulations and further conditions/clarifications that will be agreed between ADPC and the Bank. Paragraph 5.5 of the Procurement Regulations will not be applied before ADPC's Procurement Manual is adopted as there are no procurement arrangements defined in ADPC's existing procedures. Procurement of consulting services under this project shall be completely subject to the Bank's Procurement Regulations.



Summary of PPSDs

8. ADPC and RIMES have prepared their Project Procurement Strategy for Development (PPSD) based on their respective institutional arrangements, project components and activities. Both agencies will procure numerous small contracts for employment of individual consultants, supply of office equipment and furniture, computing equipment and off-shelf software, relatively small contracts hiring firms for consulting services, etc. All these may be procured following simple selection methods, such as RFQ, Selection of ICs, CQS, Direct Selection as justified, etc. RIMES will procure several contracts above US\$1.0 million for ICT system and database development, which would require open international competition or QCBS. No large or complex procurement contracts, such as at OPRC level, are expected for this project. Based on the PPSDs, each agency has prepared a Procurement Plan for the first 18 months of implementation. Bank has reviewed and agreed with the same.

Thresholds for Procurement Methods and Prior Review

9. **ADPC:** ADPC will be responsible for all procurements under this procurement plan. The selection methods indicated in Table 1 will be used for procurement under the project. Appropriate thresholds applicable to project with a ‘Substantial’ risk rating have been provided.

Table 1 Selection Methods to Be Used in the Project

Expenditure Category	Contract Value (Threshold)	Selection Method (thresholds as guidance)	Contracts Subject to Prior Review (thresholds as mandatory)
Works including turnkey, supply and installation of plant and equipment and PPP	≥US\$200,000	Request for Bids	All contracts above US\$ 10,000,000
	< US\$200,000	Request for Quotations	
	Per the requirements of Procurement Regulations 6.8 to 6.10	Direct Selection (as agreed in Procurement Plan)	
Goods and non-Consulting Services	≥US\$150, 000	Request for Bids	All contracts above US\$ 2,000,000
	< US\$150,000	Request for Quotations	
	Per the requirements of Procurement Regulations 6.8 to 6.10	Direct Selection (as agreed in Procurement Plan)	
Consultant Services (firms)	≥US\$300,000	All competitive methods; advertise internationally	All contracts over US\$ 1,000,000 equivalent
	< US\$300,000u	All competitive methods;	



		advertise locally	
		Consultant's Qualification-Based Selection (CQS)	
	-----	Selection of Particular Types of Consultants - UN Agencies (as agreed in Procurement Plan)	
	Per the requirements of Procurement Regulations 7.13 to 7.15	Direct Selection (as agreed in Procurement Plan)	
Individual Consultants	Per the requirements of Procurement Regulations 7.34 to 7.38	Individual Consultant Selection	All contracts over US\$300,000 equivalent
	Per the requirements of Procurement Regulations 7.39	Direct Selection (as agreed in Procurement Plan)	

Note:

- (1) CQS = Consultant's Qualification-Based Selection; FBS = Selection under a Fixed Budget; INDV = Individual Consultant Selection; LCS = Least-Cost Selection; QBS = Quality-Based Selection; QCBS = Quality- and Cost-Based Selection; RFB = Request for Bids; RFQ = Request for Quotations; SPD = Standard Procurement Document.
- (2) The determination of whether a contract meets the procurement prior review threshold is based on the estimated value of the contract, including all taxes and duties payable under the contract.

10. RIMES: RIMES will be responsible for all procurements under this procurement plan. Selection methods indicated in Table 1 will be used for procurement under the project. Appropriate thresholds applicable to the project with 'substantial risk' rating have been provided.

Table 1 Selection Methods to Be Used in the Project

Expenditure Category	Contract Value (threshold)	Selection Method (thresholds as guidance)	Contracts Subject to Prior Review (thresholds as mandatory)
Works including turnkey, supply and installation of plant and equipment and PPP	≥US\$5,000,000	Request for Bids - International	All contracts above US\$ 10,000,000
	≥US\$200,000, <US\$5,000,000	Request for Bids -Local	
	< US\$200,000	Request for Quotations	
	Per the requirements of Procurement Regulations 6.8 to 6.10	Direct Selection (as agreed in Procurement Plan)	
Goods and non-Consulting	≥US\$500, 000	Request for Bids-International	All contracts above US\$ 2,000,000
	≥US\$150,000,	Request for Bids-Local	



Services	<US\$500,000		
	< US\$150,000	Request for Quotations	
	Per the requirements of Procurement Regulations 6.8 to 6.10	Direct Selection (as agreed in Procurement plan)	
Consultant Services (firms)	≥US\$300,000	All competitive methods; advertise internationally	All contracts over US\$ 1,000,000
	< US\$300,000	All competitive methods; advertise locally	
		Consultant’s Qualification-Based Selection (CQS)	
Per the requirements of Procurement Regulations 7.13 to 7.15	Direct Selection (as agreed in Procurement Plan)		
Individual Consultants	Per the requirements of Procurement Regulations 7.34 to 7.38	Individual Consultant Selection (INDV)	All contracts over US\$300,000 equivalent
	Per the requirements of Procurement Regulations 7.39	Direct Selection (as agreed in Procurement Plan)	

Note:

- (1) CQS = Selection Based on Consultants’ Qualification; FBS = Selection under a Fixed Budget; INDV = Individual Consultant Selection; LCS = Least-Cost Selection; QBS = Quality-Based Selection; QCBS = Quality- and Cost-Based Selection; RFB = Request for Bids; RFQ = Request for Quotations; SPD = Standard Procurement Document.
- (2) The determination of whether a contract meets the procurement prior review threshold is based on the estimated value of the contract, including all taxes and duties payable under the contract.