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Technical Assessment

ODISHA STATE CAPABILITY AND RESILIENT GROWTH PROGRAM (P175811)

February 2023

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Abbreviations and Acronyms

ASI	Annual Survey of Industries
BSKY	Biju Swastha Kalyan Yojna
BSLLD	Basic Statistics for Local Level Development
CAPI	Computer Aided Personal Interviews
CBDRM	Community based disaster risk management
CBRN	Chemical Biological Radioactive and Nuclear
CDM	Centre of Disaster Management
COE	Centre of Excellence
CPF	Country Partnership Framework
CPF	Country Partnership Framework
CSC	Citizen Service Centres
CSS	Centrally Sponsored Schemes
DBT	Direct Benefits Transfer
DDH	Development Data Hub
DDMA	District Disaster Management Authority
DEOC	District Emergency Operation Centres
DEPA	Data Empowerment and Protection Architecture
DES	Department of Economics and Statistics
DMTC	Disaster Management Training Cell
DPO	District Project Officers
DSS	Decision Support System
EWDS	Early Warning Dissemination System
FD	Finance Department
GAMSO	Generic Activity Model for Statistical Organization
GoO	Government of Odisha
GPDMP	Gram Panchayat Disaster Management Plan
GPS	Global Positioning Satellites
GSBPM	Generic Statistical Business Process Model
GSDP	Gross State Domestic Product
HDM	Health Data Management Policy
HDR	Human Development Report

IBF	Impact-Based Forecasting
IMD	Indian Meteorological Department
IMR	Infant Mortality Rate
KALIA	Krushak Assistance for Livelihood and Income Augmentation
MeitY	Ministry of Electronics and Information Technology
MIS	Management Information System
MoHFW	Ministry of Health & Family Welfare
MOSPI	Ministry of Statistics and Programme Implementation
NCRMP	National Cyclone Risk Mitigation Project
NDAP	National Data Analytics Platform
NDHM	National Digital Health Mission
NDMP	National Disaster Management Plan
NFSA	National Food Security Act
NLTA	Non-Lending Technical Assistance
OCAC	Odisha Computer Application Centre
ODRAF	Odisha Disaster Rapid Action Force
ODRP	Odisha Disaster Recovery Project
OISS	Odisha Integrated Statistical System
OPS	Odisha Planning Service
OS&ES	Odisha Statistics & Economics Service
OSDMA	Odisha State Disaster Management Authority
OSDMA	Odisha State Disaster Management Authority
PMFBY	Pradhan Mantri Fasal Bima Yojana
PRI	Panchayati Raj Institutions
RDMD	Revenue & Disaster Management Department
RDMD	Revenue & Disaster Management Department
RIMS	Rationalization of Minor Irrigation Statistics
SAPCC	Odisha State Action Plan for Climate Change
SATARK	System for Accessing, Tracking and Alerting Disaster Risk Information based on Dynamic Risk Knowledge
SC	Scheduled Caste
SDG	Sustainable Development Goals

SDG	Sustainable Development Goals
SDMA	State Disaster Management Authority
SEC	State Executive Committee
SEOC	State Emergency Operation Centre
SFSS	State Food Security Scheme
SIDM	State Institute for Disaster Management
SPDP	Social Protection Delivery Platform
SRC	Special Relief Commissioner
ST	Scheduled Tribes
TNA	Training Need Assessment
UT	Union Territories
VDMP	Village Disaster Management Plan
VDMP	Village Disaster Management Plan
Web DCRA	Web-based Dynamic Composite Risk Atlas

I. Context

1. **Over the course of the past decade Odisha has made significant progress in improving living standards.** The pace of poverty reduction in Odisha was among the fastest of all states in India after 2005. Over a period of seven years, poverty, measured in monetary terms, reduced by twenty-five percentage points, and declined sharply in both rural and urban areas¹. Over the same period, the state achieved significant improvements in access to basic services such as electricity, drinking water and sanitation.² In 2005, less than 50 per cent of households in Odisha had access to electricity compared to close to 90 per cent today. Likewise, nearly 95 per cent of households in Odisha now have access to an improved source of drinking water, access to improved sanitation increased four-fold since 2005 and access to clean fuel for cooking nearly six-fold.

2. **Despite this remarkable record, the war on poverty is far from over.** Nearly one in three persons in the state is poor, and poverty reduction has been uneven across groups and regions. Poverty reduction among the Scheduled Tribes (ST) has been much slower than other groups. As a result, poverty is concentrated in the south and west where a relatively large share of the ST population resides. With a poverty rate of 63 per cent, poverty among STs in Odisha is the highest in the country.

3. Investments in social protection and human capital development are fragmented within the state, and access continues to be a challenge for the most vulnerable. The agenda for future resilience and jobs creation requires reforms that may entail workers to be supported in times of transitions or macro-shocks. Social protection underpins the ability of households to invest in the capabilities of their young members and the state's future workforce. Global evidence shows how a strategic combination of cash, in-kind support, services to address the barriers to paid work can unleash the productive potential of youth and marginalized communities. This is especially critical in a post-pandemic and climate change-affected world of precarity. While Odisha has made laudable progress in poverty reduction and outreach of several cash/food programs, the latest CMIE data on social protection access in 2021 shows only 37 percent of all poor households receive *both cash and food benefits*. The latest Periodic Labour Force Survey data, released in 2022, shows 55 percent of workers in non-agricultural jobs are outside any social security net. A responsive and adaptive social protection system is urgently needed.

4. **Stubborn pockets of poverty and uneven patterns of development persist in Odisha**. The state's human development indicators remain among the worst in India. Tackling poverty in populations designated as Scheduled Tribes (ST) has been much slower than the statewide average, as evidenced by a poverty rate of 63 percent among ST populations compared to 33 percent for the state overall. This discrepancy accounts in part for the disproportionate concentration of poverty in the south and west of the state where a large share of the ST population resides. While Odisha's has made remarkable progress in tackling infant mortality, at 44 deaths per 1,000 live births the state's infant mortality rate (IMR) continues to be among the highest in the country. Malnutrition, as reflected in rates of stunting, remains below the national average, but is high for the bottom 40 percent of the state demonstrate significantly higher rates of stunting than the statewide average.

5. The state of Odisha supports a variety of social assistance and insurance programs that collectively account for a significant share of annual State Gross Domestic Product (GSDP). According to the 2017/18 budget, the state implemented 198 state financed schemes. In 2019 the state announced the addition of a large farmer income support scheme (KALIA). Of these almost 200 interventions, 90 transfer benefits through cash, in-kind delivery, insurance contributions or livelihood

support to individuals or targeted communities. Of these ninety programs, a subset of four state financed welfare schemes accounted for almost 4 percent of GSDP in 2018/19.¹ The state implements an additional 74 centrally sponsored schemes (CSS) that are notified as Direct Benefit Transfers (DBT).² As a result, Odisha oversees more than 100 cash-transfer schemes that provide benefits and social protection to residents. While there is reasonable degree of variation in coverage across districts, figure 1 depicts that the broad coverage trends (low, medium, high) are relatively similar across districts, suggesting systematic issues rather than variability in implementation.





6. These multiple cash-transfer programs operate without an overarching policy or administrative co-ordination resulting in the duplication of administrative roles and costs. Schemes are characterized by fragmented beneficiary registers and poor linkages between beneficiary identification systems. In many instances, incomplete linkages to payment systems rules out the possibility of making direct transfers to beneficiaries. The composite effect of these deficiencies is widespread duplication of administrative functions, a proliferation of costs, poor systems for identifying and determining the eligibility of beneficiaries for social protection programs, unnecessary costs and leakages in the transmission of benefits, and poor delivery of benefits in a timely and predictable manner. The new income guarantee scheme for farmers will require robust systems for the identification of beneficiaries and the delivery of payments. Ideally, implementation of KALIA would leverage existing databases and systems.

7. **The data assets of the GoO are expanding rapidly but they are under-leveraged**. The state is experiencing a 'data deluge' through digital initiatives but its effective use is hampered by lack of coordination across departments, the absence of frameworks for quality assurance, a lack of uniform

¹ Odisha Direct Benefits Transfer Assessment Report by the World Bank and Oxford Policy Management in July 2018

standards on measurement and codification. Some government departments have developed their own management information systems and launched parallel data collections without coordinating across departments. This may result in low interoperability between different systems, impeding the usability of data. In short, better data governance arrangements and a strong data policy with a clear, realistic road map is imperative for the One Government model to succeed.

8. The lack of interoperable data systems further complicates delivery of social protection programs. Amidst the changing nature of poverty and increasing informality of the workforce, there is a need to articulate and codify a unified state level social protection architecture through clear policy directives, rebalancing from protective to promotional and preventive instruments, provide targeted support for vulnerable groups at risk of discrimination, expanding co-contributory coverage in the informal sector, and tightening delivery systems. Envisioning a governance framework for such a system can help the state envision it's social protection expenditure and reform path, while ensuring multiple efforts such as social pensions, scholarships, health services for the vulnerable and social insurance for the informal sector can be efficiently delivered through a unified delivery mechanism.

9. Taking advantage of government-wide data assets to improve decision-making requires the presence of strong governance frameworks to coordinate data collection and exchange. Data sources are proliferating with the increasing adoption of digital MIS systems and digital transactions in the delivery of services and tax collection. But departments too often operate as siloes, resulting in the duplication of functions, poor integration, and uncertainty about who produces authoritative analysis. Departments are building MIS systems without regard for standardized classifications, standards, and definitions. There are no formal procedures and structures in place for the effective management of information assets, including frameworks for quality assurance. Experience from other countries shows that in the absence of strong central leadership to ensure effective data governance, technology platforms will often fail to optimize their integration and performance monitoring potential. Closer to home, the experience of integrating existing administrative databases to facilitate the identification of beneficiaries for the KALIA scheme highlighted a range of challenges, from differences in definitions, unique household identifiers, varying spatial identifiers, and technology platforms that undermined the leveraging data assets. Strengthening data governance to ensure coordination at the state level should be a key priority.

10. **Strong statistical systems serve as a foundation for informed policy making and service delivery.** Are social benefits effectively targeted to the people who need them? Are there hidden pockets of poverty, and how does poverty manifest itself? Is the state well positioned to achieve specific government goals and what progress is being made towards the achievement of the Sustainable Development Goals (SDGs)? How do government policies and programs affect the poor? How can job-creating economic activity be stimulated? How can accountability and transparency in government improved? These kinds of questions can only be answered when statistical systems work effectively to produce, disseminate, and analyze quality data in a timely manner.

11. **Better data can lead to stronger resilience.** Odisha's statistical system will be foundational for various sectoral interventions in the state, while also helping improve risk mitigation and planning. Therefore, it is vital that the systems and methods used to generate statistics evolve to meet the demands and the opportunities of a changing economic and data environment. In an era of instant information and rapid technological change, policy makers and citizens need faster, better, and more granular statistics to make sound decisions and monitor outcomes. The development challenges of a diverse and disaster-prone state like Odisha make the need for a robust statistical system more pertinent. While there is proliferation of data sources due to the adoption of digital MIS systems and digital transactions in service delivery, these data are often siloed, and of variable standards and quality.

The mechanisms and capabilities to harness these digital data assets to produce statistics efficiently is lacking. The Directorate of Economics & Statistics (DES), the nodal agency for statistics in the state still relies on largely manual methods of data collection, analysis and dissemination that are time consuming, costly and less likely to satisfy rapidly changing user expectations. As a result, DES' centrality and relevance as the most trusted source of statistical information has diminished. This lack of reliable, up-to-date socio-economic data at the state and sub-state level is particularly a problem for the targeting, design and implementation of programs in the key policy areas of social protection and disaster-risk management.

12. **Strengthening capacity in the Departments of Economics and Statistics (DESs), the nodal agency** for statistical data at the state level, is critical. Mirroring statistical processes at the Central Ministry of Statistics and Programme Implementation (MOSPI), Odisha's DES has an elaborate system for carrying out household, establishment-based, and price surveys that produce statistics that are comparable across time and space. These surveys provide the core source data for important economic indicators such as GSDP, consumption, employment, and wages. DES has been empowered as the nodal agency to set standards on methodology for data collection in other line departments. However, the DES is weakly (if at all) linked with the rapid expansion of data collection taking place in other departments, and presently lacks capacity to fulfill its quality assurance function. DES has the scope to increase the quality, access, and usability of its data through the adoption of technology and building human resource capabilities. DES would benefit from stronger capacity to enhance relevance and access to its key statistical products, and to play its role more effectively as the nodal agency for data in the state.

13. Odisha is exposed to a wide range of natural disasters. Over the course of the last century, the coastal districts of the state were impacted by 263 cyclonic disturbances. A full 26 percent of all cyclonic disturbances that occur on the Indian subcontinent affect Odisha, with an average reoccurrence of one event every 15 months. Severe cyclonic storms affected the state in 1909, 1910, 1912, 1914, 1967, and 1971; Very Severe Cyclonic Storms occurred in 2013 (Phailin), 2018 (Titli), 2019 (Fani); and a 'Super Cyclone' collided with the state in 1999 resulting in severe damage to property and loss of life. Storms elevate risks to the state associated with inland floods, coastal flooding and chronic shore erosion. Due to its geographic location and associated meteorological conditions, Odisha is disproportionately affected by heavy rains, lightning, heatwaves, flash flooding and the impact of hazards associated with climate change such as sea level rise. Moreover, the state falls across moderate damage and low damage risk seismic zones. Odisha's 480km coastline is also exposed to Tsunami. Recurrent disasters significantly impact economic and development related activities in the state and adversely affects agricultural production, marine fisheries, biodiversity, infrastructure, human health and development gains.

14. Economic damages associated with the aftermath of natural disasters are increasing in line with the increased frequency of events. During the 1970s the value of property lost in Odisha to natural disasters was estimated at INR 10.5 billion (equivalent to 11 percent of Gross State Domestic Product [GSDP] for the period). In comparison to the 1970's, equivalent losses ballooned nearly seven times through the course of the 1980s, and nearly 10-fold in the 1990s (HDR 2004) contributing to serious fiscal imbalances in the state. The sharp increase in the number of extreme weather events in Odisha is aligned with the steady upward trend in economic damages attributed to these events observed worldwide. On average, Odisha is incurring Rs.3,000 Cr (USD 430 million) of financial losses each year due to natural calamities, with negative effects for the economy of the state. Analysis by the Office of the State Relief Commissioner (SRC) indicates that natural disasters have resulted in financial losses of more than Rs.72,000 Cr (USD 10.2 billion) over the course of the past 24 years (17 floods, five severe cyclones and 11 droughts). Total spending on associated relief over the same period was estimated at

Rs.12,052.76 Cr (USD 1.7 billion), underscoring the scale of expenditure imposed on the state and opportunity costs in the form of unfunded development activities.

15. Institutional strengthening of disaster risk management is vital to mitigate future losses in Odisha. In the aftermath of the 1999 Super Cyclone, the GoO established the OSDMA to pursue proactive mitigation and preparedness initiatives as well as reactive relief, restoration, and reconstruction activities. The OSDMA updates the State Disaster Management Plan on an annual basis and supports the work of District Disaster Management Authorities in preparing District Disaster Management Plans. The OSDMA also extends guidance to state line departments to mainstream disaster risk reduction measures in development activities and to assist with the preparation of Departmental Disaster Management Plans. The State Disaster Management Plan takes into consideration specific targets for sustainability and State Development Goals, the Odisha Vision Document 2036's short- and long-term targets, the Sendai Framework for Disaster Risk Reduction (2015-2020) and the Prime Minister's 10-point agenda for disaster risk reduction. However, achievement of these ambitious targets has been set back by the increased frequency of events and the concurrent hardships imposed on the state's citizens and economy. A preliminary estimate derived from a Damage, Loss and Needs Assessment conducted in the aftermath of cyclone Fani (May 2019) by the World Bank, Asian Development Bank and United Nations, estimated damages of USD 2.4 billion, losses of USD 1.1 billion and recovery costs of USD 4.1 billion.

16. While the state operates large social protection schemes, statistical machineries and disaster management agencies, implementation gaps remain and synergies between these areas have not been adequately exploited. For example, disaster agencies do not coordinate for planning, preparedness, and delivery of benefits with the state's statistical systems or social benefits platforms. Similarly, forecasting of disasters is not integrated into the design of cash transfer programs in coastal areas of the state. Good quality data to plan and prepare for social assistance needs and track delivery/risks can underpin successful implementation of an adaptive social protection system that responds effectively to disasters and climate risks. Proliferation of multiple social protection and other schemes to help citizens has led to increased overhead cost and lack of information amongst beneficiaries. Further, citizens lack a clear local point of contact to update information for their potential eligibility or registration for core safety nets implemented by the state. Benefit levels and targeting criteria are not based on high frequency dynamic data, and these could be strengthened through a consolidated social registry. On disaster risk, information alerts to citizens are not provided at scale and local governments are not engaged in planning for shocks and proposing needs for the state budget cycle. Overall, data quality and disaster planning remain rudimentary, and human resources staffing DBT Cell, DES and OSDMA need training and socialization to better use technology.

II. Program Description

A. The Government Program

17. The Government of Odisha has improved upon their previous vision of 3Ts consisting of Teamwork, Transparency and Technology and have added two more dimension of Transformation and Time-limit for implementing citizen-centric good governance. The focus of 5T action plan is to transition Odisha towards a more Empowered Odisha by focusing on alleviating poverty, ensuring equal opportunities to women and devising inclusive policies.

18. The Government of Odisha has a well-established Direct Benefits Transfer (DBT) cell in the Finance Department. As per directive of the Union Government of India, all state governments are

required to setup a DBT cell in the state. The primary responsibility of the DBT cell is to ensure regular monitoring of delivery of benefits by various centrally sponsored schemes (CSS). In 2016, the Government of Odisha partnered with the World Bank to expand the scope of the DBT cell with a focus on developing recommendations to streamline benefit delivery processes and end-to-end service delivery chain.

19. To support the implementation of 5T action plan and to promote transparency, Government of Odisha has developed State Direct Benefits Transfer portal. The state DBT portal² is managed by State DBT cell which is responsible for ensuring that all notified DBT schemes³ upload related data on the state DBT portal on a regular basis. The process of reporting data on the portal has been automated. As per the state DBT cell guidelines⁴, Government of Odisha has created an Advisory Board chaired by the Chief Secretary and other departmental heads.

20. The World Bank through a Non-Lending Technical Assistance (NLTA) helped the government to undertake assessment of twenty-nine (29) schemes. Based on the assessments conducted by the state government's DBT Cell⁵ highlight the need for robust end-to-end business processes through an integrated social registry to complement existing and future digital benefit transfers supported by a robust state data policy. Analysis suggests the need for a complementary human resource realignment within the delivery chain, through coordinated scheme and district level DBT Cells, to expedite end-to-end process flows for DBT portal onboarding and improved last-mile delivery.

21. Proliferation of multiple social protection schemes and other schemes to help citizens has led to increased overhead cost and has further resulted in lack of information amongst beneficiaries. Clearly in contested political economies schemes will continue to grow election to election. The state proposes to address this challenge by developing the policy framework and tools for a unified delivery system at the state level. These systems shall allow for greater expenditure benchmarking for state schemes and improving citizen access at both first mile and last mile delivery. This will not only help reduce delivery costs for current programs but will also develop readiness for future scheme-planning and fiscal consolidation in states. Further, such delivery systems approach will result in long term costs savings regarding impact of aging and enable quick responses following disasters, which can also contribute to reduced losses and cost efficiencies.

22. Government of Odisha operates a centralized Sanjog Helpline, an e-Grievance Redressal System. While individual schemes per their guidelines have a grievance redressal mechanism, but it may not necessarily be very effective. To ensure an effective grievance redressal, GoO has deployed an e-grievance redressal system, wherein the objective is to make the grievances resolved through a process of single window, thereby leading to faster disposal of grievances.

23. **Sub-national data and statistical systems are critical for efficient and high-quality service delivery.** As highlighted in the India 2018 CPF, investments in building capabilities of state governments in India is essential to India's development trajectory as states play a leading role in designing policies and implementation frameworks for service delivery. Increasingly, governments at sub-national level are leveraging technology to transform service delivery by enabling choice information and communication architecture for its citizens'. Use of both technology and data are key to the success of

² <u>https://dbt.odisha.gov.in</u>

³ <u>https://dbtbharat.gov.in/scheme/scheme-list</u>

⁴ <u>https://pmksy.gov.in/pdflinks/DBTCellGuidelinesforState.pdf</u>

⁵ A series of assessments of program processes and household surveys documenting program coverage/targeting at the state level, supported by the World Bank and submitted by the state DBT Cell to the Finance Department in 2018.

this agenda. State governments across India are at various level of digitization, wherein some governments are more advanced in leveraging data and technology for service delivery, as compared to other states. Therefore, like in other federal and heterogenous country contexts, modernizing data and statistical systems at the sub-national level will be essential in enabling India to achieve future resilience, growth, and prosperity.

24. **Government of Odisha has embarked on a process to strengthen the state statistical system to meet the demands and opportunities of a changing economic and data environment**. In an era of instant information and rapid technological change, policy makers and citizens are demanding faster, better and more granular statistics. With greater decentralization, development outcomes at the state level are increasingly tied to the capabilities of the public sector at the state and local levels to plan, manage resources, deliver services and monitor outcomes. The development challenges of a diverse state like Odisha make the need for a robust statistical system more pertinent.

25. Directorate of Economics & Statistics (DES) is at the center of the State Statistical System of Odisha. DES is the nodal agency responsible for collection, compilation, analysis and publication of data on the socio-economic and environmental situation in the state. It carries out its tasks by conducting household and enterprise surveys and collecting administrative data from line ministries and agencies across the state government. DES is responsible for coordinating with line departments in the state and the Ministry of Statistics and Programme Implementation (MOSPI) at the federal level on all matters related to official statistics.

26. Government of Odisha (GoO) has put in place robust capabilities for disaster risk management, particularly cyclone preparedness and response. The office of the Special Relief Commissioner (SRC) and Odisha State Disaster Management Authority (OSDMA), under the Revenue & Disaster Management Department (RDMD), assist the State Executive Committee (SEC) in effective disaster management in the State. RDMD shoulders the responsibility of providing immediate relief to the people affected by disasters and undertakes rescue, rehabilitation, and restoration work. The Odisha State Disaster Management Policy of 2005 defines OSDMA's role in pre-disaster (planning, capacity building, mitigation) and post-disaster activities (reconstruction and physical recovery projects mostly in housing and infrastructure). OSDMA's concerted efforts at cyclone preparedness, heat action planning, lightning detection cum alert systems and other similar initiatives combined with a strong capacity building and awareness program of the communities have resulted in reduced disaster-induced fatalities. Effective responses to 2013 Cyclone Phailin and 2019 Cyclone Fani have also clearly demonstrated the state's ability to substantially reduce loss of lives as compared to the super cyclone of 1999.

27. Systematic risk assessment, risk and impact analysis, and early warning dissemination are key roles played by OSDMA as also mandated by the state DM Policy. Towards this, OSDMA has established SATARK (System for Assessing, Tracking and Alerting Disaster Risk Information based on Dynamic Risk Knowledge), a one-stop platform to provide impact-based forecasting support. In the development phase of the SATARK (2018-2021), it integrated weather-based products from the India Meteorological Department and other local and regional sources for ready access and reference; further, it incorporated threshold-based indicators to transform IMD forecasts into user-relevant early warning information. Through the Bank-supported National Cyclone Risk Mitigation Project (NCRMP) Phase I, OSDMA established an early warning dissemination system (EWDS) in 22 blocks under 6 coastal districts to communicate disaster warnings up to the community level.

28. OSDMA has implemented community-based disaster risk management (CBDRM) programmes and activities since its inception. This has included the Orissa Disaster Mitigation Programme⁶ which supported coastal communities for formulation of community contingency plans and built first responder capacities. Investments in community capacities for disaster management have continued through the years, including in the form of annual mock drills and other flood/cyclone/tsunami preparedness activities. With participatory risk assessments and planning at the heart of most CBDRM initiatives (both GoO and civil society led), their positive impact on community resilience have been witnessed in several successive disaster events. Communities involved with CBDRM programs have demonstrated⁷ enhanced capabilities for safe evacuation and decisive action for early recovery during Cyclone Phailin. Disaster management planning is also an area where OSDMA has undertaken initiatives in fulfilment of its roles mandated by the Disaster Management Act 2005. This has included development of the State Disaster Management Plan, District Disaster Management Plans, Department Disaster Management Plans, Heat Wave Action Plan, and Village Disaster Management Plans (VDMPs). In 2018, OSDMA scaled up the development of VDMPs and completed this exercise in 9986 (out of total 51, 349⁸) villages covering 2301 Gram Panchayats across all the 30 districts of the state, with plans to cover other disaster-prone villages under this program. Further, GoO seeks to institutionalize the disaster management planning process through integration with development programmes by taking policy and programmatic action at multiple levels.

29. Over the past 23 years, OSDMA has managed various disasters and evolved in form and function to meet the emerging needs and opportunities for disaster risk management. OSDMA is part of a larger framework of disaster management institutions in Odisha which includes the SRC's office created in 1965-66 for conducting relief and rescue; the State Disaster Management Authority (SDMA) and State Executive Committee (SEC) at the state level; and District Disaster Management Authority (DDMA) at the district level as established in 2010. The SEC under the chairmanship of the Chief Secretary coordinates all disaster management activities of the state. The Odisha Disaster Rapid Action Force (ODRAF) was created in 2001, it has expanded to 20 units to cater to different parts of the State. Operations costs of ODRAF are borne by OSDMA. The training and capacity building of ODRAF, Fire Services, and other Search and Rescue forces is undertaken by OSDMA's Disaster Management Training Cell (DMTC) that has been set up in Revenue Officers' Training Institute (ROTI), Gothapatana, Bhubaneswar. It is envisioned that the DMTC will continue to work in the field of capacity building till the formal facilities of State Institute of Disaster Management (SIDM) are set up. The setting up of the State Institute of Disaster Management (SIDM) Odisha under the World Bank supported Odisha Disaster Recovery Project (ODRP) was decided in the 1st meeting of the Joint State level Project Steering Committee held on September 6, 2014. It was mentioned that the SIDM will be set up as a Training and Research Institute under the command and control of OSDMA. The SIDM campus is under advanced state of completion, however as of now it does not have a business plan or human resources allocated.

B. The Proposed Operation

30. The development objective of the proposed operation is to protect poor and vulnerable households from the impact of economic and climate shocks in Odisha. The PforR Program will achieve this objective by supporting the Government in scaling up existing interventions at the State level in three Results Areas of (i) increasing social protection coverage through adaptive delivery systems, (ii)

⁶ Delica-Willison, Z. (2003). Community-Based Disaster Risk Management: Gaining Ground in Hazard-Prone Communities in Asia. Philippine Sociological Review, 51, 49–64. <u>http://www.jstor.org/stable/44243072</u>

⁷ See for example, the example of Village Level Risk Reduction Committees in Ketuajanga village in the aftermath of Cyclone Phailin <u>https://cbdrm.org/case-studies/responding-emergencies-pfr-perspective/</u>

⁸ OSDMA <u>https://www.osdma.org/state-profile/#gsc.tab=0</u>

strengthening statistical systems for better planning and resilience, and (iii) reducing losses by strengthening disaster management systems.

31. Results Area 1: Increasing Social Protection Coverage through Adaptive Delivery Systems: Targets will incentivize key business process reforms to augment the State government's capacities to increase coverage of cash transfers for the vulnerable through a dynamic and adaptive social protection delivery system. Recent data shows that cash transfers report weak coverage⁹ in the state due to cumbersome application processes and lack of automated systems for application, registration, and eligibility verification. The State proposes to address this challenge by developing the policy framework and tools for a unified delivery system. This platform will allow consolidated delivery of core safety nets to vulnerable and poor households through digitized mechanisms. The platform shall also enable more coverage. To support the roll-out of the SPDP, the Government of Odisha will adopt a State Data Policy (DLI1). The policy will be formulated with a vision to protect citizen privacy, while further standardizing the process of digitization, storage and sharing of data within different departments of the state, as well as sharing of data in public domain to facilitate effective and transparent governance. The program will support development and the roll-out of a social protection delivery platform (SPDP) which will enable a citizen interface through multiple channels including Citizen Service Centres called Mo-SEWA Kendras¹⁰. Adoption of SPDP (DLI2) will lead to digitization of scheme datasets and increased coverage. Digitization and integration of different scheme databases through the SPDP will also lead to better analytics which will result in improvements in inclusion and exclusion of beneficiaries. Finally, the SPDP shall improve resilience in disaster prone regions and under-served urban areas by being integrated with disaster alerts and urban municipal points of access (DLI3).

32. <u>Results Area 2: Strengthening Statistical Systems for Better Planning and Resilience:</u> Through targets and activities in RA2, the proposed PforR will aim to modernize and transform Odisha's statistical system through investing in cutting-edge technology, improving data quality and filling key data gaps. A central element of the operation will be the introduction and adoption of digital technologies in the DES (DLI 4) including database technology, essential in supporting the elimination of manual and paper processes, and to obtain integrated and efficient statistical processes in all statistical domains including a quality assurance mechanism. Activities will focus on helping DES transition to using Computer Assisted Personal Interviewing technology (DLI5). The operation will also build the capabilities to increase user engagement in statistical activities and filling key data gaps. Key outputs expected from the operation will be a digital platform for survey data collection, a data warehouse for micro-data and time-series data and a revamped website designed to provide end-users with advanced queries and the extraction of the desired data (DLI6). Associated policies such as a data dissemination policy, quality assurance and greater user inputs into the statistical program will also be important outputs.

⁹ Working paper - Intent to Implementation : Tracking India's Social Protection Response to COVID-19 (<u>https://openknowledge.worldbank.org/handle/10986/35746</u>) shows 18percent of all households receive both food+cash. The latest round of the data from 2021 December finds only 37percent of the poorest households receive both types of support. Cash transfers lag food transfers significantly, particularly in tribal districts. MGNREGS use is wide-spread across the state.

¹⁰ The SPDP platform is envisioned to be easily accessed by citizens through Mo-Sewa Kendras. There are approximately 76,000 Mo-Sewa Kendras through a e-governance initiative called the Odisha One portal. Currently, there are 521 services across 37 departments on-boarded on Odisha One portal and over 250,000 users registered. As SPDP will be designed to be a platform approach, it is envisaged that SPDP data update will be offered as an additional service[in the MoSewa Kendras?] through Odisha One portal. This will allow any resident in the state to update data value of prescribed data fields. There will be mechanisms in place to ensure that updated data is validated and verified.

33. Results Area 3: Reducing Losses by Strengthening Disaster Management Systems: Through targets in RA3, the proposed PforR will support the creation of systems, planning processes and organizational capacities to improve risk-informed disaster risk management in the State. The key actions shall build upon OSDMA's ongoing programs for putting in place future-ready systems and capabilities, including institutionalizing disaster risk management at the community level. Under the proposed operation, it is envisioned to scale up technical and institutional capability of OSDMA to strengthen the SATARK and support decision support modules to be used for development planning needs of the state and provide impact based early warning to communities and institutions to enhance preparedness/determine response arrangements (DLI 7). The PforR will support the integration of Gram Panchayat Disaster Management Plans (GPDMP) with development programs in rural areas (DLI8). In 2021, GoO tabled an ordinance¹¹ that seeks to institutionalize the participation of Panchayati Raj Institutions (PRIs) in disaster management¹². The proposed PforR seeks to support effective community disaster management planning and implementation through (i) development of riskinformed village disaster management plans which use good quality data for planning and identify actionable resilience actions (ii) development of risk-informed Gram Panchayat (GP) disaster management plans which identify actionable resilience actions and (iii) integration of actions identified in the GP disaster management plans with GP development planning processes. Finally, this result area shall help strengthen the HR and organizational capacities of OSDMA to be future ready and operationalization of the Stated Institute for Disaster Management (SIDM)¹³ (DLI9). Operationalization of SIDM was supported under Odisha Disaster Recovery Project (ODRP). Under this DLI, a phase wise restructuring plan including staffing will be developed for OSDMA and approved by the GoO. A business plan for SIDM will be developed and approved by the GoO. Subsequently, hiring/ deputation of staff will be completed for SIDM as per the approved business plan. The education delivery system will be completed at SIDM in a phase wise manner, including the setting up of four Smart Classes, and creation of an experience and learning centre for students and for the larger public.

Table 1:	PforR	Program	Boundary
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Title	The Government Program	Odisha State Capability for Resilience (PforR) Program	Reasons for Alignment/Non- alignment
Objective	 Increase usage of technology to enhance transparency in scheme implementation by scientific means of targeting and 	RA 1: Increased Social Protection Coverage through Adaptive Delivery Systems	The program supports development of a Social Protection Delivery Platform (SPDP) and its integration with three (3) largest state-sponsored

¹¹ GoO. Law Department Notification. The December 24, 2021. No.13250-I-Legis-30/2021/L ODISHA ORDINANCE NO. 02 OF 2021. THE ODISHA PANCHAYAT LAWS (AMENDMENT) ORDINANCE, 2021.

¹² The proposed clause in the Panchayat Laws mandates that "subject to the provisions of the Disaster Management Act, 2005, preparation of Disaster Management Plan at village and Grama Panchayat level, integration with development plan, capacity building of stakeholders, carrying out and facilitation of relief, rehabilitation and reconstruction activities in disaster affected areas in accordance with State Plan and District Plan, and to undertake other measures as may be necessary for disaster management".

¹³ OSDMA has recognized the need to establish an Institute with Training, Research and Design facilities, so that more personnel may be adequately trained to support the community during times of such disaster, for a faster swifter and more effective Disaster Response and Management. State Institute of Disaster Management (SIDM) is being developed by OSDMA for capacity building of human resources from Odisha and other coastal states.

Title	The Government Program	Odisha State Capability for Resilience (PforR) Program	Reasons for Alignment/Non- alignment
	 identification Enhance coverage of beneficiaries in all centrally sponsored and state sponsored schemes Transition from a reactive service delivery regime to more pro-active service delivery 		schemes, which will allow government to target, identify, deliver, and monitor delivery of benefits. Additionally, the program supports strengthening of data policy and framework for the state.
	 Enable innovations in implementation of schemes Enable effective information, education and communication campaign to increase coverage and awareness building 		The program does not support additional integration of schemes with SPDP and adoption of data policy and framework in all departments of the state.
	 Leverage technology to transform statistical systems to collect and produce good quality data in a timely manner Enhance capacity building at different levels of governance to use data for informed decision making Enable access to data in public domain for research and academic 	RA 2: Strengthening Statistical System for Better Planning and Resilience	The program supports state sponsored schemes to strengthen statistical systems and capacity to produce good quality data for informed decision making and monitoring key development outcomes.
	 activities Promote team work to improve disaster planning at village and panchayat level Leverage technology to strengthen forecasting of different types of disaster 	RA 3: Reducing losses by Strengthening Disaster Management System	The program supports implementation of different types of forecasting modules and its integration with the state SATARK system to allow relevant authorities to plan at village and

Title	The Government Program	Odisha State Capability for Resilience (PforR) Program	Reasons for Alignment/Non- alignment
	 Enhance teamwork to respond to climate and economic shocks 		panchayat level for climate-related shocks.
			While the PforR is transversal in nature, the program will support deployment of forecasting hardware and software in two river basin, one district prone to landslide and 6 coastal districts out of 30 districts.
Geographic Coverage	Odisha	Result Area 1: Increasing Social Protection Coverage through Adaptive Delivery Systems Results Area 2: Strengthening Data for Better Planning and Resilience Results Area 3: Reducing Losses by Strengthening Disaster Management Systems	While RA1 and 2 are State-wide, outcomes under RA3 are limited to selected districts as these are new interventions which the State is initiating. Post roll-out and impact analysis the government intends to roll-out the intervention across all districts of the State.
Overall Financing	US\$ 4.1 billion	US\$145 million	

Key Result Areas	Activities	Outputs	Outcome	
Increased Social Protection Coverage through Adaptive Delivery Systems Result Area 1	Documentation on International Best Practices on Data Policy including Privacy, Protection and Security Undertaking Analysis of different scheme databases and developing MDDS Constituting SPDP PMU Onboarding of System Integrator Preparing evaluation report of different response messaging system	State Data Policy approved SPDP and Data Exchange platform design finalized Training content and plan for government officials finalized Response Broadcasting system procurement plan finalized Completion of integration of Odisha One portal with SPDP	 Standardization and data privacy & security measures across all state data assets Increased coverage due to integration of SPDP with schemes and Odisha One Portal Adoption of Response Broadcasting System 	
Strengthening Statistical System for Better Planning and Resilience Result Area 2	Integration of Odisha One portal with SPDP Develop If strategy Develop If strategy Develop If strategy Develop if strategy Developing and micro-database Digitization of Key products Developing quality assurance framework Preparation of implementation plan to fill data gaps Establishing user-groups for key statistical domains Developing adata dissemination policy Filling manpower gaps Strengthening statistical policies	Development of Digital survey platform completed Creation of classification and metadata repository finalized Core indicator database finalized Quality Assurance and Assessment Plan approved Capacity building of officials in statistical methodologies completed Establishment of sub-district level Statistical organization Extension of RIPAE&S finalized Creation of PlatPa&Stinalized	 Strengthening government's data dissemination capacity Enhanced data availability and accessibility Strengthening data production and improved data quality and data production in the state 	To protect poor and vulnerable households from the impact of economic and climate
Reducing losses by Strengthening Disaster Management System Result Area 3	Constitution of geo-spatial lab and upgradation of state/district Emergency operation centre Data acquisition, analysis and module development for impact based forecasting completed Completion of installation of weather/hazard monitoring stations and early warning instrumentation Development of villagerisk assessments, village disaster management plans and plan tracker platform Development of OSDMA's Restructuring Plan and SIDM's Business Plan	Multi-Hazard Risk Assessment database is developed Integration of multi-hazard data and models completed in SATARK for impact-based forecasting (IBF) 20 G.P.srisk-informed disaster management plans finalized and integrated with GPDP Restructuring Plan of OSDMA approved Business Plan of SIDM approved OSDMA's hiring completed as per Restructuring Plan Education delivery system developed as per SIDM's business plan	 Strengthening of Disaster-related impact forecasting systems for enhanced response and resilience Strengthened disaster management planning and implementation at local self government level Institutional strengthening of OSDMA Enhanced capabilities for disaster risk education and training 	state.

Figure 2: Theory of Change

Result Area 1 – Increased social protection coverage through adaptive delivery systems

34. In alignment with the 5T action plan, Finance Department, GoO through Odisha Computer Application Centre (OCAC) has embarked on a journey to create an integrated social protection delivery platform (SPDP). Through the NLTA to GoO between 2016-2019, the World Bank in partnership with the government developed a high-level solution architecture of the integrated SPDP. A successful implementation of SPDP will enable various state departments to streamline their scheme management processes, facilitate data-driven policymaking and better expenditure planning for the Government, as well as simplify the benefit delivery experience for beneficiaries.

35. Adoption of SPDP will focus on development and deployment of a state-wide Data Integration Platform to facilitate access to data, data management and business intelligence. As notified by DBT Mission, Government of Odisha is implementing several schemes in DBT mode which are mostly Centrally Sponsored schemes. In addition, they are implementing number of State Sponsored schemes. Each of these schemes use customized data systems and fragmented beneficiary databases thereby limiting their usefulness for other purposes. The purpose of SPDP is to leverage microservices and create provision for disparate systems to integrate and exchange information through a defined protocol with a focus on data privacy and security. It is expected that at least three schemes will be fully on-boarded on this platform. Data sharing and interoperability will be instrumental to drive time and cost-saving in data collection and reduce leakages in the delivery of welfare services. Through past NLTA, the Bank has shared knowledge and good practices to strengthen data systems and management processes.

36. The World Bank in agreement with the state government has selected KALIA, Madhu Babu pension and BSKY schemes to be integrated with SPDP. The objective of the integration will be to ensure that schemes are able to query SPDP for targeting and verification of beneficiaries without compromising on data security and privacy of a beneficiary.

37. KALIA scheme was launched to accelerate agricultural prosperity and reduce poverty. The scheme was launched in 2019 and consists of five (5) components, i) support to cultivators for cultivation with a total benefit of Rs 10,000 in a year for two crop seasons, ii) livelihood support for landless agricultural households with a total benefit of Rs 12,500 per each household, iii) financial assistance to vulnerable agricultural households with a total lump sum financial assistance of Rs. 10,000 per family, iv) life insurance support to cultivators & landless agriculture labourers with an insurance value of Rs. 2,00,000 with an annual premium of Rs. 165, and v) interest free crop loan. As per government farmers database, there are approximately 53 lakh farmers in Odisha. The scheme implementation is monitored by a State Level Committee under the chairmanship of Chief Secretary, Odisha & District Level Committee under chairmanship of Collector-cum-District Magistrate.

38. Madhu Babu Pension scheme was launched in 2008 with an objective to provide financial assistance to elderly, persons with disabilities and destitute. The scheme has a defined set of inclusion norms. The scheme provides benefits of Rs 500 upto age of 79 and Rs 700 for 80 years and above. There are approximately 1.5 million beneficiaries currently registered under the scheme.

39. **BSKY scheme was launched in 2018 with an objective to provide its citizens access to universal health assurance to receive quality health care.** Since its inception, approximately 3.82 lakh beneficiaries have been provided health care under the scheme, wherein the entire cost of treatment is covered by the state government. The scheme has provision to cover all families covered under NFSA/SFSS within Odisha are eligible under this scheme. While the government through its front-line workers distribute the health cards, a beneficiary has an option to collect his/her health card from a designated Mo Seva Kendras.



Figure 3: SPDP Building Blocks

40. **The SPDP platform will adopt industry best practices on design principles.** The success of the SPDP will be based on the strength of its technical design as well as the utility of its services, for the connected ecosystem. It is important that clearly articulated design principles should form the basis of the platform architecture. These principles must support the Government's envisioned 5T action plan for a higher quality of service to residents, greater inclusion, and empowerment to vulnerable section of the society. Table 2 highlights all the design principles which will be adopted during the development of SPDP.

Table 2: Design Principles	
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No.	Principles	Description	
1	Design for Inclusion	SPDP must be designed based on "minimalism" – wherein only a limited number of demographic and socio-economic attributes needs to be obtained from the registering beneficiaries. At the same time, the processes employed for registration and management of ongoing data updates, should be simple and straightforward for beneficiaries.	
2	Security and Privacy by Design	Ensuring the security and privacy of an individual's PII data (in line with the policies set by the National and State Governments) are a fundamental component of the SPDP architecture. When building a program of this scale, it is imperative that 'privacy' and 'security' are not afterthoughts, but embedded into the platform design, from day one.	
3	Openness, Vendor Neutrality and	• Usage of open standards, open APIs, open-source software and commodity infrastructure with multiple vendors	
	Standards based Interoperability	Adopting open procurement processes for the selection of managed service providers	
		• Openness and vendor neutrality ensure that the Government has access to the best technology at the lowest cost, but also has the flexibility to replace technology components, as and when required, through a plug-and-play mechanism.	
4	Service Unbundling	The SPDP architecture will be "unbundled" into many independent atomic elements that can then be recombined and layered to execute specific transactions.	
5	Design for Scale	The volume of data managed by the SPDP may increase over time (increase in coverage/integrated schemes/services etc.)	
6	User-centricity	SPDP will have to architected keeping a "user-centric design" as a central design principle. This is important so that the platform will be easy-to-use for all stakeholders concerned. Ensuring 'accessibility' and 'availability' (e.g. supporting 'online/offline' system availability) are key components of such a design.	
7	Observability through data driven processes	A key principle is to drive operational excellence in the SPDP program and improve the overall quality of public service delivery for residents. This involves measurement of operational processes at a high level of granularity using high quality data, creating well defined business metrics from this data and creating a feedback loop for sharing these insights and learning with the ecosystem for continuous improvement and optimization.	

No.	Principles	Description
8	Ecosystem approach	Given the federated/modular nature of the SPDP platform and the vision to engage with various scheme-owners under a collaborative governance mechanism, it is important to enlist a group of operational partners under an 'ecosystem' model.
9	Strong Data Governance	SPDP should be supported by a strong data-ownership model, which governs several policy requirements for the authorised data stewards/owners
10	Platform Resilience, Manageability and Reliability	SPDP will undergo a lot of changes over time (e.g. legal, processes and technology related changes). Hence, 'manageability' (i.e. ease of implementing changes) of SPDP is important.
11	Consent Management	SPDP will have to ensure the privacy of resident data by clearly defining what data is collected, the permissible uses of the data, and by ensuring that data is not shared with other entities without prior permission and consent. SPDP should also provide flexible provisions for residents to determine "what" information is provided to "whom" and for "how long", as well as "which" users should not be provided access to the resident's data in the SPDP (i.e. on the lines of a "limited opt-in" and "opt-out" consent models)

41. The sustainability and relevance of SPDP will be determined through ease of accessibility and data dynamism. One of the core principles of SPDP is to enable citizen as owner of their data, thereby enabling mechanisms for them to ensure that data is updated which will lead to data dynamism. The SPDP platform is envisioned to be easily accessed by citizens through Mo-Sewa Kendras. There is approximately 76,000 Mo-Sewa Kendras where Odisha One portal can be accessed and avail government services. Currently, there are 521 services across 37 departments on-boarded on Odisha One portal and over 250,000 users registered. As SPDP will be designed to be a platform approach, it is envisaged that SPDP data update will be offered as an additional service through Odisha One portal. This will allow any resident in the state to update data value of prescribed data fields. There will be mechanisms in place to ensure that updated data is validated and verified.

42. Adoption of a comprehensive data policy will promote standardization, openness, privacy, and security of data. However, modernizing, integrating, and equipping myriad of data systems to adhere to the data policy is equally important. Between 2016-2019, the World Bank provided NLTA to the Finance Department, Government of Odisha to get a detailed understanding of the gaps in current scheme data system to ensure end-to-end digitization of processes. The study focused on 1) organization and capability, 2) processes, 3) integration with external applications, 4) grievance handling, 5) technology and 6) last mile delivery. At a high-level, it was observed that data is mostly digitized, however, additional mechanism are required to ensure quality of data collected. Majority of the departments are leveraging data systems to generate routine reports, however there are opportunities to further leverage the wealth of data stored in various data system for improving service delivery or monitoring. There is a gap in terms of interoperability between data systems which often leads to challenges such as duplication of work, inclusion/exclusion errors, etc. Data governance and ownership is a challenge, as the assessment observes that while many departments have designated

data stewards, there are no standards or data policy for adherence to ensure oversight of data privacy, security protocols, data sharing and data use.

43. As the PforR program focusses on building systems, the government will develop a state data policy in addition to existing acts, rules and regulations. The current data protection regime is governed by the Information Technology Act, 2000 and the rules thereunder. In addition, the Aadhaar Act, 2016 provides for data security and protection of records linked to an individual's record. Until the PDP is enacted, there are other data frameworks which have been notified by respective authorities. Ministry of Electronics & Information Technology (MeitY) had constituted a committee to explore the governance of non-personal data. The Committee published a report on Non-Personal Data Governance Framework¹⁴. In 2022, MeitY has published an India Data Accessibility and Use Policy. In 2020, NITI Aayog released a draft document for Data Empowerment and Protection Architecture (DEPA)¹⁵ to support acceleration of financial inclusion whilst ensuring data security and privacy of individuals. Further, Ministry of Health & Family Welfare (MoHFW) has created a National Digital Health Mission (NDHM) and in December 2020, MoHFW published the Health Data Management Policy (HDM)¹⁶. The objective of the policy is to enable a National Digital Health Ecosystem while ensuring the security, confidentiality, and privacy of health-related personal information.

44. To support the development, modernization and integration of data systems, Government of Odisha will be adopting State Data Policy. The policy will be formulated with a vision to further standardize the process of digitization, storage and sharing of data within different departments of the state, as well as sharing of data in public domain to facilitate effective and transparent governance.

45. Adoption of SPDP will lead to digitization of scheme datasets. This will also lead to better analytics which may result in inclusion and exclusion of beneficiaries. It is important to employ a robust grievance redressal system to address any concerns of beneficiaries. While GoO has an e-grievance redressal system, it will be important that SPDP has an inbuilt module to register grievances pertaining to functioning of SPDP. In the long-term the SPDP grievance redressal module shall be integrated with the State's e-grievance redressal system for greater transparency and accountability.

Result Area 1: Increasing social protection coverage through adaptive delivery systems						
DLI	Year 1	Year 2	Year 3	Year 4	Year 5	
Strengthening	Notification and	Development of	Training and	At least two	Publish report on	
standardization	establishment of	operational	Capacity	select	lessons learned from	
and improving	State Data	guidelines and	building of at	departments	the implementation of	
quality of data	Steering and	checklist to	least 75	are	OSDP in two select	
sets in select	Data Governance	support	percent (out	compliant	departments for future	
two	Committee to	implementation	of 272) of	with the	adoption by other	
departments	oversee	and adoption of	officials in at	OSDP		
through	implementation	OSDP	least two			
adoption of the	of OSDP		select			
guidelines of			departments			
the State Data	AND		for the			
Policy and			adoption of			
documentation			OSDP			

Table 3: Pillar 1 - DLI Matrix

¹⁴ https://static.mygov.in/rest/s3fs-public/mygov 159453381955063671.pdf

¹⁵ <u>https://niti.gov.in/sites/default/files/2020-09/DEPA-Book_0.pdf</u>

¹⁶ <u>https://ndhm.gov.in/stakeholder_consultations/ndhm_policies</u>

Result Area 1: Increasing social protection coverage through adaptive delivery systems						
DLI	Year 1	Year 2	Year 3	Year 4	Year 5	
for future adoption	Requisite revision and re- notification of OSDP implementation of State Data Policy					
Development and Implementation of Social Protection Delivery Platform (SPDP) for enhanced coverage and resilience	Odisha Computer Application Center (OCAC) has finalized the RFP and onboarding of the system integrator for the development and implementation of SPDP with clearly codified Business Requirements, Functional Requirements, System Design specifications, and roll-out plan	OCAC has completed the development of SPDP as per approved specification and design	OCAC has completed a training and socialization program for 60 percent of government officials on using SPDP	OCAC has completed a training and socialization program for an additional 30 percent of government officials on using SPDP	Coverage of eligible households receiving KALIA (state government-financed quasi-basic income transfer program for farmers) has increased by 10 percent, AND ii) Coverage of eligible elderly/widow/persons with a disability under the Madhu Babu Pension Scheme (state government-financed social pensions for those not covered by national social pension schemes) has increased by at least 5 percent AND iii) Coverage of households (state government-financed health insurance scheme that covers those left out of national health insurance scheme) has increased by at least 5 percent	
Strengthening resilience through i) deployment of early warning dissemination technology systems, and ii) expanded citizen outreach	OCAC completes an evaluation report on different information/alert broadcasting systems at the state level.	OCAC completes and publishes an RFP to identify a vendor to develop a cell broadcasting system with a primary focus on early warning	OCAC has integrated SPDP and Odisha One portal for citizen use across the state. AND SPDP services are available (for	At least X number of persons utilizing SPDP for data updates in the coastal areas AND At least Y number of persons	At least X+A number of persons utilizing SPDP for data updates in the coastal areas AND At least Y+B number of persons utilizing SPDP for data updates in urban areas.	

Result Area 1: Increasing social protection coverage through adaptive delivery systems							
DLI	Year 1	Year 2	Year 3	Year 4	Year 5		
		information dissemination.	data updates and registration for programs) in at least 1500 Citizen Centric Centers with at least 1000 centers in rural coastal areas and 500 in the urban area	utilizing SPDP for data updates in urban areas.			

Result Area 2 – Strengthening statistical systems for better planning and resilience

46. **Substantial scope for quality improvements in statistics.** Another key responsibility of DES is to continuously improve the quality, usefulness and scope of statistical data in the State. However, DES's ability to fulfil these responsibilities has been hampered by the fact that it has failed to keep up with the technological opportunities and user demands. As a result, its centrality and relevance as the most trusted source of statistical information has diminished. There has been a proliferation of data sources in the state due to the development of digital Management Information Systems (MIS) and digital transformation in service delivery, but these data are often siloed, and of variable standards and quality. Moreover, DES' technical capacity to harness these data assets to produce credible statistics is lacking. DES' reliance on conventional methods of data collection such as sample surveys make the statistical production process time consuming and costly.

47. An external assessment of DES in 2020 highlighted several issues. In 2020, the World Bank commissioned Oxford Policy Management to conduct a functional review ("the Review") of the DES. The Review found that despite having a strong policy grounding, as evidenced by the Odisha Statistical Plan 2011-2017, and central government support for statistical strengthening, there were numerous weaknesses in the state statistical system¹⁷. According to the review, the DES lacks an organisational vision and a strategic plan to deliver as the apex organisation in the state statistical system. This lack of a unified vision and poor coordination among statistics producers can lead to a duplication of efforts. This has been seen for instance in Department of Agriculture and Farmers' Empowerment and DES both collecting crop yield-related data at the district level. Another example is the unclear role sharing between District Planning and Monitoring Units (DPMU) and DES caused by frequent mergers and reorganizations.

48. **Manual data collection, processing and dissemination is affecting productivity and quality**. The main method of survey data collection is based on lengthy schedules and in-person interviews. Analysis is done through a time-consuming manual process resulting in long time lags between data collection

¹⁷ Source: Functional Review – Directorate of Economics and Statistics, Government of Odisha, Oxford Policy Management 2020

and release of the statistical products. The manual nature of the statistical production process is also prone to errors and mistakes.

49. **Poor User engagement and dissemination practices.** In terms of user engagement, the Review found that DES does not routinely engage with its data users resulting in poor usage of the data it produces. Reports are often released with a delay of 2-3 years. At the extreme end, the Annual Survey of Industries report was released after a gap of 12 years. Staff responsible for schemes and surveys devise strategies, calendars, and operational plans in silos, but have little clarity on the use or users of the data they produce.

50. **A comprehensive, but largely static statistical work program.** DES manages a large program of statistical products and processes. The program of agricultural statistical system under DES includes the following schemes: i) Establishment of an Agency for Reporting Agricultural Statistics (EARAS), ii) the Agriculture Census, iii) Improvement of Crop Statistics, iv) Pradhan Mantri Fasal Bima Yojana (PMFBY), v) Rationalization of Minor Irrigation Statistics (RIMS), and vi) First Census of Water bodies. The DES also produces State Income as well as a range of price indices including i) Farm harvest prices, ii) Wholesale price, iii) Producer price of livestock products, iv) Price of Building Construction, v) Wage rate of Agriculture Labour, and vi) the Consumer Price Index. The Industrial Statistics Program consists of i) Annual Survey of Industries (ASI) and ii) Index of Industrial Production (IIP). The Socio-economic Survey Program covers i) National Sample Survey, ii) Economic Survey, iii) Economic Census, Census of employees, and iv) the Business Register. Finally, two local level statistical handbooks are produced: i) Basic Statistics for Local Level Development (BSLLD) and ii) District Statistical Handbook.

51. Recognizing the shortfall in capabilities, the Government of Odisha has embarked on this journey of transforming the state statistical system. DES has developed a modernization program ("the Program"), which is outlined in a Detailed Project Report. The main aim of the Program is to build the capabilities of DES to produce high-quality statistics for policy and decision-making. Five key areas outline the scope of the broader government program ('p') out of which four areas have been selected to be supported under the World Bank Project ('P'). See table 1 for an overview of the program.

52. A program that includes both DES and line ministries. While the larger government program will lay the foundations for a strong statistical system in Odisha by investing in manpower, improving human resource management, building capacities in line departments and encouraging public-private partnerships, the World Bank Project target areas will build on these foundations to modernize and transform Odisha's statistical system through investments in cutting-edge technology, improving data quality and filling key data gaps. A central element of the operation will be the introduction and dissemination in the DES of digital technologies including database technology, essential in supporting the elimination of manual and paper processes, and to obtain integrated and efficient statistical processes in all statistical domains including a quality assurance mechanism.

53. The operation will also build the capabilities to include users more in statistical activities and filling key data gaps. Key outputs expected from the operation would be a digital platform for survey data collection, a data warehouse for micro-data and time-series data and a revamped website designed to provide end-users with advanced queries and the extraction of the desired data. Associated policies such as a data dissemination policy, quality assurance and greater user inputs into the statistical program will also be important outputs.

	Result Area	Expected Outcomes
	Institutional Strengthening	 Improved HR capabilities within strategic areas such as IT, advanced analytics and statistical methodologies (fill vacancies)
		Strengthened Statistical System in all Departments (capacity building)
`а ,		 Strengthened block and sub-district statistical organizations to enable decentralized data-based planning (infrastructure and capabilities)
Small		• Built statistical capability of the private sector through PPPs, etc.
	Institutional Capacity Building	 Strengthen policy framework for statistics by providing a clear strategic vision to all stakeholders
		 Strengthen the legislative framework for data collection, privacy, etc. (acts and rules)
		 Improve user satisfaction through clear dissemination policy based on web-first policy and timely release of data (Advance Release Calendar)
	Digital Transformation	Enhance efficiency of survey operations through adoption of computer- assisted personal interviewing technology (CATI, CAWI, CAPI)
	of the DES	 Build database and digital platforms for data ingestion, management, discovery and dissemination for metadata, microdata, time-series and key statistical indicators
		 Enhance capabilities for geographical and demographic disaggregation data for sub-state planning
	Enhancing data quality	 Improve data quality in terms of timeliness, accuracy, and accessibility through implement of a data quality assurance framework
à	Filling key data	Expand range of data available for sub-state planning
3ig '	gaps	Increase data production for State Indicator Framework

Table 4: Main Results Areas and Expected Outcomes of Odisha Statistical Modernization Program

Table 5: Result Area 2 DLI

Result Area 2: Strengthening statistical systems for better planning and resilience						
DLI	Year 1	Year 2	Year 3	Year 4	Year 5	
Strengthening organizational data dissemination capacity through enhanced dissemination policy and digitalization of data	The State Government, through a cabinet order, has developed & adopted a state- wide data dissemination policy based on a web-first policy	DES has completed codifying business processes, data models, data ingestion workflows, and Data Migration Plan to enable the implementation	DES has published a data catalog for the state with Metadata	DES has established a state data portal And launched a core indicator database to improve online data availability for planning.	All districts are covered by the DES core indicator database, thereby allowing open data use for local planning/action.	

Result Area 2: Strengthening statistical systems for better planning and resilience						
DLI	Year 1	Year 2	Year 3	Year 4	Year 5	
		of state-wide data policy.				
Implementation of computer assisted survey technology (CAPI) for improved data quality and data production in the state		DES has deployed Computer Assisted Personal Interview (CAPI) for survey data collection across the state.	DES has completed Data collection for at least one (1) core state survey done through CAPI	DES has completed Data collection for at least one (1) additional core state survey from previous year done through CAPI	DES has completed Data collection for at least one (1) additional core state survey from previous year done through CAPI	
Strengthening data production in the state for enhanced analytics for evidenced based policy making	A Project Management and Data Analytics Unit has been established within the DES to oversee institutional development, capacity building, and incubation of new statistical products		DES has released at least one new statistical product	DES has released at least one new statistical product in addition to the previous year	DES has released at least one new statistical product in addition to the previous years.	

Result Area 3 – Reducing losses by strengthening disaster management systems

54. The proposed operation for Pillar 3 Building Resilient Odisha, builds upon OSDMA's ongoing programs for putting in place future-ready systems and capabilities, including institutionalizing disaster risk management at the community level. Engagement areas will focus on transformation of OSDMA's capacities on comprehensive impact based multi-hazard early warning system, integration of Gram Panchayat Disaster Management Plans with development programs, strengthening OSDMA to be future-ready and operationalization of the State Institute of Disaster Management.

55. **Disaster-related impact based multi-hazard early warning system.** Under the proposed operation, it is envisioned to scale up technical and institutional capability of OSDMA to deploy scientific risk assessment system and supporting decision support modules to be used for development planning needs of the state and provide impact based early warning to communities and institutions to enhance preparedness/determine response arrangements. The operation will build the scientific capabilities and shall include modernization of decision support systems at OSDMA, Water Resources Department, District Disaster Management Authorities, Special Relief Commissioner, Revenue and Disaster Management Department, towards advancing the information of potential impacts form hydrometeorological events to key stakeholders such as utility agencies, first responders, line

departments and the communities at risk. Associated operation products of early warning and dissemination systems will also be important outputs.

56. Integration of Gram Panchayat Disaster Management Plans (GPDMP) with development programs at the Gram Panchayat level. In 2021, GoO tabled an ordinance¹⁸ that seeks to institutionalize the participation of Panchayati Raj Institutions (PRIs) in disaster management. The proposed clause in the Panchayat Laws mandates that "subject to the provisions of the Disaster Management Act, 2005, preparation of Disaster Management Plan at village and Grama Panchayat level, integration with development plan, capacity building of stakeholders, carrying out and facilitation of relief, rehabilitation and reconstruction activities in disaster affected areas in accordance with State Plan and District Plan, and to undertake other measures as may be necessary for disaster management". OSDMA seeks to scale up their village disaster management planning program with an eye to preparing for the implementation of this proposed mandate in the Ordinance. This includes the scaling up the VDMP process across other risk-prone villages while also expanding the disaster management planning exercise through Gram Panchayat Disaster Management Plans (GPDMPs) as well as facilitating the integration with the development plans as envisioned in the Ordinance. Finally, OSDMA seeks to incorporate lessons from the first phase of VDMP planning into the second phase, including ensuring the plans are risk informed, digitized, and identify actionable mitigation actions. The proposed operation under this PfR seeks to support effective community disaster management planning and implementation through (1) development of risk-informed village disaster management plans which identify actionable resilience actions (2) development of risk-informed Gram Panchayat disaster management plans which identify actionable resilience actions and (3) integration of actions identified in the GP disaster management plans with GP development planning processes.

The setting up of the State Institute of Disaster Management (SIDM) Odisha under the World 57. Bank supported Odisha Disaster Recovery Project (ODRP) was decided in the 1st meeting of the Joint State level Project Steering Committee held on September 6, 2014. It was mentioned that the SIDM will be set up as a Training and Research Institute under the command and control of OSDMA. The SIDM campus is under advanced state of completion, however as of now it does not have a business plan or human resources allocated. Systematic risk assessment, risk and impact analysis, and early warning dissemination are key roles played by OSDMA as also mandated by the state DM Policy. Towards this, OSDMA has established SATARK (System for Assessing, Tracking and Alerting Disaster Risk Information based on Dynamic Risk Knowledge), a one-stop platform to provide impact-based forecasting support. In the development phase of the SATARK (2018-2021), it integrated weather-based products from the India Meteorological Department and other local and regional sources for ready access and reference; further, it incorporated threshold-based indicators to transform IMD forecasts into user-relevant early warning information. Through the Bank-supported National Cyclone Risk Mitigation Project (NCRMP) Phase I, OSDMA established an early warning dissemination system (EWDS) in 22 blocks under 6 coastal districts to communicate disaster warnings up to the community level.

58. **Strengthening OSDMA to be future ready and operationalization of SIDM.** Under this DLI, a phase wise restructuring plan will be developed for OSDMA and approved by the GoO. Staffing for OSDMA will be undertaken as per the restructuring plan in a phase-wise manner. A business plan for SIDM will be developed and approved by the GoO. Hiring/ deputation of staff will be completed for SIDM as per the business plan. The education delivery system will be completed at SIDM in a phase wise

¹⁸ GoO. Law Department Notification. The 24th December, 2021. No.13250-I-Legis-30/2021/L ODISHA ORDINANCE NO. 02 OF 2021. THE ODISHA PANCHAYAT LAWS (AMENDMENT) ORDINANCE, 2021.

manner, including the setting up of four Smart Classes, a museum and creating learning spaces for students and for the larger public.

Result Area 3: Reducing losses by strengthening disaster management systems							
DLI	Year 1	Year 2	Year 3	Year 4	Year 5		
Strengthening disaster- related impact forecasting systems for improved response and coverage of early warnings alerts	100 percent of Districts have information flows with State Emergency Operations Center and Geospatial Laboratory.	OSDMA has established Impact Based forecasting modules for Cyclone and Storm Surge.	OSDMA has establishmedImpact Based forecasting modules for Lightning, Heat and Cold wave, and landslides.	OSDMA has developed a state-wide Dynamic Multi- Hazard Risk Assessment system/platform.	OSDMA has integrated SATARK system with modules for impact-based forecasting, a multi-hazard risk assessment system, and linkages for all districts.		
Population covered (%) by risk-informed Gram Panchayat Disaster Management Plans (GPDMP) that are integrated with development programs at the Gram Panchayat levels	50 Risk Informed VDMPs prepared in 8 GPs.	8 Risk Informed GPDMPs prepared identifying costed and time-bound resilience actions.	Additional 12 Risk Informed GPDMPs prepared identifying costed and time-bound resilience actions. AND 51 Risk Informed VDMPs prepared in 8 12 GPs.	8 GPDMPs are integrated with the GP development planning process and the village resilience tracker platform.	Additional 12 GPDMPs are integrated with the GP development planning process and the village resilience tracker platform.		
Enhancing disaster risk management and disaster education capabilities through skilled human resource and facilities	OSDMA has notified its first strategic long- term HR plan for improved staffing dedicated to disaster management activities.	OSDMA has completed hiring or deputation of technical staff as per the new HR plan.	SIDM has completed a business plan for sustainability and capacity building of officials in disaster- management activities.	OSDMA has completed the hiring or deputation of staff as per SIDM business plan. AND OSDMA has rolled-out four Smart Classes at SIDM allowing more coverage of stakeholders.	OSDMA has established an experience and learning center at SIDM.		

Table 6: Result Area 3 DLI

III. Description and Assessment of Program Strategic Relevance and Technical Soundness

A. Strategic Relevance

Result Area 1 – Increased social protection coverage through adaptive delivery systems

59. Improving Efficiency in Delivery of Benefits by way of employing a robust Social Protection Delivery Platform. Direct Benefit Transfers (DBTs) are increasingly used by the Gol and GoO to channel resources to households and individuals. DBTs are particularly important in Odisha with a large rural based population. Despite a decline in poverty levels, the state shelters pockets of deep poverty and these households are geographically clustered. These high-poverty districts will continue to need strong traditional safety nets programs to protect them. The major DBT programs are managed through Centrally Sponsored Schemes and approximately twenty (39) selected State Schemes. While, GoO is actively managing several DBT programs, it is ranked 12th in comparison to all States/UTs in terms of DBT performance. Total expenditure on these schemes amounted to Rs. 2,122+ crores in FY 2022-23.

60. Improved efficiency in delivery of benefits is critical, both to the well-being of the intended beneficiaries and to the GoO to minimize the risks of misallocation and fraudulent loss of funds. GoO has encountered challenges related to manual data entry, inconsistent beneficiary data across departments, absence of data storage and data exchange protocols leading to threat to data privacy and lack of citizen centric data up-dating. Departments act in silos which leads to massive duplication of efforts. The program will address challenges by developing systems that will automate most of the processing and payment of DBTs and facilitate departmental data interaction under secured protocols.

61. Creating state data policy and related operational guidelines will enable improved and secure mechanisms for interaction between different systems. Development of SPDP will lead to digitization of many scheme datasets. This may result in easy access to a beneficiary data. The program will support creation and adoption of state data policy and its related operational guidelines to ensure data safeguards. The program will allow Odisha government to develop sub policies and guidelines for state-wide adoption and implementation of the policy. Once adopted, the policy provide mechanism to safeguard data and adhere to industry best practices of data security and privacy. In addition, it will enable the government to share data in public domain at regular intervals for better accountability and transparency.

62. **SPDP will be leveraged to enhance resilience.** The program will support GoO in adopting a stateof-the-art response broadcasting system which when integrated with SPDP will allow government to communicate with its citizen and pre-inform them of any localized or state-wide natural disasters. The adoption of response broadcasting system use case will not be limited to natural hazards. In fact, the system could potentially be leveraged for different types of use cases.

Result Area 2 – Strengthening statistical systems for better planning resilience

63. **Better data management is a key priority to Government of Odisha.** The Government of Odisha has taken several important steps in recent years to improve the way data is managed and used for public policy. In 2015, Government of Odisha adopted the Odisha State Data Policy 2015. The policy explicitly recognizes the potential utility and importance of the vast amounts of data generated using public funds by government departments, organizations and institutions. The policy also noted that these data remain mostly inaccessible to citizens although most of such data may be unrestricted and

not sensitive in nature. Moreover, the policy noted that most data, specifically spatial data, is compatible due to lack of common standards and non-interoperability.

64. **Odisha State Government has showed the importance of data for policy and governance.** Odisha is susceptible to cyclones. When a super cyclone struck the state in 1999, as many as 10,000 people lost their lives. This tragedy prompted the Odisha State Disaster Management Authority to invest heavily in weather forecast data. When another, similarly powerful storm struck in 2013, the capture and broadcast of early warning data allowed nearly one million people to be evacuated to safety, slashing the death toll to 38.

65. **DES** as the nodal agency for statistics in the state is instrumental to achieving better data governance and improving data use for policy. Odisha is committed to using data to formulate policy and planning at both state and district level. For this to succeed, the state must improve its statistical system to enable it to produce real time data up to the lowest level of administrative units like District, Block, Urban Local Bodies, Gram Panchayat and Villages depending upon the requirement of planning process. The state of Odisha is also committed to monitoring performance vis a vis the sustainable development goal, and the state indicator framework. This requires quality statistical estimates of nearly 369 indictors on a regular basis. The lack of data on indicators of SDG is a great challenge and bottlenecks for effective implementation of Sustainable Development Goals in the state of Odisha. The proposed project aims to fill key data gaps for the SDGs.

66. Odisha Integrated Statistical System (OISS) has the potential of transforming the statistical system of the State. Through this program, DES aims to develop and implement an enterprise information platform that will the enable smooth exchange of data from surveys into a centralized database which will facilitate analytics, quality control, tabulation, report writing and dissemination. The Odisha Integrated Statistical System (OISS) will be a strategic, central, comprehensive and transformational platform. OISS will be managed and administered by DES team. The platform is intended to have an interactive user interface as the public face of DES and cater to a variety of reporting, research and policy making purposes.

Result Area 3 – Reducing losses by strengthening disaster management systems

67. The emerging risk landscape makes it imperative to integrate disaster risk management in development processes. New hazards, cascading disasters, mounting economic cost of disasters and service disruptions have been a cause of concern for the GoO in the recent years. Over the years, the state is witnessing emerging disaster and climate induced risks. In some cases, the risks are not new, but their frequency of occurrence and resulting impacts have increased. These include heat waves, drowning, snake bites, localized tornadoes, lightning, landslides, tsunami, bush fire, industrial accidents, etc. Other climate-induced effects are changes and uncertainty in rainfall pattern leading urban flooding and new urban health risks; soil, land, and coastal erosion; and potential impact of sea level rise etc. Despite the state's exposure to multi-hazards, a comprehensive risk assessment system is yet to be developed and implemented for risk-informed planning and decision making. Recent disasters (cyclone Phailin, Fani, Titli) have demonstrated that while the state has achieved significant success in reducing life losses, economic losses continue to rise¹⁹. This will require concerted efforts to integrate disaster risk management considerations across GoO's development processes and departmental functions, including risk-informed planning. The operations' focus on strengthening multi-hazard risk assessments

¹⁹ Cyclone Fani – Damage, Loss and Needs Assessment Report, May 2019

and integration of local disaster management and development planning processes strategically and timely addresses this need.

68. Multi-hazard risk assessment is key for decision-making. Odisha has a history of recurring disasters owing to its geo-climatic conditions. With a coastline of 450 kms, the state of Odisha is divided into five major geographical regions, namely, the coastal plains in the east, the middle mountainous and highlands, the central plateaus, the seven western rolling uplands and the nine major flood plains. As per Odisha State Disaster Management Plan of 2019, the State is prone to many natural and humanmade hazards including cyclone, storm surges, tsunami, flash floods, landslides, droughts, earthquakes, severe heat wave, lightning, forest fire, road accidents, industrial and Chemical Biological Radioactive and Nuclear (CBRN) accidents. Multi-Hazard Risk Assessment must be an integral part of the disaster risk reduction planning as indicated in the National Disaster Management Plan (NDMP) and Guidelines issued by National Disaster Management Authority for preparation of Disaster Management Plans for States/UTs. Assessments that take a multi-hazard approach are not only more realistic but also allow for identifying mutually beneficial interventions. Thereby, they have practical implications for vulnerability reduction, resource allocation, infrastructure design, contingency planning, emergency planning including evacuation and a vital input to inform the development plan of the State. By enabling the development of risk maps and dynamic atlas, proposed interventions are aimed to support in decision making, prioritizing their resource utilization in disaster risk management, sectoral planning and implementation of adaptation and mitigation activities.

69. **OSDMA has prioritized the need for Impact Based Forecasting for multi-hazards.** OSDMA with support from RIMES²⁰ and IMD embarked upon the development of decision support system (DSS) for priority hazards (heat wave, drought, lightning, road accidents, flood and tsunami) and their integration into SATARK. OSDMA has also worked on strengthening the last mile connectivity of early warning through installation of siren towers in the coastal areas to disseminate public warnings. Based on experience gained in implementation of early warning dissemination system, OSDMA plans to significantly improve the SATARK platform to enhance its current capabilities to deliver impact-based forecasting. OSDMA also intends to expand its existing GIS cell to a full-fledged GIS Lab to maintain SATARK and provide sustained technical support to OSDMA/SRC operations at all levels - state, district, and local levels through modernization of the State Emergency Operation Centre (SEOC) and the District Emergency Operation Centres (DEOC). The State also intends to expand its Multi-Hazard Early Warning Dissemination System through augmenting existing siren-based warning system in the coastal areas and adopting a robust mobile communication system based on Common Alert Protocol.

70. **Institutionalization of community-based disaster management planning has been an abiding challenge.** While post project reviews²¹ of CBDRM initiatives indicate multiple resilience benefits, they also highlight the need for linkages with development programs for ensuring sustainability of the activities undertaken. A disaster management plan is only as effective as its implemented actions, and in the absence of linkages to appropriate financing and implementation mechanisms, the rate of implementation of these plans has been consistently low. This is particularly true for potential disaster mitigation actions such as building resilient community infrastructure which are often sectoral in nature i.e. pertaining to the mandates of line departments. Further, systematically building capacities of local bodies to play this role has only recently received well-deserved attention²². GoO's recent Ordinance to

²⁰Regional Integrated Multi-Hazard Early Warning System for Africa and Asia

²¹ See for example, Evaluation of UNICEF's Community Based Disaster Risk Reduction-School Safety Programme in Bihar, India (2011-2015)

²² See for example, DM planning by Local Self Governments in Kerala initiated in 2019

https://sdma.kerala.gov.in/local-self-government-dm-plans/

this effect clearly articulates its intent to empower PRIs with funds, functions and functionaries to play significant roles not only in disaster preparedness and response, but also mitigation and recovery process. The document specifically mentions the need to prepare Gram Panchayat disaster management plans and link them with development plans. When the amendments to the Law take effect, these actions will have to be implemented across all G.P.s of the state. Against this backdrop, the proposed operation not only addresses a long-standing need but also creates good practice examples to scale-up this legal mandate across all G.P.s of the state.

71. Given the early advances made by OSDMA, it is well poised to take lead position at a regional and global level and be future ready in response to the emerging risk and policy contexts. This includes the Sendai Framework of Action for Disaster Risk Reduction (SFDRR), Paris Climate Agreement and Sustainable Development Goals (SDGs) that India has globally committed to, the Prime Minister's 10-points Agenda for Disaster Risk Reduction (2016), the National Disaster Management Plan (2019). OSDMA's journey in the past 20 years makes it best suited to address the evolving risks and the policy landscape and to engage effectively in reducing existing risks, preventing the creation of new risks and preparing to manage the residual risks. The Odisha State Action Plan for Climate Change (SAPCC) 2018-23 highlights that the loss of land to the sea has become a more recurrent phenomenon as the ocean dynamics and coastal processes have strong linkage to climate change and various disasters which are likely to confront the state quite often, priority activities for disaster management sector have also been identified.

72. Need for a shift in approach for training and capacity building. Training has largely been an adhoc process countrywide, and a shift in approach is needed. The SIDM will seek to address gaps that have been identified at various levels and in various kinds of operations under disaster management capacity building in the state and the country. Odisha SIDM will be a hub in a national grid of Centre's of Disaster Management (CDM) and Centre's of Excellence (COE) and can carve out a niche for itself through thematic and geographical specialization that will also position it as an international Centre of Excellence. Within Odisha, it will be the apex capacity building institution on disaster management, and will show the way and coordinate the disaster management research, training, education and public awareness through the network of sub-state institutions

B. Technical Soundness

Result Area 1 – Increased social protection coverage through adaptive delivery systems

73. The World Bank has been working closely with GoO through a Non-Lending Technical Assistance. From 2016-2019, the World Bank has provided knowledge and support to GoO in improving their DBT coverage. The Bank has undertaken study of twenty-nine (29) DBT schemes in Odisha. Based on the assessments conducted by the state government's DBT Cell²³ highlight the need for robust end-to-end business processes through an integrated social registry to complement existing and future digital benefit transfers supported by a robust state data policy.

74. The Social Protection Delivery Platform reform is aligned with agenda of the Government of India and are comparable to reforms underway in other states. State Governments are dealing with a similar set of challenges in modernizing and digitizing the service ^{delivery} chain which will lead to strengthening of systems for channeling resources directly to the intended beneficiaries. States are at

²³ A series of assessments of program processes and household surveys documenting program coverage/targeting at the state level, supported by the World Bank and submitted by the state DBT Cell to the Finance Department in 2018.

various stages in this process and there are opportunities for states such as Odisha to learn from their peers. The Program will take advantage of opportunities for peer learning – in part drawing on the experience of Bank-financed programs in other states – particularly on issues of change management and dealing with the complex political economy of reform.

75. The emphasis on IT solutions in-line with the 5T action plan proposed under the operation reflects on the GoO plans to improve efficiency through further process automation with the objective of digitizing service delivery chain. GoO aspires to pioneer e-Governance initiatives in India that serves as a benchmark for others to follow. In pursuit of this objective, the state has developed the 5T action plan and made concerted efforts to progress towards proactive e-Governance, following a "push" model, whereby government proactively and seamlessly delivers just-in-time services to citizens shaped around their individual needs, preferences, circumstance, and location. GoO has experience in implementing IT-led systems reforms. The Program supports the development of a SPDP under the aegis of the finance department which will serve as a one-stop platform for beneficiary registration and update processes across the social protection schemes and will be an integrated social registry that would serve as a critical foundation for various program operations by facilitating seamless data sharing.

Result Area 2 – Strengthening statistical systems for better planning resilience

76. The proposed modernization program is technically sound and follows national and international best practice. Modernization program in statistical organizations in recent years have focused on improving efficiency and quality through use of new technology and becoming better at tailoring statistical services to user needs as well as updating the legal and institutional frameworks to utilize new data sources, while safeguarding data privacy. This has been done through significant investments in technology and skills development to ensure organizational capabilities are fit for purpose in an increasingly digital world.

77. Introduction of computer-assisted interview technology has the potential to improve quality and efficiency of statistical operations. Traditionally, statistical organizations have been using penand-paper interviews when conducting household and enterprise surveys. This is still the predominant method in most statistical organizations at the state and central level in India today, although it is gradually changing in some states as well as the National Sample Survey Organization of MOSPI. A review by the Asian Development Bank in 2019²⁴ showed the potential benefits of CAPI with regards to error checks, interview duration and cost-efficiencies. Easy data transfer and the ability to collect ancillary survey information such as global positioning system (GPS) coordinates, photos, and videos are other advantages of CAPI.

78. **Developing a CAPI platform or acquiring an existing solution.** MOSPI has developed a CAPI solution called eSigma, which is currently being introduced in NSO survey operations. The Bank team and DES have considered whether eSigma could be adopted by DES. However, MOSPI does not regard the product as ready to be deployed outside of NSO yet. Therefore, DES has decided to develop their own CAPI platform. This will require significant a development effort and external expertise that will have to be acquired through public procurement. Tamil Nadu DES has already shifted some surveys to an own-developed CAPI platform and offers a relevant state-state learning opportunity for Odisha.

²⁴ "The CAPI Effect: Boosting Survey Data Through Mobile Technology", ADB, September 2019

79. A central data warehouse and dissemination platform – Odisha Integrated Statistical System (OISS). DES's acquisition, processing and dissemination of survey and other data sets is largely done in a manual, decentralized manner. There is not central digital dissemination platform. The main means of dissemination is paper publications such as the District Handbook. This makes data discovery and retrieval by users difficult. Therefore, an important initiative to improve data management is the building of centralized data warehouse and data dissemination platform. There are many good practice examples of such data platforms around the world. The World Bank's Development Data Hub (DDH) is considering cutting edge and an inspiration for DES. In India, NITI Aayog recently launched the National Data Analytics Platform (NDAP), which aims to strengthen data standardization and provision of a "one-stop shop" for user access to key data sets of national importance. DES has partnered with Odisha Computer Application Center (OCAC) to develop the technical specification for the OISS. During this phase are important strategic considerations related to the choice of technology stack including whether to host the data warehouse and associated tools in the cloud or on-premise hosted servers. The building of the platform is expected to be out-sourced to an external vendor with experience in building advanced data management and dissemination platforms.

80. **Institutional development and improving quality assurance.** Besides technology modernization, the program will aim to improve the functioning of DES and the broader state statistical system, in particular with regards to the responsiveness to user needs, quality assurance and filling key data gaps. With regards to quality assurance, international best practice recommends applying a rigorous business process management framework such as the Generic Statistical Business Process Model (GSBPM), Generic Activity Model for Statistical Organization (GAMSO). A first step to quality assurance is to start a business process mapping of key processes such as a survey or other statistical product. The World Bank has suggested to DES to begin with the system of agricultural statistics, which consists of several process as well as the district handbook. External expertise will also be required for this process.

81. **Filling key data gaps and strengthening user-engagement through a new Data Analytics unit**. There is a need to review the statistical program of DES to decide whether it is fit for purpose and serves user needs. Evidence from statistical organizations around the world is that users are increasingly expecting data sets to be available through the internet onto mobile platforms. They are also increasingly looking for dynamic functionality that allows them to build tables and graphs, and to zoom in and out of different geospatial layers for specific indicators. Modern statistical organizations must move away from simply providing numbers to generating knowledge. This is a difficult transition that requires signification organizational and HR changes. Tamil Nadu DES has had some success in creating a Data Analytics Unit in a collaboration between DES and the Tamil Nadu eGovernance Agency. Odisha DES has been introduced to this model and is considering establishing the same as a means to strengthen user-engagement and developing new statistical products and services.

Result Area 3 – Reducing losses by strengthening disaster management systems

82. Upgrading the existing risk assessment and early warning system, SATARK, to provide impactbased forecasts is aligned with national and international advancements in the field. The National Weather Forecasting Centre (NWFC, IMD) is set up with an objective to provide impact-based warning services related to different weather scenario. New initiatives like implementation of impact based forecast, introducing Common Alert Protocol in dissemination of forecasts and warnings, initiatives to increase outreach etc. are being carried out, thereby improving in the quality and effectiveness of Public Weather Services. Under the Bank support National Cyclone Risk Mitigation Project (Phase I and II), NDMA in partnership with IMD and participating states (including Odisha) has developed Web-based Dynamic Composite Risk Atlas and Decision Support System (Web DCRA & DSS). Over the last two decades, there has been a significant improvement in quality of meteorological services and DRR actions. Meteorological services are moving away from traditional phenomena-based warnings, toward risk-based warnings that integrate information about the likelihood and severity of impacts arising from weather. WMO has termed this method for providing forecast information based on the potential impact of the event as "Impact-Based Forecasting (IBF)." WMO and IMD advocates the use of IBF in DRR. By providing a risk-based forecast, IBF aims to enable institutions, individuals and communities to prepare appropriately to the potential outcome of the event. There is a strong focus at OSDMA to align with the increasing uptake of this global approach and in 2019 introduced the SATARK system. Recent advances in computer technology for processing large datasets through data assimilation, use of real-time data capable of providing forecasts with greater accuracy, geographic precision and lead time, information dissemination platforms, successful collaboration mechanism with key partners (Govt and Pvt sector), offer new opportunities for OSDMA/SRC to roll out IBF for improved decision making of DRR actions.

83. Enhanced and fully deployed SATARK has the potential of transforming risk information system of the State and build resilience of systems and communities. The SATARK System, in its current form, provides early warning information for heat waves, drought likelihood, discharge forecast, and realtime lightning alerts. However, the system needs to be further enhanced for dynamic decision support system and scaling the End-to-End early warning services by a set of actions (i) Expand and update the SATARK database (exposure, vulnerability drawn from district/block and local levels) and define dynamic risk thresholds to generate location-specific impact forecasts., (ii) Impact Based Forecasts (IBF) by incorporating Cyclone, Drought, Heat and Cold wave, Lightning and Storm surge forecasts data into exposure, vulnerability data, and secondary hazards such as landslide, (iii) Upscale the Flood forecasting subsystem to integrate IBF for Urban Flooding and expand the riverine flood system to two basins (Baitarani and Budhabalanga). Through this program, SATARK will adopt a people-centered multihazard end-to-end early warning system framework and will emphasize use of in-situ ground observations, risk assessment and analysis, develop robust weather prediction system, warning, and alert generation, multiple dissemination modes to the at-risk communities (in understandable form), and finally, community response and feedback at the block or village level triggered through SOPs outlined in the local disaster management plan.

84. SATARK concept and existing operational tools are robust, and the dynamic platform will be built on state-of-the art GIS. Activities for SATARK enhancement as 'one stop solution' for Impact based Multi Hazard Early Warning Dissemination DSS will be built over existing modules developed under Phase I of SATARK (2018-21). The technical enhancement components will include a wide range of additions and not limited to (i) Data source identification, collection, digitization, and database development, building on existing databases including Disaster Assistance Monitoring & Payment System (DAMPS), (ii) Building Data Analytics support for each module, (iii) Comprehensive Multi-Hazard Vulnerability Risk Assessment, (iv) Enhancement and ensure outreach through Mobile Application and other modes of warning dissemination. The proposed program also aims to enhance the capacity of OSDMA through improved early warning services and modernization of the State and District Emergency Operation Centres (S/DEOC). OSDMA in consultation with RIMES and other technical partners have undertaken technical assessment of the existing system architecture and proposed enhancement of SATARK architecture for multi-hazard decision making. The outcomes are primarily targeted to achieve expansion of GIS Cell to GIS Laboratory with technical capacity, in terms of tools and human resources, and modernization of SEOC and DEOCs; Dynamic Multi-Hazard Risk Assessment system developed for Impact Based Forecasting; SATARK to be operational as fully enhanced impact forecasting decision support system, along with service integration of weather services, early warning dissemination system for cyclone, heat and cold wave, lightning, storm surge, floods (Baitarani and
Budhabalanga), urban floods (Cuttack and Bhubaneswar), landslides (one district) and drought (eight districts).

85. The envisioned interventions on localized disaster management and development planning are legally mandated, well sequenced and build upon lessons from previous experiences of communitybased planning processes. In scaling up the Village Disaster Management Planning process, OSDMA seeks to incorporate lessons from previous experiences while also preparing for implementing the actions mandated by the Ordinance for amendment to the PRI Act. Two lessons from the previous VDMP exercises are salient. First, the previous plans were not informed by geo-spatial village level risk information and thus, did not identify actionable mitigation actions. The development of geo-spatial risk maps and their utilization for facilitation of village level planning has been envisioned as a key step in this operation. Second, the previous maps were paper-based and neither archived nor monitored through a digital platform. The development of such a digital platform is also envisioned under this operation. The Gram Panchayat level disaster management planning is envisioned to happen after the village level plans have been prepared, informed by the village level risk information as well as orientation of local bodies for undertaking this exercise. Finally, the integration with Gram Panchayat development planning process is aimed at ensuring that the identified actions in the disaster management plans find linkages with appropriate financing mechanisms, thereby ensuring that they are implemented.

86. The evolving risks and the policy landscape requires the institutional restructuring of the OSDMA for strengthening its capacities to engage effectively in reducing existing risks, preventing the creation of new risks and preparing to manage the residual risks. Against the backdrop of evolving risk and policy landscape, a functional review of OSDMA was conducted with Bank assistance in 2020 and note on Institutional Restructuring of OSDMA was prepared. The review found several opportunities to strengthen OSDMA to a be a future-ready institution and proposed actions around repositioning, regulatory provisions, ODRAF and fire and emergency service responsibilities, financing, human resources, knowledge generation, knowledge sharing and documentation, community outreach, strategic partnership, and suggested structure of OSDMA. According to the review, currently no dedicated activity of OSDMA seems to focus on climate related or induced risks. With regards to training and capacity building activities at state level, DMTC majorly caters to response agencies like ODRAF, fire and police, etc. While this is very crucial and important, due focus on the orientation and training of staff of non-response agencies and line departments at various levels in different aspects of disaster management is missing. Proper mechanism for undertaking Training Need Assessment (TNA) of key line departments and support agencies is missing. It is expected that the upcoming SIDM may bridge this gap. Once functional, SIDM and DMTC are proposed be merged and their activities will be guided by such assessments. The Institute will have an autonomous organizational structure. It will have an operational and knowledge link with OSDMA with an independent budget and recruitment to maintain autonomy. Establishment of corpus to maintain sustenance with autonomy will be taken up. A Steering Committee of experts to advise and support the institute, particularly in the establishment period will be set up. Research (including consultancy) and Training wings, with each doing some functions of the other will be put in place. Administration and support staff for maintenance and operation of the institute will be recruited.

C. Institutional Arrangement

87. There is high level of commitment to and ownership of the Program in the Government of Odisha. The Finance Department is taking the lead for this program given its cross departmental impact. Government of Odisha is deemed to possess a comparatively strong institutional capacity for implementation of development activities. However, for implementation of certain complex

interventions envisioned under the Program would require significant local level coordination. While, DES has weak implementation and monitoring capacity, OSDMA, DE&IT and FD have adequate implementing capacity. FD will establish a Program Management Unit to assist in Program Implementation and coordination.

Result Area 1 – Increased social protection coverage through adaptive delivery systems

88. **Finance Department will be the nodal department for the implementation of SPDP and formulation of Data Policy.** Odisha Computer Application Centre (OCAC) is the designated Technical Directorate of Department of Electronics & Information Technology. OCAC is responsible for implementing all the e-Governance initiatives of the state. FD will be outsourcing the development of SPDP and formulation of the State data policy to OCAC. OCAC is headed by a Chairman and CEO. The Chairman of OCAC is also the Principal Secretary of Department of Electronics & Information Technology.



Figure 4: OCAC Organogram

Result Area 2 – Strengthening statistical systems for better planning resilience

89. As the nodal agency for statistics in the state, the Directorate of Economics and Statistics (DES) is the main implementing agency for Pillar 2. DES is headed by a director, with supporting officers in Class I and Class-II ranks from Odisha Statistics and Economic Services (OSE&S) cadre and other technical and ministerial staff at the State Headquarters, Range Level and District Level Statistical Offices. It functions under the administrative control of Planning and Co-ordination Department (P&C) which is headed by Development Commissioner of Odisha. Furthermore, the Directorate of Economics and Statistics has three range level offices namely the central, southern, and north range, and has 30 district level offices named District Planning and Monitoring Units (DPMUs). Out of the 30 DPMUs, 15 are headed by Deputy Director (Planning and Statistics) of Odisha Statistics & Economics Service (OS&ES) cadre of DES and assisted by Assistant Director (Planning) of Odisha Planning Service (OPS) cadre of Planning and Co-ordination Department. The rest 15 Districts headed by Deputy Director (Planning and Co-ordination Department and assisted by Assistant Director (Statistics) of OS&ES cadre of DE&S.

90. To ensure efficient implementation, coordination, supervision and monitoring of the project activities, a dedicated Project Management Unit (PMU) is being created under the DES. The PMU will be headed by a project coordinator, who will report to Director, DES. Given the focus on digital transformation, the PMU will have specialized capacity for designing and supervising large-scale IT investment projects. Additionally, DES is also being supported by the Electronics and Information Technology (E&IT) department through its directorate - Odisha Computer Application Centre (OCAC) – by providing critical manpower and technical assistance on IT related activities under the project. The E&IT Department is the nodal department in the state on matters of IT and communication. OCAC is the designated Technical Directorate of E&IT Department which has contributed significantly to the steady growth of IT in the State. Furthermore, the PMU will be supported by a Project Management Consultancy (PMC) which will be hired as part of the project procurement.





91. Ambitious program with significant risk. Substantial external support will be needed. The Statistical Development Pillar under the Program is very ambitious in its scope and states goals. For such a large-scale modernization effort to be successful in the longer term, it's important for leadership and the enabling environment to be supportive of reform. The program has encouragingly good leadership from the Development commissioner of the State, the Director of DES and other heads from departments. Their sustained commitment is important for the success of the program as a big component of the program is about changing the culture of data use. Secondly, financing for continued improvements and upkeep of the program will need carry after program completion to sustain gains achieved under the program. Finally, capacity constraints pose a significant risk. Currently there is a large gap in the capacity to manage a project of this ambition. This project aims to change that, but this is something to acknowledge and ensure that the capacity problem is addressed as the project progresses. To mitigate this last risk, several consulting contracts are envisioned to bring to DES that required skills and expertise. Currently, three key consulting contracts are envisioned under the project: i) Project Management Consultants, ii) Statistical Advisory Consultants) iii), and System Developer and Integrator

Result Area 3 – Reducing losses by strengthening disaster management systems

The primary responsibility for implementation of Result Area 3 will rest with OSDMA, with 92. Water Resources Department (WRD) and SRC's office as Implementing Agencies. OSDMA is headed by a Managing Director who has the overall charge of planning, implementation, and monitoring of all activities of OSDMA. The MD is supported by officials across three wings namely, Disaster Management Wing, Project Wing and Finance Wing. Each wing is headed by an Executive Director followed by Chief General Manager (CGM). OSDMA also houses a State Drought Monitoring Cell, a GIS Cell and Disaster Management Training Center that are headed by a Chief General Manager (Nodal officer), General Manager (Geo-technology) and Deputy General Manager (T&C) respectively. Apart from the government officials, the key support staff relating to disaster management activities includes State Project Officers (SPO) at State level and District Project Officers (DPO) at District level. For effective implementation of the impact-based multi-hazard early warning system (DLI 1), the Water Resources Department and the Special Relief Commissioner's office will be brought on board as implementing agencies, particularly for the urban flood monitoring; thus, includes intended procurements and financial transactions by these two IAs. Additionally, OSDMA will work in close coordination with the Panchayati Raj and Drinking Water Department on some aspects of DLI 2; PRDWD's role is envisioned for providing administrative support while the financial and technical roles will be carried out by OSDMA. Accordingly, it is not envisioned for PRDWD to be brought on board as an 'IA' under the project.

IV. Description and Assessment of Program Expenditure Framework

A. The expenditure relates to key programs in the OCAC, OSDMA, and DES.

			GOVERNMEN	T PROGRAM `p'	I	
	PRC	JECTION @ 5 p	ercent INCREAS	E FROM FY22-2	3 BUDGET [INR,	US \$]
	2023-24	2024-25	2025-26	2026-27	2027-28	Total
Result Area 1	886,443,857	1,424,016,0 51	1,021,252,56 8	662,736,624	673,194,884	4,667,643,98 4
	11,364,665	18,256,616	13,092,982	8,496,623	8,630,704	59,841,590
Result Area 2	1,596,407,0 00	366,978,480	373,458,280	380,200,580	387,218,505	3,104,262,84 7
Alca 2	20,466,756	4,704,852	4,787,927	4,874,366	4,964,340	39,798,242
Result	56,975,998, 000	60,996,697, 900	63,081,532,7 95	66,355,609,4 35	69,676,389,9 06	317,086,228, 036
Area 1	730,461,513	782,008,947	808,737,600	850,712,941	893,287,050	4,065,208,05 2
TOTAL	59,458,848, 857	62,787,692, 431	64,476,243,6 43	67,398,546,6 39	70,736,803,2 96	324,858,134, 867
	762,292,934	804,970,416	826,618,508	864,083,931	906,882,094	4,164,847,88 3

Table 7: Government Program 'p'

	PforR PROGRAM BOUNDARY `P'											
-			PROJECTED EX	PEND [INR, US	\$]							
	2023-24	2024-25	2025-26	2026-27	2027-28	Total						
Result Area	848,723,45 7	1,384,409,63 1	979,665,827	619,070,546	627,345,502	4,459,214,963						
5	10,881,070	17,748,841	12,559,818	7,936,802	8,042,891	57,169,423						
Result Area	1,556,407,0 00	324,978,480	329,358,280	333,895,580	338,598,255	2,883,237,597						
2	19,953,936	4,166,391	4,222,542	4,280,713	4,341,003	36,964,585						
Result Area	313,095,00 0	1,500,649,75 0	610,682,238	761,216,349	802,277,167	3,987,920,504						
1	4,014,038	19,239,099	7,829,259	9,759,184	10,285,605	51,127,186						
Total	2,718,225,4 57	3,210,037,86 1	1,919,706,34 4	1,714,182,47 6	1,768,220,92 4	11,330,373,06 3						
	34,849,044	41,154,332	24,611,620	21,976,698	22,669,499	145,261,193						

Table 8: PforR Program Boundary 'P'

Table 9: Result Area 1 - Expenditure Summary

SUMMARY [INR, US \$]						
GOVERNMENT PROGRAM	56,975,998,000	60,996,697,900	63,081,532,795	66,355,609,43 5	69,676,389,90 6	317,086,228,03 6
	730,461,513	782,008,947	808,737,600	850,712,941	893,287,050	4,065,208,052
PforR PROGRAM BOUNDARY	313,095,000	1,500,649,750	610,682,238	761,216,349	802,277,167	3,987,920,504
	4,014,038	19,239,099	7,829,259	9,759,184	10,285,605	51,127,186
BANK FINANCING	122,000,000	1,300,000,000	400,000,000	540,000,000	570,000,000	2,932,000,000
	1,564,103	16,666,667	5,128,205	6,923,077	7,307,692	37,589,744

Table 10: Result Area 1 - Detailed Expenditure

Expenditure Framework - Result Area 1 - Increased Social Protection Coverage through Adaptive Delivery Systems								
		PROJECTION @ 5 percent INCREASE FROM FY22-23 BUDGETAll figures[INR, US \$]in '000						
IMPLEMENTING AGENCY	BUDGET CODES - STATE BUDGET	2023-24	2024-25	2025-26	2026-27	2027-28	TOTAL	

Department of Social Security & Empowerment of Persons with Disability	Demand No. 41-2235-02- 101-2097-Madhubabu Pension for Destitutes	18,229,4 12	19,140,88 3	20,097,927	21,102,823	22,157,964	100,729,0 09
		233,710	245,396	257,666	270,549	284,076	1,291,398
Department of Agriculture and Farmer's Empowerment	Demand No. 23-2401-00- 115- 3320-Farmer Welfare- KALIA	19,789,6 45	20,779,12 7	21,818,084	22,908,988	24,054,437	109,350,2 81
		253,713	266,399	279,719	293,705	308,390	1,401,927
Health and Family Welfare Department	Demand No.12-2210-01- 001-3384-Biju Swasthya Kalyana Yojona	18,643,8 46	19,576,03 8	20,554,840	21,582,582	22,661,711	103,019,0 18
		239,024	250,975	263,524	276,700	290,535	1,320,757
Government Program 1	Sub Total (INR)	56,662,9 03	59,496,04 8	62,470,851	65,594,393	68,874,113	313,098,3 08
Government Program 1	Sub Total (US \$)	726,447	762,770	800,908	840,954	883,001	4,014,081
	Demand No. 37-2852-07- 202-2604-41048-918-	121,095	127,150	133,507	140,183	147,192	669,126

Electronics & Information Technology Department/Odisha Computer Application Centre	Grant-in-aid-General (Non Salary) Innovative Projects	1,553	1,630	1,712	1,797	1,887	8,579
Electronics & Information Technology Department/Odisha	Demand No. 37-2852-07- 202-2604-41048-918-	20,000	21,000	22,050	23,153	24,310	110,513
Computer Application Centre	Salary) Incentive under IT Policy	256	269	283	297	312	1,417
Electronics & Information Technology Department/Odisha	Demand No.37-2852-07- 202-0708-78159	50,000	52,500	55,125	57,881	60,775	276,282
Computer Application Centre Inform	Communication	641	673	707	742	779	3,542
Government Program 2 – Considered for PforR Boundary	Sub Total (INR)	191,095	200,650	210,682	221,216	232,277	1,055,921
Government Program 2 - Considered for PforR Boundary	Sub Total (US \$)	2,450	2,572	2,701	2,836	2,978	13,537
	Sub Total (INR)						
Total Government Program		56,853,9 98	59,696,69 8	62,681,533	65,815,609	69,106,390	314,154,2 28
Total Government Program	Sub Total (US \$)	728,897	765,342	803,609	843,790	885,979	4,027,618
New Budget Code to be assigned	World Bank financed State Capability Program						

Electronics & Information Technology Department/Odisha	State Data Policy	100,000	100,000	150,000	300,000	100,000	750,000
Computer Application Centre		1,282	1,282	1,923	3,846	1,282	9,615
Electronics & Information Technology Department/Odisha Computer Application Centre	SPDP development and roll-out	12,000	600,000	200,000	120,000	350,000	1,282,000
		154	7,692	2,564	1,538	4,487	16,436
Electronics & Information Technology Department/Odisha	Technology enabled resilience	10,000	600,000	50,000	120,000	120,000	900,000
computer Application Centre		128	7,692	641	1,538	1,538	11,538
	Sub total - INR	122,000	1,300,000	400,000	540,000	570,000	2,932,000
	Sub total - US\$	1,564	16,667	5,128	6,923	7,308	37,590
	Total - INR	56,975,9 98	60,996,69 8	63,081,533	66,355,609	69,676,390	317,086,2 28
	Total - US\$	730,462	782,009	808,738	850,713	893,287	4,065,208

Table 61: Result Area 2 - Expenditure Summary

SUMMARY [INR, US \$]						
GOVERNMENT PROGRAM	1,596,407,000	366,978,480	373,458,280	380,200,580	387,218,505	3,104,262,847

	20,466,756	4,704,852	4,787,927	4,874,366	4,964,340	39,798,242
PforR PROGRAM BOUNDARY	1,556,407,000	324,978,480	329,358,280	333,895,580	338,598,255	2,883,237,597
	19,953,936	4,166,391	4,222,542	4,280,713	4,341,003	36,964,585
BANK FINANCING	870,000,000	299,000,000	298,900,000	249,000,000	249,000,000	1,965,900,000
	11,153,846	3,833,333	3,832,051	3,192,308	3,192,308	25,203,846

Table 12: Result Area 2 - Detailed Expenditure

Expenditure Framework - Result Area 2 - Strengthening Data for Better Planning and Resilience								
Scheme code-Name of the scheme under Demand Number- 16 (Planning & Convergence Department)	PROJ	ECTION @ 5 pe	rcent INCREAS	E FROM FY22-2	3 BUDGET [INR	, US \$]		
BUDGET CODES - STATE BUDGET	2023-24	2024-25	2025-26	2026-27	2027-28	Total		
Demand No-16-Census Surveys and Statistics- 3454-3171-Strengthening of Statistical System	100,000,000	105,000,00 0	110,250,00 0	115,762,500	121,550,62 5	552,563,125		
	1,282,051	1,346,154	1,413,462	1,484,135	1,558,341	7,084,143		

SUB TOTAL	100,000,000	105,000,00 0	110,250,00 0	115,762,500	121,550,62 5	552,563,125
SUB TOTAL	1,282,051	1,346,154	1,413,462	1,484,135	1,558,341	7,084,143
60 percent CONIDERED FOR PforR BOUNDARY - SUB TOTAL	60,000,000	63,000,000	66,150,000	69,457,500	72,930,375	331,537,875
60 percent CONIDERED FOR PforR BOUNDARY - SUB TOTAL	769,231	807,692	848,077	890,481	935,005	4,250,486
World Bank financed State Capability Program						
Application software component	393,400,000	54,200,000	55,300,000	56,400,000	57,500,000	616,800,000
Hardware and System software	716,490,000	-	-	-	-	716,490,000
Manpower cost component SPMU	170,767,800	170,767,80 0	170,767,80 0	170,767,800	170,767,80 0	853,839,000
Strengthening user engagement and capacity bulding	9,360,000	9,360,000	9,360,000	9,360,000	9,360,000	46,800,000
Institutional Strengthening	48,450,000	-	-	-	-	48,450,000
Sub Total	1,338,467,80 0	234,327,80 0	235,427,80 0	236,527,800	237,627,80 0	2,282,379,00 0
OCAC Service Charges @ 10 percent	133,846,780	23,432,780	23,542,780	23,652,780	23,762,780	228,237,900

GST on OCAC Service charges @ 18 percent	24,092,420	4,217,900	4,237,700	4,257,500	4,277,300	41,082,822
Total OCAC Charges	157,939,200	27,650,680	27,780,480	27,910,280	28,040,080	269,320,722
SUB TOTAL - CONSIDERED FOR PforR BOUNDARY	1,556,407,00 0	324,978,48 0	329,358,28 0	333,895,580	338,598,25 5	2,883,237,59 7
SUB TOTAL - CONSIDERED FOR PforR BOUNDARY	19,953,936	4,166,391	4,222,542	4,280,713	4,341,003	36,964,585
TOTAL - GOVERNMENT PROGRAM	1,596,407,00 0	366,978,48 0	373,458,28 0	380,200,580	387,218,50 5	3,104,262,84 7
TOTAL - GOVERNMENT PROGRAM	20,466,756	4,704,852	4,787,927	4,874,366	4,964,340	39,798,242

Table 73: Result Area 3 - Expenditure Summary

SUMMARY [INR, US \$]						
GOVERNMENT PROGRAM	886,443,857	1,424,016,051	1,021,252,568	662,736,624	673,194,884	4,667,643,984
	11,364,665	18,256,616	13,092,982	8,496,623	8,630,704	59,841,590
PforR PROGRAM BOUNDARY	848,723,457	1,384,409,631	979,665,827	619,070,546	627,345,502	4,459,214,963

	10,881,070	17,748,841	12,559,818	7,936,802	8,042,891	57,169,423
BANK FINANCING	554,000,000	927,500,000	642,100,000	387,500,000	391,000,000	2,902,100,000
	7,102,564	11,891,026	8,232,051	4,967,949	5,012,821	37,206,410

Table 84: Result Area 3 - Detailed Expenditure

Expenditure Framework - Result Area 3 - Reducing losses by strengthening disaster management systems						
Scheme code-Name of the scheme under Demand Number- 42 (Revenue and Disaster Management Department)		PROJECTION @	5 percent INCREAS	SE FROM FY22-23	BUDGET [INR, <mark>US</mark>	\$]
BUDGET CODES - STATE BUDGET	2023-24	2024-25	2025-26	2026-27	2027-28	Total
2025-Sect. General Services/00/091-Establishment, operations and maintenance exp. 41548-Grants to OSDMA- 918-GIA (Non -Salary)	18,800,000	19,740,000	20,727,000	21,763,350	22,851,518	103,881,868
	241,026	253,077	265,731	279,017	292,968	1,331,819
2025-00-091-41548-921-GIA towards Salary	25,500,000	26,775,000	28,113,750	29,519,438	30,995,409	140,903,597

	326,923	343,269	360,433	378,454	397,377	1,806,456
2245-02-112 Relief on Account of Natural Calamities-SSS-SS-02-	50,001,000	52,501,050	55,126,103	57,882,408	60,776,528	276,287,088
Flood,Cyclones etc.1021-other Relief measures-78514 Training	641,038	673,090	706,745	742,082	779,186	3,542,142
programme for capacity building (CB)						
SUB TOTAL	94,301,000	99,016,050	103,966,853	109,165,195	114,623,455	521,072,553
SUB TOTAL	1,208,987	1,269,437	1,332,908	1,399,554	1,469,531	6,680,417
Considered for PforR Boundary @60 percent	56,580,600	59,409,630	62,380,112	65,499,117	68,774,073	312,643,532
	725,392	761,662	799,745	839,732	881,719	4,008,250
World Bank financed State Capability Program						
Disaster-related impact based multi-hazard early warning	744,285,714	1,248,571,429	790,000,000	337,142,857	351,428,571	3,471,428,571

system of OSDMA/GoO is strengthened						
Gram Panchayat Disaster Management Plans (GPDMPs) are integrated with Development Programmes at the Gram Panchayat level	19,285,714	40,714,286	41,571,429	73,571,429	28,571,429	203,714,287
Strengthening OSDMA to be future-ready and Operationalization of SIDM	28,571,429	35,714,286	85,714,286	142,857,143	178,571,429	471,428,573
Sub Total (INR)	792,142,857	1,325,000,001	917,285,715	553,571,429	558,571,429	4,146,571,431
Sub Total (US \$)	10,155,678	16,987,180	11,760,073	7,097,070	7,161,172	53,161,172
Government Program Total (INR)	886,443,857	1,424,016,051	1,021,252,568	662,736,624	673,194,884	4,667,643,984
Government Program Total (US \$)	11,364,665	18,256,616	13,092,982	8,496,623	8,630,704	59,841,590

V. Description and Assessment of PforR Framework and M&E

93. The State Finance Department will lead the monitoring efforts with leading roles for line departments such as OCAC, DES, and OSDMA. The Bank financed TA teams will also help with day-today monitoring and allow for instant feedback. The State Finance Department is recruiting an independent verification agency (IVA). In India IVA have been from among the state's research centers and Odisha is likely to follow suit as the state has many well-respected research institutes.

94. Grievance Redressal System of the State Government. Odisha has a centralized e-grievance redressal system called Sanjog Helpline (sanjoghelpline.odisha.gov.in) and Toll-Free Number 155335. Sanjog Helpline receives the complaints on different government schemes through its 9AM to 5PM Call Centre which translates the Grievance of a common citizen into the computer. The built-in intelligent system ensures that the grievance is disposed by the use of ICT which automatically tracks and pursues the status of grievance with the action taking authority.

95. Grievance Redress Mechanism of the Bank. Communities and individuals who believe that they are adversely affected by specific country policies supported as prior actions or tranche release conditions under a World Bank Development Policy Operation may submit complaints to the responsible country authorities, appropriate local/national grievance redress mechanisms, or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address pertinent concerns. 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 GRS, please visit http://www.worldbank.org/GRS. For information on how to submit complaints to the World Bank's corporate GRS, please visit http://www.worldbank.org/GRS. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org

VI. Program Economic Evaluation

96. The proposed PforR program builds on extensive NLTA provided by the World Bank to the state. As part of the NLTA, study of 29 schemes was undertaken to identify gaps, challenges and best practices related to systems, processes, institutional framework including human resources. One clear challenge which was common across all the schemes was that all schemes were functional in silos, thereby adding to duplication of administrative cost and efforts. The development and implementation of SPDP will allow different schemes to interact with each other, thus reducing the administrative cost and will enable government to improve targeting, identification of beneficiaries and timely delivery of benefits. Further, this will lead to improved expenditure efficiencies.

97. The PforR program focusses on strengthening preparedness and resilience of the state against different types of natural disasters. The outcomes envisaged in the program will innovate planning for disaster at the level of village which will get integrated at the gram panchayat level and eventually at the state level. Linkage of the forecasting system with early warning dissemination system of the state will enable the state to predict for future natural disasters, thereby help them develop a robust response and mitigation plan to avoid and minimize loss to lives and livelihood.

VII. Program Action Plan (PAP)

98. The PAP, set out in Table 14, lists the activities that were identified through various consultations as well as recommended in various assessments as critical for ensuring the adequacy of government systems and enabling progress towards the intended results.

Table 9: Program Action Plan

Program Action Plan		
Action	When	Responsibility
TECHNICAL		
Result Area 1: Increased social protection coverage through adaptive	delivery sys	stems
Information, Education and Communication Plan to educate citizen regarding SPDP	Year 2	FD/OCAC
Creation of SPDP training content in electronic format	Year 1	OCAC
Gazette notification of State Data Policy	Year 1	OCAC
Training of Village Level Entrepreneurs (VLEs) in coastal areas on SPDP	Yearly	FD/OCAC
Result Area 2: Strengthening statistical systems for better planning and resilience		
Result Area 3: Reducing losses by strengthening disaster management systems		
Formalize and execute an agreement between OSDMA and the Department of Panchayati Raj and Drinking Water on roles and responsibilities for DLI 8 activities	Year 1	OSDMA
Bring a Knowledge Partner on board to technically steer the DLI 7 activities	Year 1	OSDMA
FINANCIAL MANAGEMENT		
PROCUREMENT		
ENVIRONMENT AND SOCIAL SAFEGUARD	S	
CITIZEN ENGAGEMENT AND GRIEVANCE RED	RESS	

VIII. Technical Risk Rating

99. Overall Risk Rating: The overall risk rating of the proposed operation is moderate with the risks being primarily driven by the political and economic environment and not by program design.

100. External Risks to project outcomes. Odisha as a state experiences several natural disasters in a year. Further, while the effects of COVID-19 have plateaued and there still is the need to respond to COVID has distracted the attention of the state bureaucracy. The risk has been mitigated by developing strong internal ownership in the permanent bureaucracy.

101. Risks related to program design. Sector strategies and policies have strong political ownership, but the strengthening of DES could face challenges being a new concept in the state. Extensive training and communications will be done to mitigate the risk. The other program design risk is the complexity of the design and implementation of the SPDP and could require specialized dedicated agency or team to support implementation. The risk is being mitigated by the neutral Finance Department taking ownership as the lead and regular stakeholder coordination process. Expanding and bolstering of early warning system possess complexity and requires greater coordination within the government.

IX. Inputs to the Program Implementation Support Plan

102. The PforR implementation modality is new undertaking for the GoO. The program covers the GoO vision and i) strengthening social protection systems, ii) strengthening statistical systems, and iii) building resilient Odisha. GoO is responsible for the Program's overall implementation, including its technical aspects. The World Bank task team will provide implementation support on: (i) implementation progress and achievement of Program activities and results; (ii) addressing implementation challenges on the capacity building activities; (iii) implementation of the PAP, (iv) achievement of DLIs and KPIs; (iv) monitor system's performance to ensure their continuing adequacy through Program monitoring reports, audit reports and field visits; (v) monitor changes in risks to PforR and compliance with legal agreements.

103. Semi-annual meeting of the Project Steering Committee (PSC) chaired by Principal Secretary Finance will provide policy direction and ensure convergent action. The main objectives of these will be to (a) take stock of overall results, (b) assess implementation progress and identify bottlenecks in implementation, and (c) identify future priorities and agreed actions for support for the near and longer term. These meetings will be attended by government representatives from the relevant line departments / bodies for ensuring a coordinated and convergent action towards achievement of the development objectives.

104. Regular implementation support by the Bank task team during the program implementation. Key to the Bank's effective implementation support will be its coordination and timing, aligned with critical points in the planning and verification of results for disbursement requests shared with the Bank. The Bank task team for the program will be undertaking regular implementation support visits for the implementation support, monitoring and supervision of the program. This will ensure rapid and effective response to borrower's needs for implementation support. Formal implementation support missions and field visits covering all aspects of implementation will be carried out periodically

during implementation. During the first year of implementation, the Bank's support will focus on strengthening the Program systems and institutional activities necessary to achieve the DLIs. The first implementation support mission will take place right after effectiveness to provide timely inputs to the counterparts. The implementation support missions during the first year of implementation will include the full technical and fiduciary teams. Subsequent implementation support mission will have a stronger emphasis on verification of results / DLIs, capacity development, and technical implementation expertise, varying according to the actual needs

X. Annexure 1 – Diagnostic Executive Summary

Executive Summary

Following two decades of lackluster economic performance, at the turn of the new millennium the State of Odisha's economy entered a period of robust growth. Between 2001 and 2018, annual economic growth averaged 7.1 percent, ranking Odisha among the best performing state economies in India. However, the state will need to achieve and sustain a higher growth trajectory if it is to continue catchingup with India's leading states and make progress towards achieving its ambitious development objectives.

Having achieved significant economic and developmental progress, Odisha cannot afford to rest on its laurels. The state is beginning to confront more steadfast economic headwinds and the Government of Odisha (GoO) must act timeously to exploit the fiscal space currently available to it. The GoO is wellplaced to leverage a legacy of successful reform and contemporary economic conditions that lend themselves to ambitious second-generation reforms. A successfully implemented reform agenda will support accelerated economic growth and developmental change to further transform the economy of the state, and the lives of its residents.

Between 1980 and 2000, annual real GDP growth in Odisha averaged just 3.8 percent against a national average of 5.6 percent. However, between 2003 and 2008 Odisha's economy surged to an average annual growth rate of 11.6 percent, significantly above the all-India average of 8.8 percent. This economic turnaround was powered by new investments in mining and metals manufacturing, a general

improvement in the investment environment and economic dividends associated with substantive policy reform.

The omnibus of fiscal reforms that underpinned the transformation of Odisha's business environment was motivated by a full-blown fiscal crisis. In FY 1999/2000 the state's fiscal deficit lurched to almost 9 percent of Gross State Domestic Product (GSDP) and committed expenditure exceeded the state's revenues. The state adopted the use of a Medium-Term Fiscal Plan and between 2000 and 2003 significant progress was made in taming the magnitude of the deficit, primarily through enhanced revenue collection.

Further reforms targeting expenditure reduction and debt restructuring inflicted deeper cuts to the deficit and pried open new fiscal space. The adoption of the Fiscal Responsibility and Budget Management (FRBM) Act in 2005 resulted in the maintenance of a fiscal deficit below 3 percent of GSDP in all subsequent years. By 2009, sustained deficit reduction had enabled Odisha to reduce the state's debt obligations to below 25 percent of GSDP. In 2006, Odisha achieved a revenue surplus and has maintained an average revenue surplus of 2.1 percent of GSDP in subsequent years. These conditions created fiscal space for the expansion of development and capital spending with positive effects for the state economy and its people more generally.

Since 2005, the pace of poverty reduction in Odisha has been the fastest of any state in India. Improved fiscal conditions forged at the confluence of reform, improved financial management and fiscal discipline, empowered the state to implement ambitious and reinforcing poverty reduction and development programs. Between 2005 and 2012 the incidence of poverty in Odisha fell by 16 percentage points and the share of the population living in poverty almost halved.

While challenges remain, particularly in rural areas, Odisha has demonstrated progress in improving access to basic services and enhancing human development. In 2005, less than 50 per cent of households in the state were electrified compared to almost 90 per cent in the contemporary period. Moreover, almost 95 per cent of households in Odisha today enjoy access to drinking water, access to sanitation has increased four-fold since 2005, and access to clean cooking fuel increased by almost 600 percent over the same period. Between 1998/88 and 2015/16 Odisha's Infant Mortality Rate (IMR) declined by 41 percent and the state's performance in reducing the incidence of stunting and wasting among children, as well as cutting the incidence of underweight children, has been the best of all states in the country.

Odisha has prioritized the implementation of transformational urban reforms and access to inclusive and sustainable basic services as key components of its development agenda. With just 16.7 percent of the state's population living in urban areas, the GoO recognizes the opportunities for accelerating economic growth and encouraging economic diversification implicit in Odisha's nascent, but quickening, urbanization trajectory. In 2019, Odisha achieved the second-best performance of all states regarding implementation of the AMRUT urban reform agenda. The GoO's policy efforts in the urban sector frame a strategy to promote a State-ULB institutional model to lead improvements in service delivery. In 2015, the state enacted the Odisha Municipal Services Act to establish eight dedicated municipal human resource cadres to address human resource deficits and skills gaps, strengthen the organizational capacity of ULBs, and enhance the capacity of municipal structures to sustain improvements in urban governance, management and services.

The urban reform agenda has been complemented by changes to the municipal finance system aimed at strengthening systems for financial management and broadening the ULB revenue base to enhance financial sustainability and creditworthiness. Between 2015 and 2018, Odisha increased revenues raised through property taxes by 117 percent.

Odisha has prioritized pro-poor and inclusive urban development in support of poverty reduction. The state is currently implementing an ambitious land-titling and slum improvement scheme targeting 200,000 households. To date, the GOO has distributed land rights certificates to more than 50,000 slum

households and is providing financial assistance to ULBs and slum dwellers by converging national and state development grants to fund infrastructure projects in slums. To strengthen delivery of urban services, the state has adopted a two-pronged strategy of: (i) strengthening District Urban Development Authorities (DUDAs) to support smaller ULBs (with less than 100,000 population) more effectively plan, implement and monitor services and infrastructure; and (ii) corporatizing water supply and sanitation delivery functions in larger ULBs by establishing ULB-state-government-owned corporate utilities such as the Water Corporation of Odisha Ltd. (WATCO) piloted in Bhubaneswar.

Odisha is witnessing significant economic and social changes in rural areas linked to shifts toward higher value and more diversified production; the impact of changing demographics, market demand and accelerating urbanization; and a new emerging policy and institutional landscape that supports transformation and promotes inclusion for vulnerable groups. Production across the Agriculture & Allied (A&A) sector is increasing in line with diversification away from cereals to a mix of pulses, horticulture, livestock and fisheries; however, agricultural productivity remains low.

Public investment in the A&A sector tripled between 2013/14 and 2019/20 and the GoO's efforts to transform the sector are beginning to bear fruit. In 2018/19 the state A&A sector posted growth of 8.3 percent following a contraction of 8.2 percent in the preceding year. Between 2012/13 and 2016/17, income growth for agricultural households in Odisha averaged 11.6 percent per annum, above an average of 8.6 for the country as a whole.

Notwithstanding this progress, Odisha's agriculture sector remains disproportionately affected by the quality of the monsoon season, is heavily dependent on rice production and is characterized by low levels of input utilization (fertilizers, pesticides and mechanization). These factors contribute to poor productivity and fluctuations in output that negatively impact livelihoods. Furthermore, poor market integration, market distortions that depress food prices, the impact of climate change and increasing pressures on natural resources, collectively increase the precariousness of large numbers of smallholders. A further challenge is that agriculture is a major source of Greenhouse Gas (GHG) emissions in Odisha, responsible for about 25 percent (i.e. 25 MtCO2e) of overall state emissions.

The key test confronting Odisha's A&A sector is the need to balance support to the agriculture sector to become more competitive and resource efficient, while safeguarding the most vulnerable sections of the rural population. Sub-optimal institutional capacity remains a significant stumbling block to building the sector's competitiveness and further improving agricultural incomes. Going forward, the state should focus upon a comprehensive agriculture modernization strategy, prioritizing investments that support improved competitiveness and productivity, and the full implementation and realization of policy reforms.

Business as usual will be insufficient to achieve Odisha's economic and developmental objectives. Despite significant progress in advancing the fight against poverty and the achievement of more balanced development across regions and the urban-rural divide, much work remains to be done to accelerate flagging growth, advance transformational service delivery, and respond to new challenges posed by climate change.

The pace of growth in the state's economy has slowed. After sustaining an average economic growth rate of 9.1 percent in the years 2002 to 2008, in the decade spanning 2009 to 2018 the impact of the global recession, contagion from commodities price shocks, and the impact of natural disasters slowed Odisha's annual growth to an average of 6.6 percent. If one combines the century's two decades of economic growth (2002 to 2018), average annual growth falls to 7.6 percent, only slightly above the national average of 7.4 percent. Moreover, since FY2014 the fiscal deficit has gradually increased (averaging 2.2 percent between 2014 and 2019) with the result that, following more than a decade of debt reduction, public debt is again creeping upwards.

Odisha's model of growth remains overly dependent on the mining, metals manufacturing and agricultural sectors which are all vulnerable to exogenous shocks. Primary sector economic activity

accounts for approximately 30 percent of gross state value added (GSVA), while the secondary sector - which is dominated by large metals manufacturing firms - contributes a further 30 percent to state output. Economic activity in these sectors is frequently rocked by exogenous and policy related shocks. The precipitous decline in food commodity prices in 2008 and 2011 decimated agricultural markets, while metals prices were subject to sharp declines and volatility in 2008, 2011 and 2014.

The agricultural sector is sensitive to variations in rainfall and the impact of extreme weather events which are likely to become more frequent due to climate change. Severe weather also plays havoc with the delivery of services and critical infrastructure, such as electricity and water connectivity, with negative knock-on effects for all economic activity. Price and policy shocks, and the impact of frequent natural disasters, contribute to the boom-bust pattern of economic growth in Odisha.

Investments in social protection and human capital development are fragmented, and stubborn pockets of poverty and uneven patterns of development persist. While Odisha has made laudable progress in poverty reduction, the state's human development indicators remain among the worst in India. Tackling poverty in populations designated as Scheduled Tribes (ST) has been much slower than the statewide average, as evidenced by a poverty rate of 63 percent among ST populations compared to 33 percent for the state population at large. This discrepancy accounts in part for the disproportionate concentration of poverty in the south and west of the state where a large share of the ST population resides. While Odisha's has made remarkable progress in tackling IMR, at 44 deaths per 1,000 live births the incidence of infant mortality in the state continues to be among the highest in the country. Malnutrition, as reflected in rates of stunting, remains below the national average, but is high for the bottom 40 percent of the households. In line observed patterns of spatial inequity, districts in the south and west of the state of stunting than the statewide average.

Odisha implements a wide variety of social assistance and insurance programs which account for an important share of state GSDP annually. As per the 2017/18 budget, prior to the announcement of the farmer income support scheme KALIA in 2019, the state implemented 198 state financed schemes. Multiple cash-transfer programs operate without adequate policy, data or administrative co-ordination, resulting in widespread duplication of administrative functions, a proliferation of costs, poor systems for identifying and determining the eligibility of beneficiaries for social protection programs, unnecessary costs and leakages in the transmission of benefits, and poor delivery of benefits in a timely and predictable manner. Coverage of cash-transfer and insurance schemes is generally poor.

Gains in elementary education have been substantial, but these gains have not been sustained in subsequent levels of education. For children aged 6 to 15 years enrollment is near universal, dropout rates are low, and the gender gap has been almost eliminated. However, the dropout rate in secondary school is close to 30 percent and is even higher among children from Scheduled Tribes and Castes. Only a fourth of Odias aged 16 to 23 years attend school, and only a third of adult workers in the state have completed secondary education.

The state must confront significant sectoral risks and challenges to Odisha's continued economic development:

- Odisha's A&A sector is producing less and at substantially higher labor costs than other, more advanced states. The scale of this challenge is underscored by the fact that more than half of the workforce continues to be engaged in agricultural activity.
- There is a growing deficit of good jobs, as evidenced by the shrinking share of wage labor as a component of total employment, and labor force participation is diminishing, particularly for vulnerable rural and female workers.
- The potential for urbanization to drive growth and poverty reduction is constrained by an unfinished reform agenda, weak programmatic and financial capacity in ULBs, and the poor pace of slum upgrading.

 Utilities, service delivery infrastructure and the current stock of urban and rural housing are illprepared for the increasing frequency of extreme natural disasters associated with a changing climate, and the state's water storage and distribution capacity is ill-equipped to confront the state's existing spatial and seasonal variance in precipitation, let alone escalating variance in precipitation as a consequence of climate change. These infrastructural and service delivery deficits escalate the state's already significant disaster risk and the likelihood of future economic shocks.

Odisha must seize the moment to:

- Accelerate economic growth and diversify economic activity;
- Further strengthen the capacity of the state to eliminate poverty and invest in human capital; and
- Forge a sustainable and resilient future in the face of climate change.

Odisha must sustain double-digit economic growth, improve the quality of growth, and diversify its sources of growth and the economy more generally if it is to catch up with the rest of the country. The GoO should target reform in areas that will contribute toward strengthening the link between fiscal management, spending efficiency and development outcomes; enhancing in-state revenue sources (albeit in an environment constrained by the introduction of GST); and, improving the efficiency of public expenditure. The GoO should promote the development of upstream and downstream linkages across the value chain in the mining sector to promote increased beneficiation, and greater productivity and value add in the agricultural sector. The state should utilize revenues derived from its natural endowment to invest strategically to expand Odisha's capital base and enhance human capital in support of economic diversification. This could include investments to lay a foundation for the development of alternative drivers of growth and job creation in tourism, information technology, and more sophisticated services, and to promote the development of regional hubs in support of, and to take advantage of, trends in urbanization. The state should encourage the development of a diverse and vibrant MSME sector and deploy capacity to support firms to more readily traverse the full spectrum of growth from micro to small to medium and large enterprises. Odisha should target investments to realize advantages associated with its unique location and latent comparative advantages through, for example, the further development of trade linkages and the development of a more sophisticated logistics sector.

The GoO should act to further strengthen the capacity of the state to eliminate poverty and improve the lives of residents. This should integrate a specific focus on building complementary and reinforcing capacity across line departments to fully utilize the fiscal resources of the state. The GoO should take advantage of current fiscal and economic conditions to implement second generation reforms focused on improving the efficiency and developmental impact of planning, budgeting, and procurement. Particular attention should be paid to modernizing Odisha's data management systems, and to build capacity within the state to leverage data to improve service delivery, promote accountability and transparency, and enhance evidence-based decision-making. To enable more efficient and sustainable investments in human capital, Odisha should build an integrated social protection platform and a consolidated Social Registry to reduce duplication and red tape, promote expenditure efficiencies, improve the state's capacity for planning and decision-making, and improve access to benefits for citizens. The GoO should redouble its effort to the quality of, and expand access to, education, health and nutritional services, with a focus on vulnerable and marginal communities. The transformation of urban governance should be supported through interventions to strengthen institutions and organizational development, and strengthen systems for municipal finance and financial management, particularly at the ULB-level. Efforts to upgrade urban slums should be redoubled, and the pace of progress increased. The further promotion of the development of an affordable housing sector must integrate a resilience strategy to mitigate the impact of natural disasters and climate change.

Rising to the challenges of the present, to ensure a sustainable and resilient future. The state must act to address escalating challenges in the water sector by full implementing the existing reform agenda, while concurrently developing a comprehensive program to address water security across all districts. Odisha must implement a holistic resilience strategy to mitigate increased climate- and disaster-related risks to water and electricity infrastructure and to ensure that appropriate proactive and reactive capacity and systems are in place for effective early warnings and disaster management. Outreach and education strategies should be developed and operationalized to promote the use of resilient design and durable materials for the construction of housing, and the use of smart and resilient power infrastructure to more readily withstand disasters, and more quickly recover from their impact. A comprehensive strategy needs to be developed to address escalating challenges in the provision and distribution of electricity in the state, to promote more certainty in the utility market, and attract quality service providers to the state.

XI. Annexure 2 – DLI 7 Technical Note

Introduction

- The State Government of Odisha has proposed to implement a World Bank-assisted PforR (Programme for Result) project on the State's capability and resilient growth by strengthening the DRM systems for resilience. To enhance the technical Capacity of OSDMA, the State government has agreed for augmentation of its own ongoing programme through the World bank project.
- Government of Odisha and World Bank have identified three areas of engagement, such as Strengthening Social Protection, Strengthening Statistical Systems and Building Resilient Odisha. A state level PMU has been setup in the Finance Department for monitoring the project.
- 3. OSDMA will be implementing the component on Building Resilient Odisha. The basic objective of this component would be implementation of a holistic resilience strategy to mitigate increased climate- and disaster-related risks and to ensure that appropriate proactive and reactive capacity and systems are in place for effective early warnings and disaster management.
- 4. Under the Building Resilient Odisha component, three Disbursement Linked Indicators (DLIs) have been identified, which are (i) DLI-1: Disaster- related impact based MHEWS of OSDMA/ GoO is strengthened, (ii) DLI-2: GPDMPs are integrated with Development Programme at the GP level, and (iii) DLI-3: Strengthening OSDMA to be future-ready and Operationalization of SIDM.

Project Background

1. OSDMA established SATARK with support from Regional Integrated Multi-Hazard Early Warning System (RIMES) to serve as a one-stop early warning integrated platform to support disaster management. SATARK has been incorporated with nine modules, such as, heat wave, flood, drought, lightning, ocean information, road accident, earthquake, cyclone and snakebite. SATARK integrates weather forecast products from the India Meteorological Department and other global and regionalsources for ready access and reference. SATARK has also incorporated threshold- based indicators, including heat wave, lighting, drought, and floods, to transform IMD forecasts into user-relevant early warning information.

Modules Objective Data source Linked Dept	
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Heatwave	Provide heatwave alerts and advisories with a 5- days lead time	IMD GFS forecast and IMD, MC value-added forecast (for alerting)	Working with IMD MC office. The interface was developed under SATARK
Flood	Provide discharge and water level forecast for Mahanadi River at different forecast points	RIMES WRF model and ECMWF Ensemble Model	Worked with DOWR for Hydrological model development
Drought	Provide likelihood of drought based on the latest observed indicators	SRC and IMD observation and crop sown area (DOA) – SAMAGRA	DOA
Lightning	Provide lightning alerts well ahead of time.	IMD – Flash count forecast (48 Hours). Earth Network DTA data feeds	OSDMA, EN, and IMD/NCMRWF
Ocean	Provide ocean state and coastal surge information	INCOIS point forecast	INCOIS
Transport	Provide accident hotspots, maintain accident database,	With test datasets	Commerce and Transport
Additional m	nodules included subsequen	tly	
Eq Module	Near real-time Eq alerts	IRIS – RIMES Network	-
Cyclone	Cyclone track/intensity and Impact	IMD, JTWCx`	IMD-OSDMA
Snakebite	Provide snakebite information and hotspots	-	-

- 2. A GIS Cell has been set up in OSDMA to function as a decision support system for effective management of disasters. The cell is equipped with required hardware and GIS and Remote Sensing software. OSDMA has developed the GIS database for the entire State in coordination with Odisha Space Application Centre (ORSAC). The digital data obtained from ORSAC in addition to the data developed by OSDMA are utilized for taking up preparedness planning and mitigation initiatives for management of disasters in the state.
- 3. The State Drought Monitoring cell of OSDMA has been set up in 2017 as per the Drought Management Manual-2016. SDMC is continuously monitoring the drought situations in the state based on different parameters as mentioned in the Drought Management Manual. SDMC is working in close coordination with the Department of Agriculture and Farmer Empowerment, Govt. of Odisha and Office of Special Relief Commissioner, Odisha.
- 4. The Odisha State Emergency Operations Centre (SEOC) functions under the administrative and supervisory control of the Special Relief Commissioner for dissemination of early warning. District Emergency Operation Center (DEOC) have been setup in 30 districts of the state. SEOC and DEOCs play an important role in effectively and efficiently coordinating multi-agency, intergovernmental responses to disaster events. The main function of the SEOC is to collect and

disseminate information relating to the natural calamities. It is operational round the clock on 365 days.

5. Early Warning Dissemination System (EWDS) has been established in the coastal area of the state in 22 blocks under 6 coastal districts (Balasore, Bhadrak, Jagatsinghpur, Kendrapara, Puri & Ganjam) under the World Bank assisted National Cyclone Risk Mitigation Project. The objectives of the project to establish a fool-proof communication system to address the existing gap of disseminating disaster warning up to the community level. Under the EWDS, disaster warnings can be disseminated within 3 km from the coastline. Many technological interventions have been made to achieve a robust and full proof communication system. About Rs. 75 Crores has been invested for the project.

Proposed Activity

- 1. The major project components are to expand the GIS cell which is envisioned modernization of the State Emergency Operation Centre (SEOC) and the District Emergency Operation Centres (DEOC) through enhancement of the technical capacity of OSDMA, and improvement to the early warning dissemination mechanisms. The Pillar 3 of PforR project, the DLI1 is envisioned to scale up the robust technical capacity of OSDMA on the existing institutional framework.
- 2. Under the 3 DLIs of entire PforR project, following activities have been identified after assessing the gap area of multi-hazard early warning system for Odisha with a series of consultation between OSDMA & World Bank team.

DLI	Ac	tivities	Estimated Cost
			(in Crore Rs.)
DLI 1: Disaster- related impact based MHEWS of OSDMA/	1.	Impact based Flood Forecasting and Monitoring system for 2 river systems (Baitarani and Budhabalanga)	243.00
GoO is strengthened	2.	Strengthening of GIS Capability of OSDMA	
	3.	Drought Monitoring and Forecasting	
	4.	Development of Forecasting system for Urban flood in Bhubaneswar and Cuttack City	
	5.	Development of landslide monitoring system for Gajapati district	
	6.	Strengthening of SEOC	
	7.	Strengthening of EWDS in coastal area	
	8.	Strengthening of DAMP software for different assistance on disaster relief	
	9.	Setting up SPMU at OSDMA	
DLI 2: GPDMPs are integrated with Development Programme at the GP level	1.	101 Risk Informed VDMPs prepared in 20 identified GPs	12.94
	2.	20 GPs formulate Risk Informed GPDMPs identifying costed and time-bound resilience actions	
	3.	20 GPDPs incorporate resilience actions from Risk Informed GPDMPs and are linked with the	

		Village Resilience Tracker platform	
DLI 3: Strengthening	1.	Development of updated HR plan for	33.00
OSDMA to be future- ready and Operationalization of	2.	Hiring or deputation of technical staff as per OSDMA's HR plan	
SIDM	3.	Development of business plan for SIDM	
	4.	Hiring or deputation of staff as per SIDM business plan	
	5.	Setting up of four Smart Classes in SIDM	
	6.	Setting up of Museum and creating learning space for students and others at SIDM	
		Total	288.94

Protocol to Evaluate Achievement of the DLI and Data/Result Verification

Year 1:	The OSDMA has agreed to expand SATARK for multi-hazard impact based forecasting system and early warning dissemination services through strengthening of SEOC and DEOCs along with establishment of Geo-spatial Lab.
	IVA to confirm establishment of Geo-spatial Lab and IT infrastructure at OSDMA, SEOC and DEOC.
	The first disbursement can be considered on the establishment of Geo-Spatial Laboratory and established linkages with SEOC and DEOC.
Year 2:	Disbursement will be triggered towards establishment of Impact Based forecasting for Cyclone and Storm Surge. IVA to confirm the generation of the forecast for a real-time cyclone event is developed.
Year 3:	Disbursement will be triggered towards establishment of Impact Based forecasting for Lightning, Heat and Cold wave, Landslide (one District). IVA to confirm the generaion of the forecast for real-time events for hazards namely - lightning, heat and cold wave, landslide (experimental in case on non-event).
Year 4:	IVA to confirm the development and establishment of Dynamic Multi-Hazard Risk Assessment system/platform in OSDMA. The system/platform is capable to generate risk maps that can be potentially used for risk mitigation and emergency response.

Year 5:	IVA to confirm the enhanced capability of SATARK as a "one-stop' tool for
	multi-hazard impact forecasting DSS for Odisha. The system demonstrates:
	service integration of weather services, disaster database for elements at risk,
	early warning dissemination system for cyclone, heat and cold wave, lightning,
	storm surge, floods (two target basins), urban floods (Cuttack and
	Bhubaneswar), landslide (One District) and Drought (Eight Districts).

Description of DLI-1 Activities

1. Impact based Flood Forecasting and Monitoring system for two river systems (Baitarani and Budhabalanga)

It is proposed to develop an impact based flood forecasting system for 2 major river basins (Baitarani and Budhabalanga) of Odisha. Impact based flood forecasting for these two river systems would be done with data analytics and modelling

A detailed study would be undertaken by the DoWR on the hydrological profile for determining River Gauge system, section profile and fixing up telemetric based River Gauge systems in Baitarani and Budhabalanga River systems. Based on the outcome of the study Telemetric river gauge and other sensors would be installed. Besides, high resolution DEM data of catchment area of these two rivers would be developed through ORSAC/NRSC for flood modelling.

The operational flood forecasting system requires access to the real-time data collection and processing subsystem to receive and process relevant hydrological and meteorological information. This will include the collection of meteorological data such as precipitation, temperature, and evapotranspiration as input to the hydrological model; the water level and discharge data at appropriate gauged sections in rivers and from reservoirs for calibration of the model, and a database management system to pre-process these data in a ready-to-use format.

The following approach will be followed for the impact based flood forecasting system.

- *Identification forecast locations:* at the initial stage, the forecast points, which would consist of the hydrological stations, impact locations, and other areas of importance, will be identified, and their sites will be extracted
- Collecting hydrometeorological and spatial data: the required observed data, including rainfall, water level, flow etc., and other spatial data such as DEM (Digital Elevation Model), land use soil cover data will be collected. Additionally, rating curves at all forecast locations will be acquired. Warning and danger levels at all forecast locations will be defined at this stage based on recent flood events
- Basin delineation as per forecast locations: After acquiring the DEM and identifying the forecast locations and hydrological stations, the basin outlet will be defined, and the basin will be delineated to obtain the sub-basins.
- Hydrological model development and calibration: based on the delineated sub-basins, the hydrological model will be developed in HEC-HMS. Other hydrologic models can also be tested as per the requirement. Calibration will be carried out with observed hydrometeorological data at all hydrological locations. Rating curves will be integrated to obtain the relevant water level.

- *Meteorological forecast:* The WRF model with a resolution of 9km will be used as the meteorological forecast, and forecasts will be extracted at the sub-basin level.
- *Forecast verification:* forecast verification will be done for the hindcast period and for the upcoming monsoon season. Once the forecast is satisfied, the system will be live and operational, and forecast verification will be done at every monsoon season.
- Integration of correction scheme: the operational staff will be required to regularly upload observed flow and water levels, and the ARIMA correction scheme will be integrated.

Inundation modelling would involve the development of a hydraulic modelling subsystem comprising a channel routing model to estimate the movement of the flood wave along the channel, the water levels, discharges, the effects of dyke breaches and reservoir operation, and the interaction with the flood plain and flooded areas, giving a flood inundation forecast along with an error correction subsystem incorporating an algorithm to improve the estimates of discharge based on recent feedback from river-gauge data.

The following process would be involved for impact based forecasting system.

- Data Acquisition: Data acquisition for hydrodynamic modeling would be the initial stage. A
 detailed high resolution DEM and information about past flood events will be required. A
 database of the occurrence impacts areas and the population affected will be developped.
 Additionally, spatial maps of population distributions, locations of buildings, and other vital
 structures will also be identified.
- Development of hydrodynamic model: HEC-RAS will be used for developing the hydrodynamic model. Based on the required locations, the boundary conditions will be defined. A detailed DEM with high resolution will be used to obtain the cross-sections. Additionally, if ground surveys are available, they can be used for verification.
- Input files: for steady flow simulations, the return levels for the respective return periods at the boundaries will be identified. For unsteady flow simulations, severe flood events at each location will be selected, and their flow hydrographs during the event will be used as input.
- Flood inundation maps: the model will be run at steady and unsteady states, and the relevant flood maps will be obtained. These maps will be verified with ground observations, and actual flood maps developed based on ground observations (if any). They would be overlayed on the population and structure spatial datasets to see the likely Impact and the areas and people affected during such flood events.
- Identification of risk: based on the flood hazard maps, the risk would be defined. The hazard will be obtained from the hydrological forecast, and a flood inundation map would be able to predict the exposure and vulnerability for each hazard. Based on this, the risk would be identified

Real time flood monitoring

Real time flood monitoring is a essential for rescue and relief operation. Since there is possibilities of cloud cover during cyclone and flood situations, Microwave satellite data is the only solution to map the flood inundation areas in a cloudy weather. The large and inaccessible area can be monitored on a real time basis using the microwave satellite data. UAV technology would also be a best possible technological intervention for real time flood monitoring and damage assessment. A comprehensive flood monitoring system will be development using Microwave satellite data and UAV technology.

2. Strengthening of GIS & IT Capability of OSDMA

Expanding GIS Cell with technical capacity, in terms of tools and human resources, would be done to carry out risk assessment, communicate the disaster risk and potential impacts to communities, assist during response and relief operation, guide policymakers in identifying and implementing mitigation programs for disaster risk reduction. The Cell would act as a technical wing of OSDMA by providing scientific and technical support for hazard, risk, and impact analysis, especially during emergencies.

The GIS cell would be equipped with i) Hardware: Servers and Workstations, Office equipments ii) Software: GIS & database software iii) Human Resources. The priority task of the Cell shall be:

- a) Dynamic Risk Assessment and Management, Hazard, vulnerability, and risk assessments, as inputs to disaster risk reduction programs/ projects and to guide community-level decision-making.
- b) Provide technical support to Emergency Operation Centres (EOCs) for integrating these solutions (e.g., tools, technologies, approaches, strategies, procedures, and practices) into operations.
- c) Receive feedback from EOCs on the relevance and usefulness of these solutions for identifying residual gaps
- d) Collect impact data for updating the state disaster database

IT and GIS capabilities of OSDMA would be strengthened with the support of ORSAC and E & IT Deptt/ OCAC. Data of OSDMA/SEOC would be hosted in SDC and a mirror server would be set up in OSDMA. GIS based risk database for the state would be developed. Disaster Management Plans would be web-enabled and would be linked to Decision Support System (DSS).

XII.

XIII. Multi-Hazard Risk Assessment / Disaster Risk Assessment.

Multi-Hazard Risk Assessment Study would be carried out for the disaster Risk reduction planning. The resulting risk maps and Atlas will support in decision making and prioritizing their resource utilisation in disaster risk management. The study would be a systematic approach and have practical implications, even for resource allocation, and it would be included in all disaster management activities. Disaster risk management would be based on understanding the disaster risk with all its dimensions i.e., vulnerability, capacity, exposure of persons and assets, and the existing environmental conditions. Such knowledge can be used for risk assessment, prevention, mitigation, preparedness and response.

Main objectives of this study would be :

- i. To map out all hazard prone areas at State, district and block level, covering water and climate, geological, environmental related hazards in the State;
- ii. To assess the extent of vulnerability, the exposure of people, infrastructure and economic activities to these hazards.
- iii. To identify and propose location specific detailed solutions to avoid disaster risks by implementing both structural and non-structural mitigation and prevention measures

3. Establishment of Drought Monitoring and Forecasting System

Agriculture in Odisha is strongly affected by two major hydro-meteorological disasters, namely drought and flood along with cyclones and unseasonal rainfall. During the last 20 years (2000 to 2019), Odisha has faced 13 years drought due to erratic behavior in monsoon, changes in weather, climate and aberrations forcing it to be adversely affected more on agriculture sector. During the last 20 years, districts like- Angul, Bargarh, Bolangir, Deogarh, Nabarangpur, Nuapada, Sambalpur and Sundargarh etc. have faced the drought events for 8 to 10 times.

Spatial extent, intensity and duration of drought related information is essentially needed for taking the choicest rational decision making in the field of agriculture. An effective drought management approach lies in timely accessibility to real time weather data, monitoring and analysis of weather data, early warning of drought like situation, preparation of drought management/ crisis plans and a quick response to the situation based on such plan for drought mitigation measures.

For declaration of drought as per the Manual for Drought Management, Government of India, the mandatory indicators (Rainfall and Dry Spell) and impact indicators (Crop Sown Area, Remote Sensing Indices, Hydrological Indices and Soil Moisture Based Indices) are essential. But with the spatial and temporal variability of rainfall in the State coupled with other climate aberrations, capturing of the weather data has always been a major constraint to effectively monitor the drought situations with a meagre infrastructure of automatic weather stations installed by IMD, Central Water Commission, Department of Water Resources, Department of Agriculture and Farmers' Empowerment across the State. At present rainfall data is beingobtained from 314 manual rain gauges (installed @ 1 no. per block) set up under Special Relief Commissioner, Odisha. Introduction of crop insurance schemes like Pradhan Mantri Fasal Bima Yojana (PMFBY) have further necessitated installations of more numbers of AWS and ARG as the crop insurance pay outs under PMFBY are inter-linked with weather data.

The State Drought Monitoring Cell (SDMC) has been setup in OSDMA for weather data monitoring as well as drought management related activities. The cell has the objective to continuously monitor and analyse various drought parameters and facilitate real-time dissemination of weather information for augmenting crop advisories services. Drought monitoring mechanism in the state will be strengthened by establishing large network of weather observatories which include Automatic Weather Stations (AWS) and Telemetric Rain Gauges (TRG).

XIV. The following sub-activities would be taken under the project.

- i. A robust network of Automatic Weather Station and Automatic Rain GaugeStations will be established across the State focusing the drought prone districts. Under the PforR project, AWS would be installed at each block headquarter and one each in 15x15 km grid in the 8 most drought-prone districts where more than 8 events of drought noticed during the period from 2000-2019. The districts are Angul, Bargarh, Bolangir, Deogarh, Nabarangpur, Nuapada, Sambalpur and Sundargarh. TRGs would be installed in each Gram Panchayat of 8 most drought-prone districts. Whereas, the TRGs would be installed at rest of the Grampanchayats under state government funding.
- ii. The Automatic Weather Stations and Automatic Rain Gauge will be used to record different weather parameters through sensors: Air temperature, Relative humidity, Atmospheric pressure, rainfall, wind speed and wind direction. As per the need, the following additional parameters can also be obtained from the AWS like- Soil moisture and soil temperature, Solar Irradiance/Sunshine hour, Quantum PAR Sensor etc.
- iii. Continuous monitoring and analysis of various weather parameters would be done for monitoring of drought in the state.
- iv. For different applications on drought management and weather forecasting, data acquisition, modelling and forecasting would be done at OSDMA in collaboration with different organizations like Space Application Center (SAC), National Remote Sensing Application

Center (NRSC), INCOIS, ORSAC etc. and this would be shared with the concerned department and organisations as per requirement.

4. Development of Forecasting system for Urban flood in Bhubaneswar and Cuttack City

Increase in the developed areas in the city of Bhuabaneswar and cuttack and the associated changes in the land surface properties have resulted in an increase in the overland flows, leading to severe flood events during recent period. There has also been an increase in short duration high-intensity precipitation events in the city that cause floods. Occurrence of such heavy flood events, year after year, causing huge disruption to normal life and resulting in significant economic loss, necessitates an integrated approach to address the urban flooding problem in a holistic manner.

The capital city of Odisha, Bhubaneswar stands on a hilly terrain is hardly 70 years old but has expanded to a cosmic size. The city is a unique place today for its place in history, legend, tourism & ethnology, employment opportunities, expansive trade and commerce, education hub of east India, magnet for medical facilities and many more. The Bhubaneswar city was 26.09 km² to start with in 1951, expanded to 135 km² in 2008 and as present smart city of area 161 km² expected to extend up to 235 km² area. The sporadic hilly and forest terrain (av. 45 m above MSL) with lateritic coping drains all its runoff to the Kuakhai River flowing towards North East. The location of the place was such that there was no accumulation of water in and around Bhubaneswar area 50 years before.

About 10 numbers of major drainage channels with subsidiaries flows from western upland to eastern low lands. As per 2011 census the urban population was 843842. It was 38200 in 25.9 sqkm in 1961 during early shifting of the capital. The declared smart city is sprawling in its phase II extension and joining with the old Cuttack city as twin city. Particularly, in the capital city Bhubanesar, the perennial problem of waterlogging gripped Acharya Vihar, Bomikhal, Rasulgarh, Old Town, Bhimatangi and many other parts. The urban floods in Bhubaneswar during years 2008,2014, 2016, 2018 and 2019 have signaled the city at danger.

Cuttack, the commercial capital of Odisha, is one of the oldest cities and is located at the confluence of two big rivers, namely, the Mahanadi in the north and Kathajodi and is about 30 km away from the State capital. It has a population of 6.5 lakhs (2017) distributed among 59 wards with a spatial spread of 82.43 sq km. It has a population density of about 7,823 people per sq km with trade and commerce as the key economic activities. Considering the location of the city in the delta area, the city is vulnerable to flooding. Flooding is due to heavy localized rainfall as well as discharge of water from the Hirakud dam located 330 km upstream. The topography of the city is saucer shaped with unplanned urban development and choking of the narrow drains with solid waste causing frequent water logging problems in many parts of the city.

The Millennium City, Cuttack faces a severe water logging problem during monsoon. Desilting of drains and cleaning of sewer lines work is an important aspect of the monsoon preparedness plan of Cuttack Municipal Corporation (CMC). It usually begins by April and is completed by the first week of June. The city operates pumps to pump out water during rainy season to avoid water logging. The city, under various development projects, is also developing drains to reduce the impact of flood and water logging. Climate change can intensify rainfall, which can influence the runoff thus increasing flood vulnerability. The city had witnessed its worst ever water logging problem in 2007 with most of its parts remaining submerged for two days. As per reports of Cuttack Municipal Corporation, there are drains of around 1,729 km length including 519.66 km surface drains, 130.34 km major surface drains, two major storm water channels of 22 km length, a 29 km long branch storm water channel and 1,028 km long earthen drains in the city. Odisha Water Supply and Sewerage Board (OWSSB) which is carrying out Japan International Cooperation Agency (JICA) funded Odisha Integrated Sanitation Improvement Project (OISIP) in the city has started desilting the two major storm water channels after finalising the necessary tender works. He said the civic body's engineering section has intensified the cleaning of other surface drains and branch storm water channels in the city.

The present project aims at developing a comprehensive, near-real time flood forecast model for Bhubaneswar and Cuttack city. An integrated urban flood model (UFM) and forecasting system for these two cities will be developed by OSDMA, in collaboration Bhubaneswar Municipal Corporation and Cuttack Municipal Corporation to mitigate the impacts of floods. The following activities would be undertaken for the flood forecasting of these two cities.

To develop an efficient forecasting system, a well-established network of water-level sensors, integrated two-dimensional flood model, which along with the water levels provides information on the spread of flood waters (vis-à-vis flood inundation), an automated information dissemination system for preparing and mitigating flood-related damages is proposed.

One of the major aspects for the development of the model is to collect data from various agencies, and use them appropriately for simulating floods in the city. The urban flood forecasting system for the Bhubaneswar and Cuttack comprises six components, viz. (i) establishment of sensor and rain gauge network and data aggregation; (ii) precise rainfall forecast system; (iii) comprehensive flood modelling; (iv) flood information dissemination and feedback; (v) innovative technologies for flood mitigation and management

- i. Establishment of sensor and rain gauge network and data aggregation: To monitor the flow during flood events, a network of automatic rain gauges (ARGs) and water-level sensors (WLS), across the both the cities will be installed. The real-time rainfall data will be obtained at a temporal resolution of 15 min from the ARGs through a GPRS based communication system. The telemetric WLSs will set up on the storm water drains (SWDs) at various significant locations based on the identified flood-vulnerable areas, and accessibility to and safety of the sensors. The WLS will transmit data at 15 min temporal resolution, which is critical during high flood events. The networks will be equipped with alert systems to keep the authorities informed if the level crosses a threshold, helping them to prepare in case of flood events.
- ii. *Flood Modeling:* The flood modeling requires collection of fine resolution data for mapping the flow patterns. digital elevation model (DEM) of submeter resolution will be generated in collaboration with ORSAC, Bhubaneswar. Details regarding lakes and stream, watersheds, buildings, roads and railways will also be mapped. The flood-vulnerable zones will be classified based on past events. In the first phase, urban flood monitoring would be taken up for Bhubaneswar city, as High resolution LIDAR data for Bhubaneswar generated under JNNURM project is available with ORSAC.
- iii. Rainfall forecast: The rainfall forecasts will be developed by RIMES using different model output of IMD and other met agencies. The real-time data from ARG sensors and automatic weather stations (AWS) will be integrated with the forecast data to capture the real-time, location specific weather conditions. This facilitates an increased accuracy in forecasts based on the observed data.
- iv. Comprehensive flood modeling: Comprehensive urban flood modelling will be developed by integrating high-resolution weather forecast model. The input datasets required for model set-up, viz. ARG locations and rainfall data, sub-catchments, SWD network (location and channel geometry), and impervious area in the form of buildings and roads, topographical data and DEM data. The simulated peak run-off, run-off volume and critical and flood-vulnerable locations will be obtained using rainfall data of 15 min resolution generated during a historical extreme event as an input to the model. The outcomes of the urban flood model will serve as inputs to the HEC-RAS model to obtain flood inundation maps.
- v. *Near real-time flood mapping and flood forecasting:* The near real-time flood inundation maps will be prepared and dissiminated based on the outcome of the flood model with real-time observed rainfall from the ARGs as inputs, and will be correlated with the WLS data for various locations.

vi. *Flood information dissemination and feedback:* The model outcomes and relevant information will be disseminated as deliverables based on the forecasted rainfall and outcomes of the flood model of the occurrence of a high rainfall event. The flood alerts will be dissiminated to the concerned organizations through WhatsApp and messaging services. The same alert will be issued through SATARK application. Details of location and intensity of rainfall and the occurrence of floods will be communicated to BMC and CMC authorities for taking different preparedness and evacuation measures, if necessary.

5. Development of landslide forecasting system for Gajapati district

The landslides event due to cyclone "Titli" in Gajapati district of Odisha is a unique phenomenon and the state had never experienced such event in the past during any cyclonic situation. Though the state had faced similar or greater intensity of cyclones in the past, but the landslide due to cyclone Titli has added as one of the impacts of cyclone apart from high wind, heavy downpour and storm surge.

In Gajapati district, many tribal people live on the hill top areas which are prone to landsides. Heavy rainfall within a short time period in the hilly region causes flash floods and landslides. This problem would be more frequent in future due to climate change impact. OSDMA has engaged the IIT-Bombay for mapping of landslide prone area to identify the critically vulnerable pockets. The study emphasizes on the requirement of new hill shelters & its design, selection of suitable sites and re-relocation site, wherever required.

Extreme events such as heavy and or prolonged rainfall episodes resulting in soil saturation and increased volumetric water content can lead to slope failure. The State of Odisha encounters this phenomenon frequently during the cyclone movement in the North-Central regions. Although, Landslide Early Warning System (LEWS) is a localized data-driven and complex process. However, an effective LEWS, if developed, considerably reduce human fatality, and save property. While developing LEWS collectively support; i) developing landslide risk zonation map through extensive hazard assessment, ii) continuous monitoring system and surveillance capability using in-situ observation systems or remotely sensed data, iii) identify adequate lead time forecast for alerting the at-risk communities, iv) potential socio-economic Impact of the landslide depending on its severity. The LEWS shall be developed with a combination ofphysical monitoring, advanced spatial analysis, and social and institutional involvement.

The state government will emphasize on the landslide risk mitigation measures in the landslide hotspot areas. The risk mitigation measure includes, the landslide early warning systems, slope stabilization near the settlements, hill shelters, etc.

A landslide monitoring system will be established at selected locations in Gajapati district on a pilot basis. The locations for landslide monitoring system would be decided based on this study conducted through IITB.

Impact-based forecasting for anticipatory actions would be developed using historical analysis and characterization of the landslides. Utilizing the highly localized and near real-time rainfall data and quality weather forecast will be used to formulate the warnings system and estimate the anticipating future risk by incorporating all landslide types and volumes, all triggering events, vulnerability, and elements at risk.

6. Strengthening of SEOC

The Emergency operation centre's role is critical during disaster situations. It is essential to equip the EOCs to utilize early warning information to respond to emergencies more efficiently. EOCs with adequate tools and access to the technology will have ready access to information and can effectively communicate during emergencies. It is proposed to strengthen the Emergency Operation Centres (SEOC and DEOCs) to integrate Impact-based Forecasts (IBF) and risk-based early warning information to undertake Forecast-based Actions (FBA) and respond to emergencies more efficiently. The EOCs will be Equipped with adequate tools to have ready access to information all the time and can effectively communicate during emergencies. Capacity augmentation of SEOC in terms of hardware and manpower would be done. Hotline facility in the State EOC would be established for disaster management. For effective early warning dissemination, Cell Broadcasting system would be developed for the entire state to alertthe population in specific zones or locations or areas. Integrating the common alerting protocol mechanism to disseminate the informationthrough various media.

Integration of Satark application will be made with DSS, EWDS, CAP, Mass Messaging System for Dissemination of disaster warning to the community through mobile app, SMS, and cell broadcast and other mechanism

Enhancement of Satark application

Impact Based forecasting (IBF) for Lightning, Cyclone, Heat and Cold wave, Landslide (one District), Storm Surge will be developed. Robust Dissemination Mechanism to support the delivery of the early warning information through a robust and redundant platform.

SATARK fully enhanced impact forecasting decision support system, service integration of weather services, early warning dissemination system for cyclone, heat and cold wave, lightning, storm surge ,floods, urban floods (Cuttack and Bhubaneswar), landslides and Drought.

SATARK currently incorporates only the hazard database and early warning service based on thresholds defined by IMD. To respond to and meet the demands for Impact Based Forecasts (IBF), exposure and vulnerability data streams need to be incorporated into the SATARK Data Analytics Architecture, which is at a basic level of development stage and needs to be enhanced. These additional data streams need to be collected from local levels from villages /urban centres. Other hazard modules need to be incorporated into SATARK, and its outreach (coverage) needs to be expanded to reach early warning information to the entire State.

The SATARK system under implementation has an inherent potential for further scaling up. Under its Program for Results (PforR) for activity-based financing support, the development, scale-up, and expansion of the SATARK System would be done to provide impact-based forecasting (IBF) products covering multiple hazards and emerging risks. The Proposed Programme intends to incorporate all the features of Impact based Forecasting and Dissemination of preceding years in the SATARK platform so as to develop itas one stop solution for Multiple Hazards.

Lightning

This phase of the system development would build/ improve the already developed lightning forecasting model integrated under the SATARK platform. Based on real-time data feeds received from the lightning monitoring sensors network, SATARK issues different level of warnings and advisories, based on thresholds drawn from historical patterns of events.

Probable dangerous thunderstorm alerts with a lead time of 30 mins can be issued based on the sensor data. System automatically identifies polygons spatially over Odisha at district/block level and generate simultaneous alert of the same to the registered SATARK Mobile app user in every5 mints interval.48 Hour Lightning Forecast data obtained from NCMRWF can be accessed at anhourly interval. Alerts will be notified to the user on the basis of their geo-location. During the Severe Activity, the device will trigger the buzzer to notify the alert.

The Activities in developing this module are as follows :

a. Data Acquisition for Hazard, Risk and Vulnerability assessment meant for lightning.
- b. Software module development in SATARK for Impact based forecasting meant forlighting along with advisory for vulnerable areas.
- c. Development of Early Warning Dissemination mechanism for lightning.

XV. Cyclone and Storm Surge

This component primarily would source the forecast from the India Meteorological Department for the real-time tropical storm track and intensity and the surge data from the Indian National centre for an ocean information system (INCOIS). Alternate deterministic and probabilisticforecasting sources such as the ECMWF and JMA can also be utilized for the probabilistic track prediction. It would also undertake customization of the Hurricane Weather Research and Forecast System (HWRF) to cover the Gulf of Thailand and the neighbouring Bay of Bengal andthe South China Sea to predict cyclonic storm genesis and evolution.

The model provides cyclone track (pressure, radius of maximum winds, location, direction, and speed), intensity, and rainfall forecasts. Customization of the Japan Meteorological Agencies storm surge model shall be integrated within SATARK to estimate storm surge heights and winds resulting from historical or predicted cyclones. Input data required for the surge model includes near-shore topography and bathymetry and cyclone track. The tool's front end will be driven by PHP and PostgreSQL databases, with HWRF and JMA models running in the backend.

The Activities in developing this module are as follows:

- a. Data Acquisition for Hazard, Risk and Vulnerability assessment meant for Cyclone.
- b. Software module development in SATARK for Impact based forecasting meant for Cyclone along with advisory for vulnerable areas.
- c. Integration of Web DCRA in to the SATARK application
- d. Development of Early Warning Dissemination mechanism for cyclone.

7. Strengthening of EWDS in coastal area

As a part of cyclone preparedness, Early Warning Dissemination System (EWDS) has been established in the coastal area of the state under the World Bank assisted National Cyclone Risk Mitigation Project. Under the EWDS, cyclone warnings can be disseminated within 3 km from the coastline. Many technological interventions have been made to achieve a robust and full proof communication system. About Rs. 75 Crores has been invested out of the project with 100percent central share.

In order to reduce the vulnerability of coastal communities by addressing the existing gap in dissemination of warning of Cyclones and other disasters the Early Warning Dissemination System (EWDS) connecting to the Last Mile and Capacity building of all stakeholders is very much required within 10 km of the coastal track of the State. In the present scenario under the EWDS, since major infrastructures have already been created at State, District and Block levels, only the alert siren system needs to be established beyond the three kilometer track to disseminate the cyclone warnings.

Alert Tower Siren System is one of the options for Mass Notification in Pre Disaster scenario applicable to cyclone disaster and other disasters. The Alert Tower Siren System can be installed

mainly near coastal habitation. The Siren/ announcement can be initiated from the State Emergency Operation Centre (SEOC) through GPRS network. Separate Power supply with Solar panels shall be required for each outdoor unit of the alert siren assembly. Alert siren/ announcement sound is audible up to 1.5 kms in Omni direction (3 kms end to end).

In the present context, it is proposed to establish additional three contiguous lines of EWDS parallel to coast to cover 10 km coastal area. The systems would be placed at the roof top of multi storied existing building (e.g. MCS/ MFS/ GP Office/School/other Govt buildings) and all the communication equipment would be mounted on the 5m pole above the buildings. GPRS system would be used as the communication medium for activating the siren system and dissemination of voice messages. To cover three lines parallel to the 480 km coast, with approximately 3 km distance between two locations, 480 no. of alert sirens would be required.

8. Strengthening of DAMP software for different assistance on disaster relief

DAMPs software developed by NIC would be strengthened by developing modules for different disaster relief assistance. Integration of state unified beneficiary database bank account database would be made in DAMPS.

9. Setting up SPMU at OSDMA

It is proposed to setup a separate PMU for the execution of the project.

Detailed budget

DLI -1 Activities	Sub activities	Budget (INR Crore)
Impact based Flood Forecasting and Monitoring system for 2 river systems (Baitarani and Budhabalanga)	Study on the hydrological Profile of 2 river systems (Baitarani and Budhabalanga) for determining River Gauge system, studying the section profile and fixing up telemetric based River Gauge systems	27.0
buunabalanga)	Establishment of Telemetric river gauge and other sensors in two river basins	
	Data base development for flood forecasting of two river basins	
	Flood forecasting in SATARK with data analytics and Modeling	
	Real time Flood Monitoring mechanism for response activities	
	Early warning dissemination system for the flood from SEOC through different modes of communication.	

Strengthening of GIS & IT Capability of OSDMA	GIS and IT capabilities of OSDMA and DEOC is strengthened	36.0
	Hazard information and risk data base for the state are developed in GIS platform	
	GIS based hazard information and risk data are integrated with Satark App	
	Hazard Risk and Vulnerability Assessment of the state	
Drought Monitoring and Forecasting	Identification of suitable location for AWS and ARG in most drought vulnerable districts and block headquarters of the Odisha	62.5
	Installation of AWS in block headquarters and 15X15 km grids 8 drought vulnerable districts	
	Installation of ARG in each Grampanchayat	
	Drought monitoring using weather data from AWS and ARG	
	Crop weather forecasting and advisories throgh Agriculture deptt.	
Development of Forecasting system for Urban flood in Bhubaneswar and Cuttack City	Infrastructure for Urban flood forecasting like Telemetric Rain Gauges & Flood Water gauges is established for Cuttack and Bhubaneswar city	6.0
	Urban Flood monitoring database is developed in GIS platform	
	Forecasting system of Urban flood in Bhubaneswar and Cuttack City is developed in SATARK application	
	Urban flood early warning is disseminated through existing digital display board and other modes of communication of Municipal authorities	
Development of landslide monitoring system for Gajapati	Installation of landslide monitoring sensors at strategic locations in Gajapati dist	5.0
district	Development of thematic information in GIS platform for land slide monitoring	
	Development of landslide module in SATARK application	

	Landslide early warning dissemination	
Strengthening of SEOC	Strengthening of SEOC of Odisha with provision of Hotline and Call Center facility with capacity enhancement of staff recruitment at State and District EOC for effective disaster response and dissemination of early warning Early warning dissimination through Cell Broadcasting system	56.5
	SATARK application is fully enhanced for impact based forecasting for different disasters	
	Integration of SATARK application for dissemination in different platform	
Strengthening of EWDS in coastal area	EWDS is established in coastal area of Ganjam and Puri district within 10 km from coastline	31.0
	EWDS is established in coastal area of Jagatsinghpur and Kendrapada district within 10 km from coastline	
	EWDS is established in coastal area of balasore and Bhadrak district within 10 km from coastline	
	Dissemination of multi-hazard early warning are done through the EWDS towers	
Strengthening of DAMP software for different assistance	Modules in DAMP software for different assistance on disaster relief are developed	5.0
on disaster relief	A State Unified Database has been built for the provision of safety nets in case of disaster, populated with beneficiary data using clear data protection protocols	
	Social registry database and Bank accounts of beneficiaries for relief payments are integrated with the DAMP for disaster assistance	
	Data up gradation and customization of DAMP are done	
Setting up PMU at OSDMA	PMU Setup for DLI-1, DLI-2 and DLI-3	14.0
	Total	243

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XVI. Annexure 4 – DLI 8 Technical Note

1. Introduction:

The State Government of Odisha is Planning to implement a World Bank-assisted Programme for Result (PforR) project on the State Capability and Resilient Growth Project (OSCRGP). Under the Pillar-3 of the Project which accounts for Building Resilient Odisha by virtue of strengthening the Disaster Risk Management System, the State Government has identified for preparation of Risk Informed Village Disaster Management Plan and Gram Panchayat Disaster Management Plans which will be subsequently linked with Gram Panchayat Development Planning process (GPDP).

The DLI-2 (Disbursement linked indicator-2) of the Pillar-3 of the Project is envisioned for developing the risk informed Village Disaster Management Plans and Gram Panchayat Disaster Management Plans and its subsequent linkage to GPDP process.

2. <u>Background:</u>

Odisha State Disaster Management Authority (OSDMA) has implemented community-based disaster risk management (CBDRM) programmes and activities since its inception. This has included the Orissa Disaster Mitigation Programmeⁱ which supported coastal communities for formulation of community contingency plans and built first responder capacities. Investments in community capacities for disaster management have continued through the years, including in the form of annual mock drills and other flood/cyclone/tsunami preparedness activities. With participatory risk assessments and planning at the heart of most CBDRM initiatives (both GoO and civil society-led), their positive impact on community resilience have been witnessed in several successive disaster events. Communities involved with CBDRM programs have demonstratedⁱⁱ enhanced capabilities for safe evacuation and decisive action for early recovery during Cyclone Phailin. Disaster management "planning" is also an area

¹ Delica-Willison, Z. (2003). Community-Based Disaster Risk Management: Gaining Ground in Hazard-Prone Communities in Asia. Philippine Sociological Review, 51, 49–64. <u>http://www.jstor.org/stable/44243072</u>

¹ See for example, the example of Village Level Risk Reduction Committees in Ketuajanga village in the aftermath of Cyclone Phailin <u>https://cbdrm.org/case-studies/responding-emergencies-pfr-perspective/</u>

where OSDMA has undertaken initiatives in fulfilment of its roles mandated by the Disaster Management Act 2005. This has included development of the State Disaster Management Plan, District Disaster Management Plans, Department Disaster Management Plans, Heat Wave Action Plan, and Village Disaster Management Plans

(VDMPs), amongst others. In 2018, OSDMA scaled up the development of VDMPs in collaboration with the District Disaster Management Authorities (DDMA) and completed this exercise in 9986 (out of total 51, 349) villages covering 2301 Gram Panchayats across all the 30 districts of the state, with plans to cover other disaster-prone villages under this program. Further, GoO seeks to institutionalize the disaster management planning process through integration with development programmes by

taking policy and programmatic action at multiple levels. Village Disaster Management Plans aim to ensure community level disaster preparedness and to make the community and infrastructure more resilient. The Village Disaster Management Plan template (see Annex 4 for a sample plan) has been designed to delineates the detailed hazard profile, resource identification, vulnerability profile, mitigation measures and response planning of a particular village.

In addition to that, under the Village Disaster Management Plan program of OSDMA, Village Disaster Management Committees (VDMCs) and Disaster Management Teams (DMTs) are also being constituted to carry out different disaster management activities and response activities of a village.

The Village Disaster Management Committee (VDMC) is the institution for Community Based Disaster Risk Management (CBDRM) at the Village level. VDMC is the village institution anchoring CBDRM intervention. On one hand, it has responsibility to lead CBDRM activities at village level and on the other hand it has responsibility to coordinate, involve PRI and other frontline government workers for proper implementation of development activities ensuring vulnerability reduction. VDMC works for the issues/ problems with respect to disaster management and risk reduction without any bias of caste, creed and gender etc.

The constitution of the VDMC is made in the village consultation meeting through nominations. VDMC represents men and women from a cross section of the village. Membership in VDMC varies from 15-25 members depending on the size of the village. The composition provides adequate representation of women and socially excluded (SC and ST) population. Adequate representation is made to present the vulnerable groups including / specially abled persons. The villages, having Cyclone Shelter Management & Maintenance Committee (CSMMC)/ Flood Shelter Management & Maintenance Committee (FSMMC), does not form any VDMC. The CSMMC/ FSMMC plays the role of VDMC. As on date 9986 villages have VDMC and 814 villages have CSMMC/FSMMC. The members of the VDMC are chosen from the following categories

- 1. Elected representatives- All ward members of the Village.
- 2. Two Women Shelf Help Group (WSHG) members- preferably from 2 different WSHGs.
- 3. One from local Non-Government Organisations (NGOs)/ Community Based Organizations (CBOs)
- Two members of youth groups such as Nehru Yuva Kendra Sangathan (NYKS), National Service Scheme (NSS), Bharat Nirman Volunteers (BNVs), Civil Defence, local Youth Club or others
- 5. One retired Government Employee or Ex-service personnel
- 6. One Representative of Police Department (GramaRakhi/ Home Guard or Beat Constable etc.

- 7. Village level government functionaries each from following (if available)
 - Education (Head Master of Local School)
 - Health (ASHA, ANM/ Swasthya Karmi etc.)
 - Women and Child Development (Aanganwadi Worker/s)
 - Agriculture (VAW)
 - Veterinary (LI, Go Mitra etc.)
 - MGNREGS (Gaon Sathi/ Mate)
 - Any other important organisation
- 8. One representative each from or SC & ST and population and other vulnerable groups

The VDMC anchors the VDMP process by performing the following key functions:

- 1. Social mapping of the village
- 2. Village level hazard mapping.
- 3. Conducting village level risk assessment.
- 4. Analyses of disaster risk based on the assessment and prioritize the key activities to be undertaken for disaster risk mitigation measures.
- 5. Identification and prioritization or critical community infrastructure that should be taken up for disaster risk mitigation measures
- 6. Formulation of project implementation committees.

Other functions carried out by VDMC includes:

Preparedness functions of VDMC

- 1. Share Village Disaster Management Plan (VDMPs) with all members of the community
- 2. Conduct disaster preparedness training with VDMC members
- 3. Raise community awareness on what to do before, during and after a disaster
- 4. Monitor disaster threats, conduct drills and draw lessons to improve the plan
- 5. Expand membership and involvement in disaster risk management activities

Emergency functions of VDMC

- 1. Communicate warnings in case of emergencies issued by district administrator. Manage evacuations at village level
- Organize search and rescue with community participation at village level Support /conduct damage assessment at village level and report damages and needs to government and disaster management agencies for assistance as per Government designed reporting formats and criteria.
- 3. Coordinate, plan and implement emergency relief delivery operations with DDMA, Block and Gram Pachayat

Recovery functions of VDMC

1. Ensure that risk reduction measures are integrated during construction and repairing of critical community infrastructures.

- 2. Evaluate the performance of DMT/ Task Forces capacity and effectiveness to promote community safety
- 3. Coordinate with DDMA, Block and Gram Panchayat for the implementation of different recovery measures.

Roles, responsibilities and Standard Operating Procedures (SOP) of VDMC:

The VDMC performs the following role

- 1. Organize meetings of VDMC for the discussion of the tasks and functions of VDMC.
- 2. Conduct risk assessment in the village through the participation of other community members.
- 3. Organise and participate in learning activities.
- 4. Plan periodically for risk reduction of the village dealing with the issues emerging from disasters and track the results.
- 5. Ensure that households prepare their survival kits as per the plan.
- 6. Ensure community level preparedness before each hazard season as per the guideline.
- 7. Manage early warning dissemination during disasters
- 8. Coordinate with service providers for timely and appropriate implementation of development services.
- 9. Monitor the health and nutrition services for children and women.
- 10. Monitor quality of construction work being done from Gram Panchayat funds, so that the assets created should be disaster proof
- 11. Collect and manage village contingency fund in transparent manner, as per need.
- 12. Keep records of VDMC meetings and correspondence with GP and other government departments.
- 13. Participate and ensure participation in government organized coordination meetings and training programmes

Mitigation and Preparedness Plan

The Mitigation and Preparedness Plan will include the followings

- 1. List out the Standard Operating Procedures for DMTs in the pre disaster phase
- 2. Enumerate the short term and long-term mitigation measures for the community

Disaster Management Teams

The principal objective of formation of DMT is to have trained and equipped disaster preparedness groups to minimize loss of lives and properties of the targeted community. Disaster Management Teams are being formed in each village and function under the VDMC for specialized task like Early Warning Dissemination; Evacuation and Search & Rescue; First Aid; Shelter Management; Water and Sanitation; Relief Distribution; Carcass Disposal; Trauma Counselling; and Damage Assessment, etc. As on date there are approximately 50,000 DMTs across 9986 villages.

The number of DM Teams are being formed by the VDMC as per the need of the village. Each team consist of 5-7 members depending on the availability of local youth within the age group of 18-35 years. Minimum Educational Qualification for Disaster Management Team members is 8th Pass

preferably. However, the VDMC relax the norms in exceptional cases. Members of the Disaster Management Teams are nominated by the VDMC in its first meeting.

Each group have distinct activities to carry out before during and after disaster. The DMT's have certain standard Operating procedures in the three phases of disasters. The different DMT's are as follows:

- 1. Early Warning and Dissemination Team
- 2. Evacuation, Search and Rescue Team
- 3. Medical and First Aid Team
- 4. Shelter Management Team
- 5. Water & Sanitation Team
- 6. Relief and Coordination Team
- 7. Carcasses Disposal Team
- 8. Trauma Counselling Team
- 9. Damage & Loss Assessment Team

The roles and responsibilities of different Disaster Management Teams (DMTs) is mentioned as follows:

Early Warning and Dissemination Team:

The warning team includes youths of village, both men and women who are trained to understand radio/ TV/ other meteorological warnings and act fast to spread the warning throughout the village in an effective manner. They perform the following functions in different phases of a disaster.

Pre- Disaster:

- Monitoring of weather forecasts through radio bulletins and television without fail.
- Transport and communication aids are needed to pass on the warnings to the entire village. Thus, inspects cycles, motorbikes, boats and other transport and megaphones, drums and other communication aids regularly.
- Update the contact details of the local offices.
- Every group have a radio and red flag to mark the most vulnerable houses

During Disaster

- Cross checking of the warnings received on the radio or from any other source with the DEOC (District Emergency Operation Centres) 1077.
- Dissemination of warning throughout the village, especially to those households that have been identified as the most vulnerable and put red flags on those houses who are required to be evacuated immediately after the warning.
- Inform the community regarding the velocity/ movement/direction for the immediate threat through the local means like 'dengura' or 'drum beat 'or 'conch', so that, people can be evacuated as quickly as possible.
- Contact with different shelters and safe houses when the disaster like cyclone/ flood is expected to strike.

• Keep listening to news continuously

Post Disaster:

- Monitoring the path of disaster on radio and confirm from the Tahsildar /BDO's office or from the DEOC that the disaster has passed.
- Dissemination of precautionary information on post disaster health hazards and remedies Coordination with other teams like the shelter team and the evacuation teams to help the community for rehabilitation

Evacuation, Search and Rescue Team

The member of this Team includes physically strong men and women in the age group of 18-35 years. Gram Rakhi/ Chowkidaar are included in this team. The Evacuation and Rescue team coordinates with the government to avail various services.

Pre-Disaster:

- Keeping information about the vulnerable groups and the area in which they work and live. Update the information regularly.
- Identify safe routes to reach the vulnerable population and plan their evacuation.
- Keep transportation ready for use to evacuate people
- Informing concerned officials for road repair and get it done in liaison with officials.
- Prepare a rescue kit which contains a rope, iron hooks or tow belongings, rafts, container to bail out water, torches, transistor, a first aid kit, life jackets, tyres and other floatable objects.
- Keep some tools handy such as cutting saw and blades, crowbar, hammer, nails etc to cut the fallen trees and to rescue people stuck under falls houses or debris.
- Identify highlands for evacuating cattle and livestock which had enough fodder for about a week. Carry out a mock drill for evacuation to get a fair idea of the kind of problems that need to be tackled at such times.

During Disaster:

- Picking up the vulnerable community from the sea and riverbanks in case of flood or cyclone.
- Help the vulnerable people to get in to their respective shelters with minimum important belongings. Ensure discipline during evacuation.
- Try to find out missing persons within the community.
- Securing rescue boats and rescue kits
- Rush to the spot if any casualty informed, if require take the help of First Aid Team
- Arrange shifting of acute cases to the nearest PHC
- Evacuating cattle and livestock

Post Disaster:

- Village inspection and rescuing stranded and injured people.
- Maintain a "missing persons" register and updating it after each rescue trip and assisting government in enumeration of damaged property
- Clean roads/ garbage in order to establish proper transportation / movement

- Transporting doctors, volunteers and other relief materials Establish contact to the outside agencies who would like to help the needy.
- Coordinate with other task force group.

Medical and First Aid Team

Pre-Disaster:

- Maintaining a list of pregnant women, infants, physically and mentally challenged and ensuring their medical needs.
- Keeping a first aid box with disinfectants, water purifying tablets, antiseptics, medicine, bandages, splint, scissors, blades, iodine, ointments, ORS, safe delivery kits, clean cloth etc well in advance. Distributing basic medicines like water purifying tablets, ORS packets etc. and demonstrating their use, to families in advance.
- Keeping stretchers ready.

During Disaster:

- Moving medicine stocks and first aid kits to the shelters or safe places.
- Looking after the medical needs of the evacuees.
- Take immediate steps to address sick and injured. If possible, try to shift the victims to the nearest PHC before it is too late.
- Try to accompany rescue team in getting the victims/ sick and ailing safe to the shelter. Make special arrangements for the pregnant women.
- Instruct evacuees to take proper food and drinking water.
- Assure the community not to be panicked and maintain discipline in the shelter.
- The team must be indoors when the disaster strikes and ensure that no one leaves the shelter during the disaster.

Post-Disaster:

- Try to reach the spot immediately to save life of victim and make proper arrangement to shift the patient to Hospitals.
- Attending to injuries of the rescued people.
- Helping doctors and paramedics shift the sick and the injured to hospitals.
- Help the govt. / para- medical staff
- Support government/ external (NGO) medical team to attend the patients. Inform regarding serious cases. 20
- Take adequate measures not to allow spread of epidemic inside the community. If noticed, inform Block/ UPHC immediately with accurate information regarding the number and symptoms of the patient.
- Isolating cases with infectious diseases and prevent them from spreading after giving due primary care.
- Providing preventing medication if there is a danger of epidemic outbreak like cholera, dysentery, malaria etc.

Shelter Management Team

The members of this team can include both men and women.

Pre-Disaster:

- Shelters and safe houses have been identified and checked by engineers and necessary repairs have been made.
- Food, water, utensils, medicines, milk powder, candles, matchboxes, kerosene etc for usage for at least one week are stocked in sufficient quantities.
- Health and sanitation facilities are usable and properly placed. Separate and private enclosure for women is must in each shelter.
- Stockpile of dry food for the period evacuees might have to stay in the shelter.

During Disaster:

- Stock of food, drinking water, utensil and medicines are to be transferred to the affected place.
- Ensure that people come to shelters with minimum food/water/candle/match box and other day to day requirements at least for three days.
- Evacuees may be asked to use their own foodstuff first. Emphasis to be given on the use of safe drinking water.
- Arrangement of sufficient space to house the evacuated families.
- Strict hygiene conditions should be maintained in the shelter camps.
- Special care provisions should be given to the more vulnerable group.
- Make special arrangements for pregnant women and ailing persons.
- Every evacuee's name should be registered and identification slips should be produced. If anyone found missing, inform the Search and Rescue Team immediately.
- The team should ensure that the evacuees remain indoors and also that no one leaves the shelter during the disaster.

Post Disaster:

- Arrange/collect relief items from the sources to maintain buffer stock
- Maintain cleanliness inside and outside the shelter
- Make necessary arrangement to have community kitchen
- Make necessary arrangements to clean shelters immediately after the event is over.
- Health and sanitation facilities are usable and properly placed.
- Team should help other teams in chlorinating wells, spraying bleaching powder, treating injuries and wounds of the injured people in the camp.
- Coordinate with other teams
- Submit expenditure report, if any, to VDMC

Water & Sanitation Team

Pre-Disaster:

- Stocking bleaching powder in large quantities from the nearest Public Health Centre and other sources.
- Procuring water testing kits from the respective government department.
- Stocking kerosene and fuel wood to dispose of carcasses
- Ensuring water sources in the villages are protected from flood waters
- Stocking sufficient lime power bags for purification of bigger water bodies.
- Collecting temporary mobile lavatories and other essential sanitation requirements from the concerned departments.
- Ensuring cleaning of drains and its maintenance.

During Disaster:

- Ensure proper sanitation near shelters Arrange/ensure evacuees take boiled/purified water for drinking
- Inform/demonstrate how to use chlorine/halogen tablets for drinking water Use disinfectants in the well/tube wells
- Ensure that the water reserved by shelter management team is safe enough to use

Post Disaster:

- Spray bleaching powder and other disinfectants in the village to prevent the spread of infectious disease.
- Ensuring trenches and lavatories are cleaned and disinfected.
- Ensuring the evacuees use the sanitation facilities properly.
- Checking the quality of water with the water testing kit.
- Informing the affected community about purifying water before drinking, to prevent stomach infections.
- Take adequate measures not to allow spread of epidemic inside the community. Help clean garbage. Keep the sewerage system clean
- Carry out the task of purifying water by chlorinating it.

Relief and Coordination Team

The members of the team include both men and women. They collect materials such as food supply, utensils, clothes, kerosene, diesel etc. and coordinate all relief requirements of other teams. The women members inquire about the specific needs of the affected women. Certain gender sensitive clothes and material are being distributed to other women only through women. The members also keep a track of all government provisions related to gratuitous relief works to prevent starvation, deterioration, migration, health and sanitation measures for both people and livestock so that people do not lose out on their entitlements.

Pre-Disaster:

- Mobilizing stocks from the government and other sources like water pouches, baby food, food grains, dry rations, medicines, torches, lamps, kerosene, solar cooker, firewood etc. for shelters in advance.
- Stocking temporary building material like bamboo, rope, tarpaulin, asbestos sheets and other material.

- Stocking food and medicine for animals
- Interacting with other teams and assisting in getting their supplies.
- Deciding on the quantity of relief material to be allocated to each shelter according to the number of families the shelter caters to.

During Disaster: -

- Move relief supplies to the respective shelters.
- Monitor the stocks and make a list of things to be replenished.
- Coordinate between relief supplies from the government sector and the NGO's
- Conduct a needs assessment and ask the NGO sector to pitch in with the requirements of the affected community. Post Disaster:
- Receive and distributing stocks of relief material.
- Replenish the stock which is running low.
- Monitor and distribution relief from all sources.
- Ensure that the officials start the enumeration procedure immediately, so that the building material can be arranged through revenue authorities.

Carcasses Disposal Team

Pre-Disaster: -

- Maintain stores of fuel wood, kerosene and sackcloth to cover dead bodies
- Identify elevated areas to serve as cremation grounds.

Post-Disaster: -

- Collect dead bodies. Identify them. It is advised to do the cremation with the knowledge of owner of the domestic animal
- Record the number of the insured animal.
- In case of human dead bodies, it is advised to keep record/ photograph before cremating, they should inform UPHC-MO/PS
- Sprinkle bleaching powder on the areas/spot where the dead bodies are found.
- Collect dead bodies and recording their description for families to identify them.
- Cremate carcasses and bodies and disinfecting the area with bleaching powder.

Trauma Counselling Team

Pre-Disaster: -

- Map the more vulnerable groups like women, children, aged, people with critical disabilities etc.
- Generate awareness on general psychosocial wellbeing of the community.

Post Disaster: -

- Help the survivors in contacting their relatives so that they can get social support.
- Emphasis on engaging the disaster survivors in some kind of activities that interest them in order to give them a sense of being productive.

- Engage the disaster survivors in relaxation/ breathing exercises help in the healing process. Encourage the survivors to undertake these exercises at least twice a day regularly. This helps to gain control over their anxiety.
- It is necessary to encourage the disaster survivors to practice their religious beliefs and rituals. Practicing religious beliefs help in the recovery process.

Damage & Loss Assessment Team

The members of this team have to be evacuated preferably matriculates and above. The responsibilities of this team are as follows:

Pre-Disaster: -

- Help in forecasting damages including lives lost and losses to property and assets like houses, livestock, agriculture, plantations, fishing boats etc.
- Sensitize the families of the village to keep their paperwork intact and keep it in their emergency kit.

Post Disaster:

- Check and update all the list of beneficiaries
- Prepare an authentic list of all the dead and deceased, domestic animals, houses, boats, family belongings, community infrastructures, trees, livelihood assets etc.
- Support the RI, Sarapanch, Government functionaries to assess the damage
- Inform NGOs and other Charitable Organizations to carry out rehabilitation programme.
- Help the families to get compensation without any difficulties.
- Help in assessing damages to infrastructure like roads, water supply, electricity, markets and distribution networks.
- Hasten the government enumeration process to assess the damage and loss incurred by the affected community.
- Help families with paperwork to follow compensation proceedings especially relating to death certificates, insurance etc.
- Ensure that the assessment and concerned papers reach the government department which is responsible for compensation to ensure timely assistance

3. <u>Rationale:</u>

VDMPs have been prepared in approximately 10,000 (in 9986) villages of the State of Odisha in the 1st Phase. The VDMPs focuses on Preparedness, Response and to some extent mitigation plans (both structural, non-structural). There are certain limitations of the VDMPs.

• The VDMP doesn't talk about the mitigation action in specific and so as to

financing the mitigation actions.

• The VDMPs are also not linked with Gram Panchayat Development Plans (GPDPs) or other pathways for implementation.

• Although the VDMP contains a Resource map, Vulnerability map, Evacuation route map, it doesn't talk about Risk mapping of any particular village and its assets and community members.

Towards addressing some of these challenges, the Government of Odisha has initiated policy reforms for creating an enabling institutional framework for community-based disaster management planning and action. Recently, the Odisha Grama Panchayat Act, 1964 has been amended, inserting of clause(h-1), to sub-section section (1) in section 44-chapter II which states-

"Subject to provisions of Disaster Management Act,2005, preparation of disaster management Plan at village and Grama Panchayat level, integration with development plan, capacity building of stake holders, carrying out and facilitation of relief, rehabilitation and reconstruction activities in disaster affected areas in accordance with State plan and district plan, and to undertake other measures as may be necessary for disaster management"

The Ordinance clearly articulates GoO's intent to empower Panchayati Raj Institutions (PRIs) with funds, functions, and functionaries to play significant roles not only in disaster preparedness and response, but also mitigation and recovery process. The document specifically mentions that it is mandatory to prepare the GPDMP and link it with GPDP. When the amendments to the Law take effect, these actions will have to be implemented across all the 6798 GPs of the State of Odisha.

The proposed PfR operation seeks to strengthen the ongoing VDMP planning process of GoO while also facilitating the scaling up envisioned by the Ordinance, through:

- Making the VDMPs more risk informed
- Ensuring the VDMP preparation process and VDMP template enables identification of actionable and time-bound actions
- Linking the identified actions with financing pathways, including gram panchayat development plans
- Developing progress tracking mechanisms

Under the DLI-2 of the PforR project it is proposed to prepare the risk informed VDMP, GPDMP and will be subsequently linked with Gram Panchayat Development Plans (GPDP).

4. Proposal and Activity Sequenced Work Plan

- a) **Plan** The PfR programme is a 5 years programme which would achieve key result year wise. The year wise key results are as per the followings:
 - i. In the 1st year, 50 Risk Informed VDMPs will be prepared under the identified 8 GPs in the 6 coastal districts.
 - ii. In the 2nd year, Risk Informed GPDMPs will be prepared in the identified 8 GPs by identifying the costed and time bound resilience actions in the GPs
 - iii. In the 3rd year, 12 GPs in the 6 coastal district and 12 Risk Informed GPDMPs will be prepared in 12 GPs based on Risk Informed VDMPs prepared in the 51 identified villages under 12 GPs in the 6 coastal district.
 - iv. In the 4th year, 8 Gram Panchayat Development Plans will be linked in the 8 respective Risk Informed GPDMPs and will be linked with Village Resilient Trackers Platforms.
 - v. In the 5th year, 12 Gram Panchayat Development Plans will be linked in the 8 respective Risk Informed GPDMPs and will be linked with Village Resilient Trackers Platforms.

The DLI matrix is given below

SI	Year	Key Result Areas
No.		
1.	Year-1	50 Risk Informed VDMPs prepared in 8 identified GPs
2.	Year-2	8 GPs formulate Risk Informed GPDMPs identifying costed and time- bound resilience actions
3.	Year-3	Rest 12 GPs formulate Risk Informed GPDMPs identifying costed and time-bound resilience actions
4.	Year-4	8 GPDPs incorporate resilience actions from Risk Informed GPDMPs and are linked with the Village Resilience Tracker platform
5.	Year-5	Rest 12 GPs incorporate resilience actions from Risk Informed GPDMPs and are linked with the Village Resilience Tracker platform

b) Coverage- Under the DLI-2 of the Pillar-3 of the PforR programme, risk informed Village Disaster Management Plans will be prepared in 101 identified Villages (the villages taken up under the National Cyclone Risk Mitigation Project (NCRMP) under the six coastal districts viz (Balasore, Bhadrak, Jagatsinghpur, Kendrapada, Ganjam and Puri) of the State of Odisha covering 20 Gram Panchayats. The villages have been selected based on their vulnerability and risk to Tsunami, Cyclone, Floods and Storm surge. The villages have been covered under the NCRMP and NCRMP (AF) Project and risk map of these villages have been prepared under the NCRMP Project and are available in the web Dynamic Composite Risk Atlas, making risk data available for the preparation of village and G.P.level risk maps-

Subsequently, Risk Informed Gram Panchayats Disaster Management Plans will be prepared in the concerned 20 GPs (covering the 101 Villages) with focus to identified costed and time-bound resilient actions. The list of the Villages and GPs are annexed at annexure-2

The proposed key outcomes under the DLI-2 are as per the followings:

i. Outcome 1: Preparation of Risk Informed Village Disaster Management Plan in 101 Villages

Risk Informed Village Disaster Management Plans will be prepared in the identified 101 Villages in two phases (50 in the 1st phase and 51 in the 2nd phase) in the six coastal districts (the villages taken up in the NCRMP project) which are being covered under 20 GPs. The VDMPs will be incorporated by geo-spatial maps and risk informed maps for identifying intense risk, hazards and vulnerability profile of the village. The process will be facilitated by Non-Government Organization (NGOs), who will be selected through certain selection procedures and criteria. Templates and guidelines will be prepared by OSDMA in consultation with UN agencies, Govt. departments, NGOs and CBOs. Training programmes for District and Block level officials, PRI members and other stakeholders will be conducted.

The different activities contributing to this outcome include: -

a) Consultation with Departments, UN agencies and Civil Society Organization for development of guidelines and templates: - Two State level Consultation workshop will be organized involving the line departments, Un agencies, Civil Society organizations, district level line department officials and NGOs for finalization of guidelines and templates for preparation of Risk Informed VDMPs and GPDMPs

- b) Printing and distribution of Guidelines, templates and training modules and participants handbooks: Design and translation of the guidelines and templates for VDMPs and GPDMPs and training modules and participants handbooks for imparting training to Village Disaster Management Committee (VDMC) members, members of Cyclone and Flood Shelter Maintenance and Management Committee and Disaster Management Teams will be prepared, printed and distributed to the participants.
- c) Selection, Engagement and Orientation of NGO Partners: NGOs partners will be selected for preparation of VDMPs and GPDMPs based upon some selection criteria.
- **d) Development of Village Risk Maps: -** Risk informed maps of the village will be prepared to identify risk associated with the village
- e) Preparation of Risk Informed VDMPs in 101 villages under 20 GPs: Risk Informed VDMPs will be prepared in the identified 101 villages under the identified 20 GPs in six coastal districts. Following the below mentioned process to be included as follows:
 - Community Mobilisation & rapport building by the selected NGOs.
 - Formation of Village Disaster Management Committee (VDMC) and Disaster Management Teams (DMTs) by following a process of nomination in the village meeting.
 - Hazard, Risk & Capacity analysis of the village will be done by discussing with the community members and through PRA techniques, including discussions facilitated through the use of the geo-spatial risks maps:-
 - Detail Vulnerability Analysis of the village (Human, Infrastructure and Services) to be done with the community members.
 - Mitigation actions to be finalized by discussing with community members.
 - Facilitating Participatory processes and compilation of primary and secondary data
 - Developing Village Disaster Management Plan
 - Approval of the VDMP in the Palli Sabha
 - Sharing of VDMP with VDMC and DMTs members and community members
 - Submission of copies of VDMP at Village/Panchayat/Block and Village level
 - Entry and updation of VDMP data in the online tracker
- f) Training of members Village Disaster Management Committee/Cyclone Shelter Maintenance and Management Committee/ Flood Shelter Maintenance and Management Committee /Disaster Management Teams (DMTs) on CBDP and Search & Rescue, First-Aid and Psychosocial care in 20 GPs

The members of VDMC, CSMMC, FSMMC and Disaster Management Team (DMT) Members will be trained on the followings

- 02 days Community Based Disaster Preparedness Training (for VDMC/CSMMC/FSMMC members)
- 04 days Search & Rescue (for DMT members)

- 02 days First-Aid (for DMT members)
- 02 days Psychosocial Care

ii. Outcome 2: Preparation of Risk Informed Gram Panchayat Disaster Management Plan

Risk Informed Gram Panchayats Disaster Management Plans to be prepared in the 20 GPs (covering the 101 Villages) in two phases (8 GPs in the 1st Phase and 12 GPs in the 2nd phase). Templates and guidelines will be prepared by OSDMA in consultation with UN agencies, Govt. departments, NGOs and CBOs The GPDMPs will identify costed and time-bound resilient actions of the GPs.

The process to be included as follows:

- GP level consultations meeting with different stakeholders
- Village wise consultations meetings
- Hazard Risk Vulnerability & Capacity analysis
- Facilitating Participatory processes and compilation of primary and secondary data and information
- Developing GP Disaster Management Plan
- Printing of GPDMPs 4 copies each GP
- Approval of the GPDMP in the Gram Sabha and sharing of the same
- Preparation of Geo-Spatial Maps
- Entry and updation of GPDMP data in the online tracker

The different activities contributing to this outcome include

a) Training of Govt. Officials, PRI members and other stakeholders of all GPs at Block level

Training programmes for District and Block level Govt. officials, PRI members and other key block and GP level stakeholders to be conducted for preparation of Risk informed GPDMPs and linking with GPDMPs in GPDP.

b) Development of Village Resilient Tracker and Preparation of Geo-spatial maps and data updation

- i. Village development resilient tracker will be developed in collaboration with external expert agency to track and monitor the existing data base pertaining to the resources, risk and hazard profile of the village.
- ii. Geo-spatial maps will be developed pertaining to hazard, risk, vulnerability and resource mapping of the village (see annexure 3 for details)
- c) Option analysis for financing of resilience actions identified in VDMPs/GPDMPs in addition to financing secured through GPDPs (Study Report)

A study will be conducted for financing the identified resilience actions in Village Disaster Management Plans and Gram Panchayats Disaster Management Plans. An external agency will be hired for conducting the study.

d) Technical study on the feasible hazard specific mitigation measures in the concerned GP

A technical study will be conducted to identify the feasible hazard specific measures cane be taken up in the concerned 20 GPs. An external expert agency can be hired for the purpose.

e) Background analysis of VDMP-GPDMP-GPDP process and plans to identify areas of integration (Study Report)

One background analysis study will be conducted to fix-up the process for integrating VDMP-GPDMP and its linkage with GPDP. An external experts can be hired for the purpose.

All these above-mentioned studies may be made in collaboration with one agencies or different agencies through a ToR.

iii. Outcome 3: Incorporation of GPDMPs in GPDP

The 20 GPDMPs will be linked with respective Gram Panchayats Development Programmes

iv. Outcome 4: Incorporation of Resilience actions from GPDMPs in GPDP

20 GPDPs will incorporate the resilience actions from the risk informed GPDMPs and will be linked with village resilient tracker platform.

The specific outcomes, activities and budget to be undertaken year wise is annexed at Annexure-1

<u>Annexure-1</u>

		DLI: Risk I	nformed Gram Pano	chayat	: Disas	ter Ma	anagen	nent Pl	ans (GI	PDMPs)	are in	tegrate	ed witl	h Deve	elopmen	it Progra	mmes a	t the Gr	am Pa	nchayat level				
S I N o	Ye ar	Activity	Sub-Activity	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q1 0	Q1 1	Q12	Q13	Q14	Q15	Q1 6	Q17	Q18	Q1 9	Q2 0	Bud get in Cr
1	Ye ar 1	50 Risk Inform ed VDMPs prepare d in 8 identifi ed GPs	Consultation with Departments, UN agencies and Civil Society Organization for development of guidelines and templates and hiring of two HR Consultant/HR Cost@ 1 L per months	0.1	0.0	0.0 6	0.0 6																	0.29
2			Printing and distribution of Guidelines, templates and training modules and participants handbooks		0.7 0																			0.70
3			Selection, Engagement and Orientation of NGO Partners		0.0 32																			0.03
4			Training of Govt. Officials, PRI members and other stakeholders of all GPs at Block level@ 40,000			0.0 8																		0.08

5			Preparation of Risk informed VDMP in 50 villages of the selected 8 GPs (@ Rs.20000 x 50 villages)		0.0 5	0.0 5											0.10
	Ye ar 2	8 GPs formula te Risk Inform ed GPDMP s	Remuneration for two HR Support @ 1 L per month				0.06	0.06	0.06	0.06							0.24
6		identify ing costed and time- bound resilien ce actions	8 GPs formulate Risk Informed GPDMPs identifying costed and time-bound resilience actions (@ Rs.1,00,000 x 8 GP)				0.04	0.04									0.08
			Training of VDMC/CSMMC/FS MMC/DMTs on CBDP and Search & Rescue, First- Aid and Psychosocial care in 8 GPs				0.16 25	0.16 25	0.16 25	0.16 25							0.65
7			Background analysis of VDMP- GPDMP-GPDP process and plans to identify areas of integration (Study Report)					0.25	0.25								0.50
8			Monitoring of the preparation of Risk Informed VDMP and GPDMPs in 8 GPs							0.20							0.20

				 	-			 									
	Ye ar 3	Rest 12 GPs (Cumul ative 20) formula te Risk	Remuneration for two HR Support @ 1 L per month					0.0	0.0	0.0	0.06						0.24
1 0		Inform ed GPDMP s identify ing costed and	Preparation of Risk Informed VDMP in rest 51 villages of the selected rest 12 GPs (@ Rs.20000 x 51 villages)					0.0 51	0.0 51								0.10
1		time- bound resilien ce actions	Rest 12 GPs (Cumulative 20) formulate Risk Informed GPDMPs identifying costed and time-bound resilience actions (@ Rs.1,00,000 x 12 GP)							0.0 6	0.06						0.12
			Training of VDMC/CSMMC/FS MMC/DMTs on CBDP and Search & Rescue, First- Aid and Psychosocial care in 12 GPs								0.16 575	0.165 75	0.16 575	0.16 575			0.66
1 2			Option analysis for financing of resilience actions identified in VDMPs/GPDMPs in addition to financing secured through GPDPs (Study Report)								0.50						0.50

			Development of Village Resilient Tracker and Preparation of Geo-spatial maps and data updation				0.50		0.5 0	0.5 0	0.50	0.50	0.50	0.25	0.2 5	0.25	0.25		4.00
1 3			Monitoring of the preparation of Risk Informed VDMP and GPDMPs in 12 GPs								0.20								0.20
	Ye ar 4	8 GPDPs incorpo rate resilien ce actions	Remuneration for two HR Support @ 1 L per month									0.06	0.06	0.06	0.0 6				0.24
1 4		from Risk Inform ed GPDMP s and are linked with the Village Resilien ce	8 GPDPs incorporate resilience actions from Risk Informed GPDMPs and are linked with the Village Resilience Tracker Platform												0.3 0				0.30
1 5		Tracker Platfor m	Monitoring the process												0.2 0				0.20
1 6			Technical study on the feasible hazard specific mitigation measures in the concerned GP												2.0 0				2.00

1 7	Ye ar 5	Rest 12 GPs (Cumul ative 20) incorpo rate resilien ce actions from Risk	12 GPDPs (Cumulative 20) incorporate resilience actions from Risk Informed GPDMPs and are linked with the Village Resilience Tracker Platform																				0.3 0	0.30
1 8		Inform ed GPDMP s and are linked with	Process documentation & lesson learnt (Report)																	0.25	0.25	0.2 5	0.2 5	1.00
1 9		the Village Resilien ce Tracker platfor m	Monitoring the process																				0.2 0	0.20
2 0			Total	0. 11	0.7 9	0. 19	0. 11	0.2 6	0.5 1	0.9 7	0.4 2	0.1 1	0.6 1	0. 62	1.49	0.73	0.73	0.48	2. 81	0.50	0.50	0. 25	0. 75	12.9 4
2 1		Quar	ter wise Total		1.	20	1		2.:	17			2	.83			4.7	74		2 0 0	12. 94			

Annexure-2

Annexure-3:

A short note on the geo-spatial risk mapping process and outputs

Most VDMP processes draw from the rich experiential knowledge available within the community using participatory rural appraisal (PRA) exercise such as hazard and vulnerability mapping, historical calendar, disaster timelines, transect walks, amongst others (see for example, sample PRA exercises and outputs in the image below)



The PRA exercises serve the dual purpose of evolving a shared understanding of risks within the community as well as informing the disaster risk management actions to be identified in the VDMP. Some PRA tools (for e.g. village mapping) have continued to be used consistently through the years and other tools have evolved depending on the specific target groups (for e.g. tools for children or elderly) and based on emerging technologies (for example, participatory GIS tools).

While the existing tools consolidate community knowledge on risks, in their current form, they do not enable communities to benefit from the existing in spatial and probabilistic risk assessment, digital elevation models, or quantification of risks to facilitate decision making about risk reduction actions in their VDMPs. Such tools can enable communities to visualise, for example.

- Which parts of their village are most likely to be inundated during a flood or storm surge?
- Which community infrastructure or houses are likely to be affected by a cyclone or high winds?
- How much monetary loss can be caused by a particular hazard?
- What are the safe elevations or locations for a new or relocated school/anganwadi center/health sub-centre/road?
- What is the safest evacuation route from their village?
- The impact of hazards for which there may be living memories, for e,g. earthquakes or evolving risks that are yet to materialise, for e.g. landslides.

Thus, it is proposed to integrate these sources a forms of risk information into the PRA process to enhance the VDMP exercise. This will entail both the development of the digital risks maps as well as participatory interpretation and utilisation of the same during the VDMP process.

1. Development of Risk Maps

Risk map of the Village will be prepared using geospatial technology. Base map of the village with boundary will be taken from village layers available with OSDMA. Village level resource information will be generated from the high-resolution satellite data. Infrastructure and facility information will be collected through field survey and integrated with the base map of the village in GIS platform. Hazards and risk database will be developed using primary & secondary data of the villages and integrated with the village map in GIS. For Cyclone based risk mapping data will be derived from WebDCRA.

2. Utilization of the Risk Maps in the community-based participatory process

Risk maps of the village will be helpful to understand the hazards and risks in the community. The community will be encouraged to visualize the risk of their village and take action to prevent a possible disaster or reduce its effects if it happens.



	20.101		
କ୍ର.ସଂ	ଇ	88	ପୃଷ୍ଠା
	ଅଧ୍ୟାୟ	ଉପ-ଅଧ୍ୟାୟ	
6	ଘୋଷଣ		8
9	୧.ପ୍ରଥମଭାଗ–ଗ୍ରାମ ଓ ଅଚକର ସଂକ୍ଷିସ୍ତ ବିବରଶୀ	୧.ପୃଷଭୂମି	Ð
লা		୨.ଗ୍ରାମ ବିପର୍ଯ୍ୟୟ ପରିଚାଳନା ଯୋଜନା ପ୍ରସ୍ତୁତିର ଲକ୍ଷ୍ୟ ଓ ଉଦ୍ଦେଶ୍ୟ	9
8		୩.ଗ୍ରାମୟରୀୟ ବିପର୍ଯ୍ୟୟ ପରିଚାଳନା ଯୋଜନା ପ୍ରସ୍ତୁତି ପାଇଁ ନିଆଯାଇଥିବା ପଦକ୍ଷେପ	٩
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9		୨.୨ଗ୍ରାମରୁ ବିଭିନ୍ନ ସ୍ଥାନକୁ ଯୋଗାଯୋଗ	Г
୭		୨.୩ଗ୍ରାମର ଭୌଗୋଳିକ ଅବସ୍ଥିତିର ସଂକ୍ଷିସ୍ତ ବିବରଣୀ	С
Г		୨.୪ ଗ୍ରାମର ଜନସଂଖ୍ୟା ସଂପର୍କରେ ସବିଶେଷ ସୂଚନା	ç
C		୨.୫ ଧର୍ମ ଭିତିକ ଜନସଂଖ୍ୟା ବିବରଣୀ	ç
60		୨.୬ ବୟସ ବର୍ଗ	С
66		୨.୭ ଗୃହର ଢାଂଚା	60
6 9		୨.୮ଙ୍କପୂର୍ଷ ଭୌଗଳିକ ଷେତ୍ର(ହେକ୍ରରରେ)ତହସିଲ ସୁଚନା ଅନୁସାରେ)	60
. १९११		୨.୯ ଫସଲର ଢାଂଚା	60
68		୨.୧୦ ଭୂମି ଦଖଲକାରୀଙ୍କ ଢାଂଚା	60
6.8		୨.୧୧ଜୀବିକା ବିବରଣୀ	60
69		୨.୧୨ ପବାସନ /ଦେଶାନ୍ତର ଢାଂଚା	60
29		୨ . ୧୩ ଗୃହପାଳିତ ପଶୁପକ୍ଷୀଙ୍କ ବିବରଣୀ	66
9		୨.୧୪ ପାନୀୟ ଜଳ ଉସ୍	99

66		<u>୨.୧୫</u> ଜଳସେଟନ ସ୍ରୋତ ଏବଂ ସୁବିଧା	6.6
90		୨.୧୬ ଶିନ୍ଧ	66
9 6		୨.୧୭ ଆର୍ଥିକ ଅନୁଷାନ	69
99	୩.ନୃତୀୟଭାଗ –ବିପତି,ସଙ୍କୁଳତା ଏବଂ କ୍ଷମତାର ବିଶ୍ଳେଷଣ	୩.୧ ବିପର୍ଯ୍ୟୟ ଇତିହାସ(ବିଗତ ୨୦ ବର୍ଷ ମଧ୍ୟରେ)	69
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98		୩.୩ ବିପଦ ସଙ୍କୁଲତାର ବିଶ୍ଲେଷଣ	९ ना
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99		୩.୩.୨ ବିପଦ ସଙ୍କୁଳ ଭିତିଭୂମି ଏବଂ ସମ୍ପତି	68
99		୩.୪ ବିପଦପୂର୍ଷ ସ୍ଥାନରୁ ଗ୍ରାମର ଦୁରତା(କି.ମି)	6.8
9 F		୩.୫ ଚିହୁଟ କରାଯାଇଥିବା ନିରାପଦ ଆଶ୍ରୟସ୍ଥଳୀ ଠାରୁ ଗ୍ରାମ ଫଚାୟତର ଦୁରତା (କି.ମି.)	6.8
90		<u>୩.୬</u> ନିରାପଦ ଆଶ୍ରୟସ୍ଥଳୀକୁ ରାଞା	6.8
ণা০		୩.୭ ସାମର୍ଥ୍ୟତା ବିଶ୍ଳେଷଣ	6.8
ๆ		୩.୭.୧ ପାଖରେ ଥିବା ସମ୍ଦଳର ତାଲିକା	6.8
ๆเย		୩.୭.୨ ଅନ୍ୟାନ ସୟଳର ତାଲିକା	69
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ท๑		୪.୨ ଗୋଷୀଞରୀୟ ପ୍ରଶମନ କାର୍ଯ୍ୟ	66
ากก		୪.୨.୧ ସ୍ୱଳ୍ପମିଆଦି ପ୍ରଶମିତ କାର୍ଯ୍ୟ	6 6
ฑ๙		୪.୨.୨ ଦୀର୍ଘମିଆଦି ପ୍ରଶମନ କାର୍ଯ୍ୟ	66
80		୪.୩ ଉନୟନ ପରିକଳ୍ପନା ଏବଂ ବିପର୍ଯ୍ୟୟ	66

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86	୫ ଫତମଭାଗ- ବିପର୍ଯ୍ୟୟ ମୁକାବିଲା ଯୋଜନା	୫.୧ ଗ୍ରାମ୍ୟ ବିପର୍ଯ୍ୟୟ ପରଚାଳନା ସମିତି(ଭି.ଡି.ଏମ୍.ସି)	90
89	й	୫.୨ ଗ୍ରାମ୍ୟ ବିପର୍ଯ୍ୟୟ ପରିଚାଜନା ସମିତି ଦ୍ୱାରା ବିପର୍ଯ୍ୟୟ ଦ୍ୱାରା ପ୍ରଷ୍ମୁତି ,ପ୍ରଶମନ ଓ ମୁକାବିଲା ପାଇଁ ନେବାକୁ ଥିବା ବିଭିନ୍ନ ପଦକ୍ଷେପ	90
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88		୫.୩.୨ ପ୍ରାନାତ୍ତର, ସନ୍ଧାନ ଏବଂ ଉଦ୍ଧାରକାରୀ ଦଳ	9 ୧
<u> ৪</u> ৯		୫.୩.୩ ସ୍ପାସ୍ଥ୍ୟ ଏବଂ ପ୍ରାଥମିକ ଚିକିସ୍। ଦଳ	9 6
<u> </u>		୫.୩.୪ ଆଶ୍ରୟସ୍ଥଳୀ ପରିଚାଳନା ଦଳ	99
8L		୫.୩.୫ ଜଳ ଓ ପରିମଣ ଦଳ	99
84		୫.୩.୬ ରିଲିଫ ବଣ୍ଟନ ଏବଂ ସଂଯୋଜନକାରୀ ଦଳ	99
80		୫.୩.୭ ଷୟଷତି ଅକଳନ ଦଳ	9୩
8.6		୫.୩.୮ ମାନସିକ ଆଘାତ ପ୍ରାସ୍ତ ବ୍ୟକ୍ତିଙ୍କୁ ପରାମର୍ଶ ଦଳ	9 म
89		୫.୩.୯ ଶବ ନିକାଶ ଦଳ	9୩
গ্ব		ପରିଶିଷ୍ଟ-୧ବିପର୍ଯ୍ୟୟ ପରିଚାଳନା ପାଇଁ ଗୁରୁଦ୍ୱପୂର୍ୟ ବ୍ୟକ୍ତିଙ୍କ ନାମ ଓ ଯୋଗାଯୋଗ ନୟର	9 ୩
88		ପରିଶିଷ-୨ଗୁରୁତ୍ୱମୂର୍ଶ ସରକାରୀ/ ବେସରକାରୀ କାର୍ଯ୍ୟାଳୟ	98
88		ପରିଶିଷ–୩ଗ୍ରାମରେ ଥିବା ଯାନବାହାନ ବିବରଣୀ	98
89		ପରିଶିଷ-୪	98

ଘୋଷଣା ନାମା

ଏହି ମନକେ। ଗ୍ରାମ ବିପର୍ଯ୍ୟୟ ପରିବାଳନା ଯୋକନାଟି ୨୦୨୧–୨୨ ପାଇଁ ବିଭିନ୍ନ ଅନୁଷ୍ଠାନିକ ଓ ଅଶଆନୁଷ୍ଠାନିକ ଉସ୍କରୁ ନିଆଯାଇ ପ୍ରସ୍ଥୁତ କରାଯାଇଛି . ସାହାକି ଯେକୌଶସି ସମୟରେ ଆମ୍ବର ସହାୟକ ହୋଇପାରେ । ଏହା ଏକ ଚିରନ୍ତନ ପଦ୍ଧତି ଏବଂ ସମୟ ଉପଯୋଗା ପରିବର୍ତନଶାଳ ଅଟେ ।

ଏହି ଯୋଜନା ପୁଞ୍ଚିଜାଟି . ଏହି ଗ୍ରାମ୍ୟ ବିପର୍ଯ୍ୟୟ ପରିଚାଳନା କମିଟି ମାଧ୍ୟମରେ ପ୍ରତ୍ୟେକ ବର୍ଷ ନଭେଗ୍ୱର ମାନ୍ସରେ ଉନ୍ନତି କରାସିବ । ଏହି ଯୋଜନାଟି ଗ୍ରାମର ପ୍ରତ୍ୟେକ ଅଂଶାଦାରଙ୍କ ପ୍ରତ୍ୟେଷ ଅଂଶଗ୍ରହଣ ଭୂାରା . ସେମାନଙ୍କ ସ୍ଥତିନ୍ଧିତ ମତାମତତ୍ରୁ ନେଇ ପ୍ରସ୍ଥୁତ କରାପାଇଛି ।

Mangingo Kuka

ଗ୍ରାମ୍ୟ ବିପର୍ଯ୍ୟୟ ପରିଚାଳନା କମିଟି

Cyriacus finc) mjodi G.P Dist Superargarb

ରାମଯୋଡି ଗ୍ରାମ ଫଚାୟ

ଗ୍ରାମ ବିପର୍ଯ୍ୟୟ ପରିଚାଳନା କମିଟି ସଦସ୍ୟଙ୍କ ଦଞ୍ଚଖତ

ଦଞଖତ ନଥି ସଂଲଗ୍ନ କାରଯାଇଛି ।(୧)

ଗୋଷୀ ସଦସ୍ୟଙ୍କ ଦସ୍ତଖତ

ଦଞଖତ ନଥି ସଂଲଗ୍ଧ କାରଯାଇଛି ।(୧)

251120011 ସମ୍ପାଦକ ଗ୍ରାମ୍ୟ ବିପର୍ଯ୍ୟୟ ପରିଚାଳନା



ଗୋଷୀ ନୁନୁଯୁନ୍ତ ଅଭାର Officer Block Development of States ଭାତିକଟା ସଂଶାର୍ଷଙ୍ଗ ସମିଷ୍ଠି

E Cyria aue Aind, Jarpanch Majodi G P ସରପ"ଙ୍କ ଅନୁମୋଦନ ଉପକ୍ରମ ୧. ଗ୍ରାମ ଓ ଅ^{*}କର ସଂକ୍ଷିସ୍ତ ବିବରଣୀ ୬. **ପୃଷ୍ଠଭୂମି-** ସୁନ୍ଦରଗଡ ଜିଲ୍ଲା ଲାଠିକଟା ବ୍ଲକ ଅଧନସ୍ଥ ରାମପୋଡି ଗ୍ରାମଫବାୟଡରେ ମନକୋ ଗ୍ରାରଟି ଅବସ୍ଥିତ । ଉଦ୍ଧ ଗ୍ରାମରେ ସମ୍ଭଦାୟ ୨୧୨ଟି ପରିବାର ବସବାସ କରନ୍ତି । ଏହି ଗ୍ରାମରେ ହିନ୍ଦୁ, ଖ୍ରାଷ୍ଟ୍ରୟାନ ଏବଂ ସାଧାରଣ ବର୍ଗର ପରିବାର ସ୍ଥଖ୍ୟତଃ ବସବାସ ଜରନ୍ତି । ଗାଁଟି ସଂପୂର୍ଣ୍ଣ ପାହାତ, ପର୍ବତ,ଜଙ୍ଗଲ ମଧ୍ୟରେ ଅବସ୍ଥିତ । ଜଙ୍ଗଲ ମଧ୍ୟରେ ଅବସ୍ଥିତ ଥିବାରୁ ପ୍ରାୟ ସବୁ ବର୍ଷ ହାତୀ ଦୁର୍ବୀପାକର ଶୀକାର ହୋଇଥାଏ । ଗାଁର ପ୍ରାୟ ସମସ୍ତ ପରିବାର ଚାଷ ଉପରେ ନିର୍ଭର ଥିବା ବେଳେ କିଛି ପରିବାର ସେବା – ଚାଜିରୀ ଏବଁ ଛୋଟ ଛୋଟ ଧନ୍ଦାମୂଳକ ବ୍ୟବସାୟ କାର୍ଯ୍ୟ କରି ମଧ୍ୟ ଜୀବିକା ନିର୍ବାହ କରନ୍ତି । ତେଶୁ କରି କଣା ପଡ଼ୁଛି ଯେ ଗ୍ରାମର ଆର୍ଥିକ ଅବସ୍ଥା ସକଳ ନାହିଁ । ମରୁଡି ପ୍ରାୟ ସବୁବର୍ଷ କିଛି କିଛି ମାଡ୍ରାରେ ହୋଇଥାଏ । କୀଟ ଆଲ୍ଲମଣ ଯୋଗୁଁ କିଛି ଫସଲ ନଷ୍ଟ ହୋଇଥାଏ । ବର୍ଷକୁ ଥରେ ମାତ୍ର ଚାଷ ହୁଏ । ଫସଲ ଅମଳ ସମୟରେ ହାଚୀ ଦୁର୍ବୀପାକ ଯୋଗୁଁ ବହୁତ ଷଡି ସହି ଆସୁଛନ୍ତି ଗ୍ରାମବାସୀ । ରବି ଚାଷ ନିମନ୍ତେ କୌଶସି ପ୍ରକାର ସୁବିଦା ନାହିଁ । ଉଠାଜଳସେଚନ /ଜଳସେଚନର ବ୍ୟବସ୍ଥା କରାଗଲେ ମରୁଡି ସମସ୍ୟକୁ ଏଡାଇ ଦିଆ ଯାଇପାରିବ ବୋଲି ଗ୍ରାମବାସାଙ୍କ ମତ । ଗତ ୨୦୧୯ ମସିହାରେ ଦନ୍ତହାତୀ ହାବୁତ ରେପତି ନାମକ କୂଦ୍ଧା /କୃଦ୍ଧ ଜଣ ସୃତ୍ୟବରଣ କରିଥିଲେ । ଗାଁ ଲକ ବର୍ଷ ବର୍ଷ ଧରି ଏହି ବିଭିନ୍ନ ବିପର୍ଯ୍ୟୟର ଶୀକାର ହୋଇ ଆସ୍ଥଛନ୍ତି । ଏହି ବିପର୍ଯ୍ୟୟ ପୋର୍ଗୁ ଘଟୁଥବା ଷୟକ୍ଷଡି ପେପରିକି ପଶୁସ୍ଥଙ୍କଦ ଘର୍ଷତି ମନ୍ନସ୍ୟ ଜୀବନ ଅଘଟଣ ସହୁଛନ୍ତି । ସେଥିପାଇଁ ଏକ ଆଶ୍ୱୟସ୍ଥଳୀ .କେନାଲ ଖନନ. ଉଠାଜଳକ୍ଟେଚନର ବ୍ୟବସ୍ଥା ହାଡୀ ଉପଦ୍ରବରୁ ବ୍ୟଚିବା ଭଳି ରାଜନା ନଜି ଗାଁ ଯୋଜନାରେ ହାଡୀ ଉପଦ୍ରବରୁ ବ୍ୟଟିବା ଭଳି ଯୋଜନା ନିଜ ଗାଁ ଯୋଜନାରେ ସାମିଲ କରିଛନ୍ତି । ବିପର୍ଯ୍ୟୟ ଷଡିରୁ ରକ୍ଷାପାଇବା ସଙ୍ଗେ ସଙ୍ଗେ ଗାଁକୁ ଉନ୍ନଡି ୟୂରରେ ପହଁଚାଇବା ଲାଗି ଏହି ଯୋଜନା ଗୁଡିକ ସୂଚାରୁ ରୂପେ କାର୍ଯ୍ୟକାରୀ କରିବାରେ ସରକାରଙ୍କୁ ସଂପୂର୍ଣ୍ଣ ସହଯୋଗ କରିବେ ବୋଲି ଗାମବାସୀ ମାନେ ନିଜର ମତାମତ ରଖଛନ୍ତି । ୩. ଗ୍ରାମତ୍ତରୀୟ ବିପର୍ଯ୍ୟୟ ପରିଚାଳନା ଯୋଜନା ପ୍ରସ୍ତୁତିର ଲକ୍ଷ୍ୟ ଓ ଉଦ୍ଦେଶ୍ୟ ବିପର୍ଯ୍ୟୟ ଟାଲିବା ଓ ବିପର୍ଯ୍ୟୟ ସମ୍ବନ୍ଧୀୟ ବିପଦର ପ୍ରଭାବକୁ କମାଇବା ଲାଗି ଗୋଷୀଞ୍ଚରରେ ଣ୍ଟଳନା ପ୍ରଞୁତିରେ ଗୋଷୀର ସାମର୍ଥ୍ୟ ଓ କୌଶଳ ବୃଦ୍ଧି କରିବା । ନିଳ ଶୈଳୀରେ ବିପର୍ଯ୍ୟୟକୁ ସାମ୍ବା କରିବା ଲାଗି ଗୋଷ୍ଠୀକୁ ସଶକ୍ତ କରିବା ।

କମ୍ପ୍ୟୁନିଟି ବିପଦରେ ଥିବା ବିଷୟରେ ଗ୍ରାମବାସୀଙ୍କୁ ସଚେତନ କରିବା ।



- ସ୍ଥାୟୀ ବିକାଶ ଉପରେ ଗୁରୁତ୍ ଦେବା ଅମର ଲକ୍ଷ ଓ ଉଦ୍ଦେଶ୍ୟ ।
- ୩. ଗ୍ରାମଞ୍ଚରୀୟ ବିପର୍ଯ୍ୟୟ ପରିଚାଳନା ଯୋଜନା ପ୍ରଷ୍କୁତି ପାଇଁ ନିଆଯାଇଥିବା ପଦକ୍ଷେପ
- ଗ୍ରାମ ଫତାୟତ ,ଗ୍ରାମାଦସୀ ତଥା ବିପର୍ଯ୍ୟୟ ପରିଚାକନା ବିଭିନ ସହ ସୟବିତ ବିଭାଗମାନଙ୍କ ମିକିତ ଉଦ୍ୟମରେ ଗୋଷ୍ପୀର ବିହଦ ବିପନ୍ନତା ବିଶ୍ଲେଷଣ ଓ ବିପଦ ବିଶ୍ଲେଷଣ କରାଯାଇ ଏକ ଗ୍ରାମ ବିପର୍ଯ୍ୟୟ ପରିଚାଳନା ଯୋଇନା ପ୍ରସ୍ତୁତ କରାଯାଇଛି ।
- ଗ୍ରାମ ବିପର୍ଯ୍ୟୟ ପରିଚାଳନା ଯୋକନାର କାର୍ଯ୍ୟକାରିତା ସହ ଅପଡେଟ୍ କରିବା ।
- ପୂର୍ବଭାସ ଦ୍ୱାରା ରହିଯାଉଥିବା ଦୂରତାକୁ ଚିହ୍ନଟ କରିବା ।
- ବିପର୍ଯ୍ୟୟ ପରିଚାଳନା ବିଭିନ୍ନ କାର୍ଯ୍ୟକ୍ରମ ପାଇଁ ଗ୍ରାମଞରରେ କାର୍ଯ୍ୟଦଳ (Task force) ଗୁଡିକ ଗଠନ କରାଯାଉଛି ।
- ସାମାଜିକ ମାନଚିତ୍ର ,ସୟଳ ମାନଚିତ୍ର ଓ ଅବଶ୍ୟକ ମାଟକ୍ସ ପ୍ରଷ୍ତୁତି କରାଯାଉଛି ।
- ଗ୍ରାମ ବିପର୍ଯ୍ୟୟ ପରିଚାଳନା ଯୋଜନାର ପ୍ରକ୍ରିୟା ଅପଡେଟ୍ ରିଖିବା ।
| ନୁ.ସଂ | ବିଷୟ | ସ୍ଥାନ | ଗ୍ରାମ ଠାରୁ ଦୂରତା | ମୁଖ୍ୟ ବିଭାଗୀୟଙ୍କ ଯୋଗାଯୋଗ ନ |
|-------|-----------------------------------|--------------|------------------|----------------------------|
| | | ପ୍ରଶାହ | าก | |
| е. | ରାଜ୍ୟ ଗ୍ରାମର ନାମ | ମନକୋ | ୦ କି.ମି. | |
| 9. | ସାହି / ୱ୍ୱାର୍ଡଗୁଡିକର ନାମ) | ମନକୋ | ୦ କି.ମି. | |
| ฑ. | ଗ୍ରାମ ପ [*] ାୟତର ନାମ | ରାମଯୋଡି | ୪ କି.ମି. | <i>୬</i> ୩୭୨୭୯୭୩୮୦ |
| ۲. | ବ୍ଲୁକର ନାମ | ଲାଠିକଟା | ୭ କି.ମି. | ୯୪୩୯୯୧୬୯୫୩ |
| 8. | ଉପଖଷର ନାମ (ଝଳର ଜସଙ୍କବହବକ୍ତ) | ପାନପୋଷ | ୨୧ କି.ମି. | 6960086-9860969 |
| Ð. | ଚ୍ଚିଲ୍ଲାର ନାମ | ସୁନ୍ଦରଗଡ | ୧୨୧ କି.ମି. | 8226689-9939958 |
| ۶. | ନିକଟସ୍ଥ ଡାକଘରର ନାମ | ରାମଯୋଡି | ୪ କି.ମି. | , |
| ٢. | ରାଜସ୍ପ ନିରୀକ୍ଷକଙ୍କ କାର୍ଯ୍ୟାଳୟ | ଡଲାକୁଦର | ୩ କି.ମି. | ୭୦୦୮୫୮୬୯୭ |
| с. | ନିକଟସ୍ଥ ପୋଲିସ୍ ଷ୍ଟେସନ | ଲାଠିକଟା | ୭ କି.ମି. | |
| • | | ସ୍ପାପ୍ଥ୍ୟ ଅନ | ୁଷାନ | |
| eo. | ନିକଟସ୍ଥ ଏ.ଏନ୍.ଏମ୍. କେନ୍ଦ୍ର | ଡଲାକୁଦର | ୩ କି.ମି. | ୯୪୩୯୯୯୩୬୬୬ |
| e e . | ନିକଟସ୍ଥ ଅଙ୍ଗନବାଡି କେନ୍ଦ୍ର | ମନକୋ | ୦ କି.ମି. | 9189666088 |
| 89. | ନିକଟସ୍ଥ ପ୍ରାଥମିକ ଚିକିସ୍। କେନ୍ଦ୍ର | ରାମଯୋଡି | ୪ କି.ମି. | |
| १९११. | ନିକଟସ୍ଥ ଗୋଷୀ ତିକିସ୍। କେନ୍ଦ୍ର | ବିରକେର। | ୧୨ କି.ମି. | |
| 28. | ନିକଟସ୍ଥ ଉପକେନ୍ଦ୍ର (ଝକର ଉରତ୍ସରକ୍ର) | ଡଲାକୁଦର | ୩ କି.ମି. | 2×m222m355 |
| 28. | ନିକଟସ୍ଥ ପଶୁ ଚିକିସ୍। କେନ୍ଦ୍ର | ରାମଯୋଡି | ୪ କି.ମି. | |

ବସବାସ କରନ୍ତି । ଗାଁଟି ସଂପୂର୍ଣ୍ଣ ପାହାଡ, ପର୍ବତ,ଜଙ୍ଗଲ ମଧ୍ୟରେ ଅବସ୍ଥିତ ।

ସୁନ୍ଦରଗଡ ଜିଲ୍ଲା ଲାଠିକଟା ବୁକ ଅଧିନସ୍ଥ ରାମଯୋଡି ଗ୍ରାମଫବାୟତରେ ମନକୋ ଗ୍ରାମଟି ଅବସ୍ଥିତ । ଭକ୍ତ ଗ୍ରାମରେ ସମୁଦାୟ ୨ ୧ ୨ଟି ପରିବାର ବସବାସ କରନ୍ତି । ଏହି ଗ୍ରାମରେ ହିନ୍ଦୁ, ଖ୍ରୀଷ୍ଟଣାନ ଏବଂ ସାଧାରଣ ବର୍ଗର ପରିବାର ମୁଖ୍ୟତଃ

୨. ଗ୍ରାମର ପରିଚୟ:

ପରିଚ୍ଛେଦ-୨

କ୍ର.ସଂ.	ସ୍ଥାନ	ପର୍ଯ୍ୟତ୍ତ	ସଡ଼କର ମାନ	ସଡକ	ର ଅବସ୍ଥା	ମନ୍ତବ୍ୟ
				ସବୁ ଦିନିଆ	ଖରା ଦିନିଆ	
е.	ଗ୍ରାମ	ପ*ାୟତ	ଗ୍ରାମ୍ୟ ଉନ୍ନୟନ ରାଷା			
9.	ଗ୍ରାମ	ବ୍ଲକ ମୁଖ୍ୟାଳୟ	ଗ୍ରାମ୍ୟ ଉନ୍ନୟନ ଜାତୀୟ ରାଜପଥ			
୩.	ଗ୍ରାମ	ିକିଲ୍ଲା ସଦର ମହକୁମା	ଗ୍ରାମ୍ୟ ଉନ୍ନୟନ ଜାତୀୟ ରାଜପଥ			
۲.	ଗ୍ରାମ	ପ୍ରାଥମିକ ସ୍ପାସ୍ଥ୍ୟ କେନ୍ଦ୍ର	ଗ୍ରାମ୍ୟ ଉନ୍ନୟନ ରାସ୍ତା			
8.	ଗ୍ରାମ	ଗୋଷୀ ସ୍ପାସ୍ଥ୍ୟ କେନ୍ଦ୍ର	ଗ୍ରାମ୍ୟ ଉନ୍ନୟନ ଜାତୀୟ ରାଜପଥ			
٩.	ଗ୍ରାମ	ଉପ ସ୍ୱାପ୍ଥ୍ୟ କେନ୍ଦ୍ର	ଗ୍ରାମ୍ୟ ଉନ୍ନୟନ ରାଷ୍ଟା			
9.	ଗାମ	ବନ୍ୟା /ବାତ୍ୟା ଆଶ୍ୱୟସ୍ଥଳୀ	-			

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୨୮. ନିକଟପୁ ଦୁଗୁ କେନ୍ଦ୍ର ପାନପୋଷ

¢.9.	ନିକଟପୁ ପ୍ରାଣୀ ନିରୀକ୍ଷକଙ୍କ କାର୍ଯ୍ୟାକୟ	ରାମଯୋଡି	୪ କି.ମି.	
		ଶିକ୍ଷାନୁଷ	ାନ	
୧୭.	ନିକଟଗ୍ଲ ପ୍ରାଥମିକ ବିଦ୍ୟାଳୟ	ମନକୋ	୦ କି.ମି.	Smarmmagor
۴Г.	ନିଜଟସ୍ଥ ଏମ୍.ଇ. ବିତ୍ୟାଳୟ	ମନକୋ	୦ କି.ମି.	2.351.5
66.	ନିକଟସ୍ଥ ଉଚ୍ଚ ବିଦ୍ୟାଳୟ	ମନକୋ	୦ କି.ମି.	
90.	ନିକଟପ୍ଥ ମହାବିଦ୍ୟାଳୟ	ଜଲଦା	୧୦ କି.ମି.	
		ଅନ୍ୟାନ୍ୟ ଗୁରୁତ୍ୱପୂ	ର୍ଷ ଅନୁଷାନ	
9 ę.	ନିକଟସ୍ଥ ଗ୍ରାମ ପ [*] ାୟତ	ରାମଯାଡି	୪ କି.ମି.	୬୩୭୨୭୯୭୩୮୦
99.	ନିକଟସ୍ଥ ବନ୍ୟା /ବାତ୍ୟା ଆଶ୍ରୟସ୍ଥଳୀ	-	-	
୨୩.	ନିକଟସ୍ଥ ଅଗ୍ନିଶମ ସେବା କେନ୍ଦ୍ର	ରାଉରକେଲା		
98.	ନିକଟସ୍ଥ ଦୂରାଭାଷ ବିନିମୟ କେନ୍ଦ୍ର (ଟେଲିଫୋନ ଏକ୍ସଚେଞ୍ଚ)	ଲାଠିକଟା	୭ କି.ମି.	
98.	ନିକଟସ୍ଥ ବିଦ୍ୟୁତ କେନ୍ଦ୍ର	ଲାଠିକଟା	୭ କି.ମି.	
99.	ନିକଟସ୍ଥ ଗ୍ରାମ ପାନୀୟ ଜଳ ପରିମଳ କେନ୍ଦ୍ର	ରାମଯୋଡି	୪ କି.ମି.	
99.	ନିକଟସ୍ଥ ବ୍ୟାଙ୍କ	ଲାଠିକଟା SBI	୭ କି.ମି.	

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୨.୩ ଗ୍ରାମର ଭୌଗୋଳିକ ଅବସ୍ଥିତିର ସଂକ୍ଷିସ୍ତ ବିବରଣୀ:

ସୁସରଗତ କିଲ୍ଲା ଲାଠିକଟା ବୁଜ ଅବର୍ଗତ ରାମଯୋଡି ଗ୍ରାମ ଫତାୟତରେ ଏହି ମନକୋ ଗ୍ରାମଟି ଅବସ୍ଥିତ । ଭକ୍ତ ଗ୍ରାମରେ ୨୧୨ଟି ପରିବାର ବସବାସ କରନ୍ତି । ଗାଁ ଙ୍କପୁର୍ଣ୍ଣ କନ ଜଙ୍ଗଲ ମଧ୍ୟରେ ଅବସ୍ଥିତ । ଗାଁ ପୁର୍ବରେ ପାହାତ ପର୍ବତ.ପଣ୍ଡିମରେ କରଲାଖମନ, ଉତରରେ ତଲାକୁଦର ,ଦକ୍ଷିଣରେ ପାହାଡ ବର୍ଡରେ ପରିପୂର୍ଣ୍ଣ ହୋଇରହିଛି ।

୨.୪ ଗ୍ରାମର ଜନଙ୍ସଖ୍ୟା ସଂପର୍କରେ ସବିଶେଷ ସୂଚନା

ଘର ସଂଖ୍ୟା ଓ ଏହାର ବାଖ୍ୟା

କ୍ର.ସଂ	ସମୁଦାୟ	ବର୍ଗ							
	ପରିବାର	ଅନୁସୂଚିତ ଜାତି	ଅନୁସୂଚିତ ଜନଜାତି	ସାଧାରଣ	ଅନ୍ୟାନ୍ୟ ପଛୁଆ ବର୍ଗ	ଦାରିତ୍ର୍ୟ ସୀମାରେଖା ତଳେ (ବି.ପି.ଏକ୍.)	ଦାରିଦ୍ର୍ୟ ସୀମା ରେଖା ଉପରେ (ଏ.ପି.ଏଲ୍)		
6	999	909	C	6	-	909	60		

ଜନ ସଂଖ୍ୟା ଓ ଏହାର ବାଖ୍ୟା ।

କ୍ର.ସଂ	e	ଜନସଂଖ	141	ଅନୁସୂଚିତ ଜାତି	ଅନୁସୂଚିତ ଜନଜାତି	ସାଧାର ଶ	ଅନ୍ୟାନ୍ୟ ବର୍ଗ	ଶିକ୍ଷିତ	ଭିନ୍ସକ୍ଷମ/ ଦିବ୍ୟାଙ୍ଗ
	2	ମ	ତୃତୀୟ						
6	४७४	628		99	969	8	-	CD8	60

୨.୫ ଧର୍ମ ଭିଠିକ ଜନସଂଖ୍ୟା ବିବରଶୀ

କ୍ର.ସଂ	ସମୁଦାୟ ଜନସଂଖ୍ୟା	ହିନ୍ଦୁ	ମୁସଲିମ	ଖ୍ରୀଷ୍ଟିୟାନ	ଶିଖ୍	ଅନ୍ୟାନ୍ୟ ବର୍ଗ	
9	668	F9F	8	९७०	-	-	

୨*.୬* ବୟସ ବର୍ଗ

କ୍ର.ସଂ ସମୁଦାୟ		୦-୫ ବୟସ		୬-୧୪ ବୟସ			୧୫-୫୯ବୟସ		୬ ରୁ ଭର୍ଦ୍ଧ ବୟସ		
	ଜନସଂଖ୍ୟା	ପୁରୁଷ	ମହିଳା	ପୁରୁଷ	ମହିଳା	ପୁରୁଷ	ମହିଳା	ତୃତୀୟ ଲିଙ୍ଗ	ପୁରୁଷ	ମହିଳା	ତୃତୀୟ ଲିଙ୍ଗ
6	662	89	88	98	99	ণাপ্ত	ণা४ণা	-	886	880	-

୨*.୭* ଗୃହର ଢା^{*}।

ଓ୍ୱାର୍ଡ /	ସାହି	କଚ୍ଚା ଘର ସଂଖ୍ୟା	ଆଂଶିକ ପକ୍କା ଘର ସଂଖ୍ୟା	ପକ୍କା ଘର ସଂଖ୍ୟା	ସମୁଦାୟ ଘର ସଂଖ୍ୟା

୨.୮ ସଂପୂର୍ଣ୍ଣ ଭୌଗୋଳିକ କ୍ଷେତ୍ର (ହେକ୍ଟରରେ) (ତହସିଲ ସୂଚନା ଅନୁସାରେ)

କୃଷି ଭୂମି	ଗୋଚର ଭୂମି	ତଙ୍ଗଲ ଭୂମି	ଅନ୍ୟାନ୍ୟ	ସଂପୂର୍ଣ କ୍ଷେତ୍ର
୧୧୦୭.୮୩୦୦ ଏକର ୧୧.୩୫୫୪ ହେକ୍ର	୯୯.୬୮୦୦ଏକର	୮୨୨.୬୯୦୦ଏକର	୨୬୫.୨୧୦୦ଏକର	୨୨୯୫.୪୧୦୦ଏକର ୧୧.୩୫୫୪ ନେକୃର

୨.୯ ଫସଲର ଢା*।

ଜ୍ର.ସଂ		ରତୁ								
		ଖରିପ			ରବି					
	ଫସଲର ପ୍ରକାର ଭେଦ	ବାଷବିକ ଫସଲ ବୁଣିବା କ୍ଷେତ୍ର	ଫସଲ ଉପୁଜାଇବା ମାସ	ଫସଲର ପ୍ରକାର ଭେଦ	ବାୟବିକ ଫସଲ କୁଣିକା କ୍ଷେତ୍ର	ଫସଲ ଉପୁଜାଇବା ମାସ	କ୍ଷେତ୍ର (ଏକରରେ)			
6	ଧାନ	କୁନ	ନଭେୟର/ଡିସେୟର							
9										

୨.୧୦ ଭୂମି ଦଖଲକାରୀଙ୍କ ଢା*।

ଭୂମିହୀନ	ଭାଗତାକ୍ଷୀ	ନାମମାତ୍ର ଚାଷୀ ([୨.୪୭ ଏକର)	କ୍ଷୁଦ୍ର ତାଷୀ (୨.୪୭ ରୁ ୪.୯୪ ଏକର)	ଅର୍ଦ୍ଦ - ମଧ୍ୟବ ତ୍ତି ୀ (୪.୯୪ ରୁ ୯.୮୮ ଏକର)	ମଧ୍ୟବଙ୍ଫୀ (୯.୮୮ ରୁ୨୪.୭୧ ଏକର)	ବୃହତ (]୨୪.୭୧ ଏକର)

୨.୧୧ ଜୀବିକା ବିବରଶୀ

ଙ୍ଗାବିକାର ପ୍ରକାର ଭେଦ	ନିଯୁକ୍ତ ଲୋକ ସଂଖ୍ୟା	ନିଯୁକ୍ତ ପରିବାର ସଂଖ୍ୟା
ଚାଷ	୮୦୦ଲୋକ	୨୦୦ ପରିବାର
କୃଷି ଶ୍ରମିକ	ศาย	୬ ପରିବାର
ଅଣ କୃଷି ଶ୍ରମିକ	-	
ମସ୍ୟାଙ୍ଗାବୀ	-	
କ୍ଷୁଦ୍ର ବ୍ୟବସାୟୀ	-	
ସେବା / ଚାକିରୀ	ଆଶା/ ଆଙ୍ଗନଓ୍ୱାଡି କର୍ମ	
ଅନ୍ୟାନ୍ୟ		

୨.୧୨ ପବାସନ / ଦେଶାନ୍ତର ଢା^{*}।

ଞ୍ଚାର୍ଡ	ସମୁଦାୟ	ଦେଶାନ୍ତର ବିବରଣୀ	ପଛରେ ରହି ଯାଉଥିବା ବ୍ୟକ୍ତି	ଦେଶାନ୍ତର	କେଉଁ	ସମୟ ସୀମା
/ସାହି	ପରିବାର		ସଂଖ୍ୟା	ସ୍ଥାନ	କାମ ପାଇଁ	(ଠାରୁ

	CPONUI	ମରିହାର	000	ମରିକା	ଇନିକା	කින	08/08	1	CORIGO	ตต์แด
	4.611	Clorutor	Goto	1.140 001	USCAL IN 1	OI Q	d'a / d'ai		ହୋଇଥାରି	ମାସରେ
ମନକୋ	8	8	8	-	-		··· .	ଗୁଜୁରାଟ, ସୁରାଟ, ରେବସର	ମାହତାଷ, ଶ୍ରମିକ	୧ କର୍ଷ ମଧ୍ୟ

୨ . ୧୩ ଗୃହପାଳିତ ପଶୂପକ୍ଷୀଙ୍କ ବିବରଣୀ

			ପଶୁ		ପକ୍ଷୀ	
ଓ୍ୱାର୍ତ୍ତି / ସାହି	ଦୁଧ	<u>ເ</u> ຊິ່ງ	ଅଣ କୁ	ଧିଆଳୀ	କୁକୁଡ଼ା / ବତକ	ଦରକାର ହେଉଥିବା
	ଗାଈ /ମଇଁଷି	ଛେଳି /ମେଣ୍ଟା	ଓଟ /ଘୋଡା / ବଳଦ	ଗଧ / ଖଚର /ଅନ୍ୟାନ୍ୟ		ଗୋଖାଦ୍ୟ ପରିମାଶ (କ୍ୱି[ାଲରେ)
	ଗାଈ-୫୦ ମଇଁଷି-୧୫	ଛେଳି- ୧୫୦	ବଳଦ-୪୦୦		କୁକୁଡ଼ୀ–୬୦୦ ବତକ–୪୦	6000

୨.୧୪ ପାନୀୟ ଜଳ ଉସ୍

କ୍ର.ସଂ	ଞ୍ଜାର୍ତ୍ତି / ସାହି	ନଳକୂପ ସଂଖ୍ୟା	କୂପ ସଂଖ୍ୟା	ପାନୀୟ ଜଳ (ଷ୍ଟାଣ୍ଡ ପୋଷ୍ଟ) ସଂଖ୍ୟା	ଅନ୍ୟାନ୍ୟ ଉତ୍ସ୍	ମତ୍ତବ୍ୟ
6	ମନକୋ	9.6	Г	8	6	

୨.୧୫ ଜଳସେଚନ ସ୍ରୋତ ଏବଂ ସୁବିଧା

କୃହତ ଜଳଟେ	ଏବଂ ମଧ୍ୟମ ସତନ ପ୍ରକନ୍ଧ	ଲଘୁ ଟ ପରିଣ	ନକସେଚନ ପାଚ୍ଚନା	ଉଠା ⁽	ଜଳସେଚନ ନଦୀ)	ଉଠା	ଜଳସେଚନ (କୂପ)	ଉଠା (ଗଢ	ଜଳସେଚନ ଧର ଜୁପ)	ଅ	ନ୍ୟାନ୍ୟ
ସଂଖ୍ୟା	ଜଳସେଚିତ କ୍ଷେତ୍ର (ଏକରରେ)	ସଂଖ୍ୟା	ଜଳସେଚିତ କ୍ଷେତ୍ର (ଏକରରେ)	વ્યવ્યમા	ଜନସେଚିତ କ୍ଷେତ୍ର (ଏକରରେ)	ସଂଖ୍ୟା	ଜଳସେଚିତ କ୍ଷେତ୍ର (ଏକରରେ)	ସଂଖ୍ୟା ।	ଜକସେଚିତ କ୍ଷୋତ୍ର (ଏକରରେ)	ସଂଖ୍ୟା	ଜଳସେଚିତ କ୍ଷେତ୍ର (ଏକରରେ)
-											

୨.୧୬ ଶିଳ୍ପ

କ୍ର.ସଂ	ଶିଚ୍ଚର ନାମ	ଶିଚ୍ଚର ପ୍ରକାର ଭେଦ	ବିନିଯୋଗ ମାନବ ସୟଳ	ଯନ୍ତ୍ରପାତି	ବିନିଯୋଗ ପୁଞ୍ଚି	ଉତ୍ପାଦନ ପରିମାଣ
	ନାହିଁ					
_						

୨.୧୭ ଆର୍ଥିକ ଅନୁଷାନ

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the state of the second

6	ଷ୍ପଙ୍କ ସହାୟିକା ଗୋଷ୍ପୀ	ତ୍ରୀଶକ୍ତି ଏସଏଚଳି,ମନକୋ	ସାରୋଜିନି ଲାକ୍ରା, ସଭାପତି- ୮୯୧୭୫୫୮୫୯୪
		ମା ସାରାୱତୀ ଏସଏଚ୍ଚି,ମନକୋ	ଆସମିତା କେର୍କେଟା, ସଭାପତି- ୭୬୫୩୮୮୩୧୩୦
		ଜାୟକାରାମ ଏସଏଚ୍ଚି,ମନକୋ	ମୁକ୍ତା ମିଞ୍ଚ, ସମ୍ମାଦିକା - ୭୮୪୭୮୫୦୯୫୭
		ମା ଲକ୍ଷ୍ମୀ ଏସଏଚ୍ଡି,ମନକୋ	ଗାଙ୍ଗୀ ତିର୍ଜୀ, ସମ୍ପାଦିକା - ୮୨୮୦୮୪୨୧୪୦
		ଆଦି ଶାକ୍ତି ଏସଏଚ୍ଚି,ମନକୋ	ଆଶା ଲାକ୍ରା, ସଭାପତି- ୮୮୯୫୫୬୩୭୯୧୧
9	ବ୍ୟାଙ୍କ	ଭାରତୀୟ ଷ୍ଟେଟ ବ୍ୟାଙ୍କ ଲାଠିକଟା	
୩	ଗ୍ରାମ୍ୟ ବ୍ୟାଙ୍କ		
22	ସମ୍ବରାମ କ୍ୟାଙ		

						5	ପରିଚ୍ଛେ
41. 5	ALICIARY MORIA (400	70 ma ri	CINON)		aaalo 800.		
A. 8	ବପସ୍ୟୟ ପ୍ରକାର	29.91	-		ସମସ୍ତର ବନ୍ଦ୍ରର	511	
- C - L		00	COCH	00000	000	00	2/0
	0011	ବଷ	ମନୁଷ୍ୟ	ପଶୁ ସଂପଦ	ଫସଲ	ଗୃହ	ରି©ରୂ
ę.	ବନ୍ୟା	ବକ୍ଷ	ମନୁଷ୍ୟ	ପଶୁ ସଂପଦ	ଫସଲ	ଗୃହ	ରି©ଭୂ
୧. ୨.	ବନ୍ୟା ବାତ୍ୟା ସହାରୀ	ବଷ	ମନୁଷ୍ୟ	ପଶୁ ସଂପଦ	ଫସଲ	ଗୃହ	ରି©ରୂ
e. 9. ¶. X.	ବନ୍ୟା ବାତ୍ୟା ପୁନାମୀ ଇମିକଞ୍ଚ	ବଷ	ମନୁଷ୍ୟ	ପଶୁ ସଂପଦ	ଫସଲ	ଗୃହ	ରି©ଭୂ
e. 9. 9. 8.	ବନ୍ୟା ବାତ୍ୟା ପୁନାମୀ ଭୂମିକଞ୍ଚ ଅଗିକାଣ	ବକ୍ଷ	ମନୁଷ୍ୟ	ପଶୁ ସଂପଦ	ଫସଲ 	ଗୃହ	ରି©ରୁ
৫. 9. পা. ४. ৪. ୬.	ବନ୍ୟା ବାତ୍ୟା ପୁନାମୀ ଭୂମିକମ୍ପ ଅଗ୍ଳିକାୟ ମଭୁଦି	ଦର ସବବର୍ଷ	ମନୁଷ୍ୟ	ପଶୁ ସଂପଦ	ଫସଲ 	ଗୃହ	ରି©ରୂ
৫. 9. ୩. ୪. ୫. ୬.	ବନ୍ୟା ବାତ୍ୟା ପୁନାମୀ ଭୂମିଜମ ଅଗ୍ଳିକାଣ ମରୂହି ବଳ୍ପପାତ	ବକ୍ଷ ସନୁବର୍ଷ ୨୦୦୦	ମନୁଷ୍ୟ ମାଙ୍କରୀ ଏହ୍ସା	ପଶୁ ଫପଦ	ଫସଲ 	ଗୃହ 	ରି©ରୂ √
е. 9. 9. 8. 9. 9.	ବନ୍ୟା ବାତ୍ୟା ବୁନୀମୀ କୁମିକମ ଅସ୍ଥିକାୟ ମଭୁଦି ବଜୁପାତ କରୁକାପାତ	ବକ୍ଷ ସବୁବର୍ଷ ୨୦୦୦ -	ମନୁଷ୍ୟ ମାଙ୍ଗରୀ ଏକ୍ସା	ପଶୁ ଫପଦ	ି ସସଲ 	ଗ୍ <u></u> ୱହ 	ରି©ରୁ ✓
е. 9. 9. 8. 9. 9. Г. С.	ବନ୍ୟା ବାତ୍ୟା ବୁନିମ ବୁନିକଙ୍ ଅସ୍ପିକାଶ ମଭୁଦି ବକ୍ରୁପାତ କଭକାପାତ ସାପକାମୁତା	ବକ୍ଷ ସବୁବର୍ଷ ୨୦୦୦ - -	ମନୁଷ୍ୟ ମାଙ୍ଗରୀ ଏକ୍ସା	ପଶୁ ଫପତ 	ି ସମ୍ବଲ 	ଗ୍ <u></u> ୟହ	କି©କୃ ✓
е. 9. 9. 9. 8. 9. 9. 7. С. ео,	ବନ୍ୟା ବାତ୍ୟା ସୁନାମୀ ଭୂମିକଙ୍ଗ ଅସ୍ପିକାଣ ମହୁଦି ବକ୍ରୁପାତ କରୁକାପାତ ସାପକାମୁତା ଭୂଷକନ	ବକ୍ଷ ସନୁବର୍ଷ ୨୦୦୦ - - -	ମନୁଷ୍ୟ ମାଙ୍ଗରୀ ଏକ୍ଟା	ପଶୁ ଫପତ 	ି ସହଲ 	ଗ୍ <u></u> ୟହ	ରି©କୃ ✓
е. 9. 9. 8. 9. 9. Г. С. ее.	ବନ୍ୟା ବାତ୍ୟା ସୁନୀମୀ ଭୂମିକଙ୍କ ଅଗ୍ଧିକାଣ ମହୁହି ବକ୍ରପାତ କରକାପାତ ସାପକାମୁତା ଭୂଷକନ ହୁଡି ମରିବା	ବଷ ସନୁବର୍ଷ ୨୦୦୦ - - - -	ମନୁଷ୍ୟ ମାଙ୍ଗରୀ ଏହ୍	ପଶୁ ଫପଦ 	ି ସହଲ 	ଗ୍ୱହ 	ଜି©କୁ ✓
е. 9. 9. 9. 8. 9. 9. 7. С. ее, ее, ее,	ବନ୍ୟା ବାତ୍ୟା ପୁନାମୀ ଭୂମିକଙ୍ ଅସ୍ଥିକାଣ ମହୁହି ବକ୍ରୁପାତ କରକାପାତ ସାପକାମୁତା ଭୂଷକନ ବୃତ୍ତି ମତିବା ବାଦକ ଫଟା କର୍ଷା	କଷ ସନୁବର୍ଷ ୨୦୦୦ - - - - - - - - - - - - - - - - -	ମନୁଷ୍ୟ ମାଙ୍କରୀ ଏହା		ସହଲ ✓ ✓	ଗୁହ 	ରି©ନୂ ✓
е. 9. 9. 9. 8. 9. 9. 7. С. ее. ее. ее.	ବନ୍ୟା ବାତ୍ୟା ପୁନାମୀ ଭୂମିକମ୍ପ ଅକ୍ସିକାୟ ମତ୍ତ୍ରହି ବଳ୍ପପାତ କରକାପାତ ସାପକାପୂତା ଭୂଷକନ ବୃଢି ମରିବା ବାଦଲ ଫଟା ବର୍ଷା	କଷ ସନୁବର୍ଷ ୨୦୦୦ - - - - - - - ୨୦୧୯	ମନୁଷ୍ୟ ମାଙ୍କରୀ ଏହା		ସହଲ 	ଗୁହ 	ରି©ନ୍ତୁ ✓
е. 9. 9. 8. 9. 9. Г. с. ео, ее. е9.	ବନ୍ୟା ବାତ୍ୟା ପୁନାମୀ ଭୂମିକମ୍ପ ଅସ୍ଥିକାଷ ମକୃହି ବଳ୍ପପାତ କରକାପାତ ସାପକାମୁତା ଭୂଷକନ ଭୂଷି ମରିବା ବାଦଲ ଫଟା କର୍ଷା	କଷ ସହୁକର୍ଷ ୨୦୦୦ - - - - - - - - - - - - - - - - -	ମନୁଷ୍ୟ ମାଙ୍ଗରୀ ଏହା		ସହଲ 	ଗୁହ ଜିରଞା ଏହା-୨ ମାଙ୍କରୀ ଏହା-୨	ରି©ନ୍ତୁ ✓
е. 9. 9. 8. 9. 9. С. с. ее, ее, ее,	ବନ୍ୟା ବାତ୍ୟା ପୁନାମୀ ଭୂମିବନ୍ଧ ଅସ୍ଥିକାୟ ମତ୍ତୁଦି ବଳ୍ରସାତ କରକାପାତ ସାପକାମ୍ବତା ଭୂଷନନ ଭୂଷି ମରିବା ଭାଦଲ ଫଟା କର୍ଷା କାଟ ଆକ୍ରମଣ ଯୋଗୁଁ ପସନ ନଷ୍ଟ	କଷ ସନୁକର୍ଷ ୨୦୦୦ - - - - - - - - - - - - - - - - -	ମନୁଷ୍ୟ ମାଙ୍ଗରୀ ଏହା		ସହଲ 	ଗୁହ ବିରଷା ଏହା-୨ ମାଙ୍କରୀ ଏହା-୨	ରି©ନ୍ତୁ ✓
е. 9. 9. 9. 5. 9. С. 6. ее. ее. е. е. е. е.	ବନ୍ୟା ବାତ୍ୟା ଭୂମିକମ ଅସ୍ଥିକାଣ ମଭୁନ୍ତି ବଳ୍ପପାତ କରକାପାତ ସାପକାମୁତା ଭୂଷକନ ଭୂଜି ମରିବା ବାଦଲ ଫଟା ବର୍ଷା କାଟ ଆକ୍ରମଣ ଯୋଗୁଁ ଫସଲ ନଞ୍ଚ ନୌକା ଦୁର୍ଘଟଣା	କସ ସବୁକର୍ଷ ୨୦୦୦ - - - - - ୨୦୧୯	ମନୁଷ୍ୟ ମାଙ୍ଗରୀ ଏହା		ି ସହଲ 	ଗୁହ ଜିରଞ ସହା- ୨ ମାଙ୍କଜା ଏହା- ୨	ର©ହୁ ✓
е. 9. 9. 9. 9. 9. 7. С. ео. ее. е9. еч. ех. ех.	ବନ୍ୟା ବାତ୍ୟା ବୁନିନମ ବୁନିକଙ୍ ଅସ୍ଥିକାଣ ମଭୁତି ବଳ୍ଥପାତ କରକାପାତ ସାପକାମୁତା ଭୁଷକନ ବୁଢି ମରିବା ବାଦଲ ଫଟା ବର୍ଷା କାଟ ଆନ୍ତ୍ରମଣ ଯୋଗୁଁ ଫସଲ ନଞ୍ଚ ନୌକା ଦୁର୍ଘିଟଣା ଅନ୍ୟାନ୍ୟ	କସ ସହୁକଶି ୨୦୦୦ - - - - ୨୦୧୯ - - ହାତୀ ଦେସାନ	ମନୁଷ୍ୟ ମାଙ୍କରୀ ଏହା		ସହଲ 	ଗୁହ ଜିରଞ୍ଚ ଏହା-୨ ମାଙ୍କରୀ ଏହା-୨	ରି©ନ୍ତୁ ✓

୩.୨ ମାସ ଅନୁଯାୟୀ ବିପର୍ଯ୍ୟୟର ବିବରଣୀ କ୍ର.ସଂ ବିପର୍ଯ୍ୟୟ ଘଟଣା ମାସ କାନୁଯାରୀ ଫେକ୍ଟୁୟାରୀ ମାର୍ଚ୍ଚ ଏସ୍ଥିବ ମଇ କୁନ୍ନ କୁରାଇ ଅଟଞ୍ଚ ବେପ୍ଟେମ୍ବର ଅଭ୍ୱେକର ନିରେୟର ତିସେୟର ପ୍ରକାର е. ଢନ୍ୟା ୨. ବାତ୍ୟା ന. ସୁନାମୀ 8. ଭୂମିକମ୍ପ 8. ଅଗ୍ନିକାଶ୍ଚ ~ 5. ମରୁଡି ବଚ୍ଛପାତ 9. କରକାପାତ ସାପକାମୁଡା C. 90. ଭୂଷ୍ଣଳନ ୧୧. ବୁଡି ମରିବା ୧୨. ବାଦଲ ~ ପଟା ବର୍ଷା ~ ~ ୧୩. କୀଟ ~ ଆକ୍ରମଶ ଯୋଗୁଁ ଫସଲ ନଷ୍ଟ ୧୪. ନୌକା ଦୁର୍ଘଟଣା

୩.୩ ବିପଦ ସଙ୍କୁଳତାର ବିଶ୍ଳେଷଣ

୧୫. ଅନ୍ୟାନ୍ୟ

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୩.୩.୧ ବିପଦ ସଙ୍କୁଳ ଜନସଂଖ୍ୟା

କ୍ର.ସଂ	ବିବରଣୀ	ପରିବାର ସଂଖ୍ୟା	ଲୋକ ସଂଖ୍ୟା	ମନ୍ତବ୍ୟ
е.	ତଳି ଅ [*] ଳରେ ବସବାସ କରୁଥିବା ପରିବାର	-		
9.	ଦୁର୍ବଳ ଅବସ୍ଥାରେ ଥିବା ଘର	68	8.6	
୩.	ବୟଷ୍କ ବ୍ୟକ୍ତି ଥିବା ପରିବାର	୩୭	96	
Χ.	ମହିଳା ମୁଖିଆ ଥିବା ପରିବାର	98	98	
8.	ଭିନ୍ନକ୍ଷମ ବ୍ୟକ୍ତି ଥିବା ପରିବାର	60	60	
٩.	ଗର୍ଭବତୀ ମହିଳା / କ୍ଷୀର ଖୁଆଉଥିବା ମା'	8	Г	
໑.	ନିରାଶ୍ରୟ	-	-	
Г.	ଶିଶୁ (୦-୬ ବୟସ)			
С.	ରୋଗୀ ଏଙ୍ ଅସୁସ୍ଥ			
90.	ସମୁଦ୍ର /ନଦୀ ତଟରେ ଥିବା ଘର			
99.	ଭୂମିହୀନ ପରିବାର			
69.	ଦାରିଦ୍ୟୁ ସୀମାରେଖା ତଳେ ଥିବା ବ୍ୟକ୍ତି	-		
୧୩.	ବିଶେଷ ଚିକିସ୍ୱା ନିର୍ଭରଶୀଳ ବ୍ୟକ୍ତି			

× × ×

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68.	ଭିନ୍ନକ୍ଷମ ବ୍ୟକ୍ତି	ପ୍ରକାର		¥1	
68.		ଅନ୍ଧ	୧-ସୁବାସି କ	ଧାଷୁଲନା	
e.D.		କାଲ ସମିକ ଚିକ୍କରି କାଳି	-		
ег.		ଶାରୀରିକ ଅକ୍ଷମ	ดอาสา กิย	n.	
			ରେଶମା		
66.		ଅନ୍ୟାନ୍ୟ			
ฑ.ฑ.	୧ ବିପଦ ସଙ୍କୁଳ ଭିତିଭୂମି ଏବଂ	ସମ୍ପତି			
କ୍ର.ସଂ	ଇି©ରୂମି / ସଂପତି ପ୍ରକାର	ସଂଖ୍ୟା		ମନ୍ତବ୍ୟ	
ę.	ତାଳ / କଟ୍ଟା ଘର				
9.	ନୌକା	-			
୩.	କାଲ	-			
κ.	କମାର ଚାଳିଆ	-			
8.	କୁମ୍ବାର ଚକ	-			
۶.	ତନ୍ତ	-			
໑.	ଙ୍ଗୀବିକା ସମ୍ପ© / ସମ୍ପଦ	-			
г.	ଉଠା ଜଳସେଚନ	-			
с.	ପାନୀୟ ଜଳ ଯୋଗାଣ ଉସୂ	ନଳକୃପ			
		କୃଅ -୧୫			
		ପାନୀୟ ଜଳ (ଷ୍ଟାଷ ସ	ପଏଣ୍ଟ) - ୫		8
60.	ଅନ୍ୟାନ୍ୟ ଜଳ ଉସ୍	କେନାଲ –			
		ନଦୀ –			
		କମ୍ୟୁନିଟି ଟାଙ୍କି / ଁ େ	ପାଖରୀ–୬		
66.	ପଶୁ ସଂପଦ	ଗାଈ ୫୦/୧୫			
		କୁକୁଡ଼ା ୪୦୦			
		ଁ ଛେଳି / ମେଣ୍ଟା -	680		
•		ଅନ୍ୟାନ୍ୟ			
		ଫାର୍ମ ଘର			
69.	ମୂଲ୍ୟବାନ ନଥିପତ୍ର	يې يې			
୧୩.	ଫସଲ, ଗଛ ଓ ଜଙ୍ଗଲ	ହଁ			
98.	ଖାଦ୍ୟ ଶସ୍ୟ	ହଁ			
68.	କର୍ଷି ମର୍ଚ୍ଚାମ	ភ្			

୩.୪ ବିପଦପୂର୍ଣ୍ ପ୍ଥାନରୁ ଗ୍ରାମର ଦୂରତା (କି.ମି.)

କ୍ର.ସଂ	ବିପଦପୂର୍ଣ୍ ସ୍ଥାନ	ଗ୍ରାମ ଠାରୁ ଦୂରତା	ମନ୍ତବ୍ୟ
е.	ନଦ୍ଦୀ	-	
9.	ଦୁର୍ବଳ ନଦୀ ବନ୍ଧ	-	
୩.	ସମୁଦ୍ର	<u>4</u>	
κ.	ଅନ୍ୟାନ୍ୟ ବିବରଣୀ	ω);	

୩.୫ ଚିହ୍ନଟ କରାଯାଇଥିବା ନିରାପଦ ଆଶ୍ରୟସ୍ଥକୀ ଠାରୁ ଗ୍ରାମ /ଗ୍ରାମ ପ^{*}ାୟତର ଦୂରତା (କି.ମି.)

କ୍ର.ସଂ	କିରାପଦ ଆଶ୍ରୟସ୍ଥଳୀ	ଯୋଗାଯୋଗ ବ୍ୟକ୍ତି ଏଙ୍କ ତାଙ୍କ ଫୋନ ନୟର	ଗ୍ରାମ ଠାରୁ ଦୂରତା
	-		

୩.*୬* ନିରାପଦ ଆଶ୍ରୟସ୍ଥଳୀକୁ ରାଞା

କ୍ର.ସଂ	ମୁଖ୍ୟ ରାହ୍ଚାର ନାମ	ବିକଳ୍ପ ରାୟାର ନାମ	ମନ୍ତବ୍ୟ	
۹.	ଗ୍ରାମ୍ୟ ଉନ୍ନୟନ ରାଷ୍ଟା			

୩.୭ ସାମର୍ଥ୍ୟତା ବିଶ୍ଳେଷଣ

୩.୭.୧ ପାଖରେ ଥିବା ସମ୍ଭଳର ତାଲିକା

କ୍ର.ସଂ	ଭି©ଭୂମି ପ୍ରକାର	ହଁ / ନା (ଠିକ୍ / ଭୁଲ୍ ଚିହ୍ନ)	ଦୂରତା	ଫୋନ ନୟର
е.	ବୁକ କାର୍ଯ୍ୟାଳୟ	~	୭ କି.ମି.	
9.	ଗ୍ରାମ ପ [*] ାୟତ କାର୍ଯ୍ୟାଳୟ	~	୪ କି.ମି.	
୩.	ବିଦ୍ୟାଳୟ	~	୧ କି.ମି.	
Υ.	ଗୋଷୀ କେନ୍ଦ୍ର	~	୧୫ କି.ମି.	
8.	ଦୂରଭାଷ ବିନିମୟ କେନ୍ଦ୍ର	~		
9	ବିଦ୍ୟୁତ କେନ୍ଦ୍ର	~	୭ କି.ମି.	
໑.	ଗ୍ରାମୀଶ ପାନୀୟ ଢଳ ପରିମଳ କେନ୍ଦ୍ର			
г.	ବ୍ୟାଙ୍କ	1	କି.ମି.	
С.	ତେଜରାତି / ପି.ଡି.ଏସ୍. କେନ୍ଦ୍ର /ଦୋକାନ			
eo.	ଏ.ଏନ୍.ଏମ୍ କେନ୍ଦ୍ର	\checkmark	୨ କି.ମି.	
66.	ଅଙ୍ଗନବାଡି କେନ୍ଦ୍ର	\checkmark	୧ କି.ମି.	

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19.	ପ୍ରାଥମିକ ଚିକିସ୍। କେନ୍ଦ୍ର	~	୨ କି.ମି.	
୧୩.	ଗୋଷୀ ଚିକିସ୍ଟା କେନ୍ଦ୍ର			
ęγ.	ପୋଲିସ ଷ୍ଟେସନ	~	୭ କି.ମି.	
68.	ତାକ ଘର	~	୧ କି.ମି.	
69.	ମନ୍ଦିର	×		
-	00 000	1		

୩.୭.୨ ଅନ୍ୟାନ୍ୟ ସମ୍ବଳର ତାଲିକା

କ୍ର.ସଂ	ସୟଳ ପ୍ରକାର	ବିସ୍ଫୃତ ବିବରଣୀ	ମାଲିକ ନାମ	ଫୋନ ନୟର	ମନ୍ତବ୍ୟ
6	ଗମନାଗମନ ଓ ଯୋଗାଯୋଗର ସୁକିଧା	ଶଗତ ଗାଡି, ଁଟ୍ରାକ୍ର, କିପ, ଟ୍ରଲି ଁରିକ୍ମା, ତଙ୍ଗା, ଅନ୍ୟାନ୍ୟ	ରାଜୁ ତିଲ୍ସା ବିର୍ଶ୍ଣ କେର୍କେଟା, ମାଙ୍ଗା କେକେଟା	-	
9	ଧାରକ ପାତ୍ର	ପାଣି ଟେଙ୍କର , ଉପରପାଶି, ଟାଳି, ପୁାଷିକ୍ ବଡ ଡବା, ବଡ ହଷା, ଜାର	୨ଟି ସିନଟେକ୍ସ ପାଶି ଯୋଗାଣ		
ๆา	ଅନ୍ୟାନ୍ୟ ସୟକ	ପମ୍ପ ସେଟ୍ ଜେନେରେଟର ଗ୍ୟାସ ଲାଇଟ୍ ସୋଲାର କାଇଟ୍	ପାଞ୍ଜନେତ୍ରଲ ୬ ଟି ୧-କରଣା ଏହା ୨-ମାଙ୍ଗା ଲାହ୍ରା ୩-ଇଞ୍ଜିତା ରୋମ ୪-ଲାଥୁ ଟପୋ ୫-ଲହୁ ମିଜ ୬-ଜୁନ୍ରା ଏହା ୨-ମାଙ୍ଗ ତିର୍କା		
γ.	ଅସ୍ଥାୟୀ / ସାମୟିକ ଆଶ୍ରୟପ୍ଥଳୀ ପାଇଁ ଆବଶ୍ୟକ ସାମଗ୍ରୀ	ତୟୁ, ପାଲୋ, ବାଭଁଶ, ପଲିଥିନ, ଟାର୍ପୋଲିନ୍	-		

୩.୭.୩ ଚିହୁଟ କରାଯାଇଥିବା ନିରାପଦ ଆଶ୍ରୟପ୍ଥଳୀ

କ୍ର.ସଂ	ନିରାପଦ ଆଶ୍ରୟପ୍ଳକୀ (ୟୁଇ, କଲେଜ, ଗୋଷୀକେନ୍ଦ୍ର, ସରକାରୀ କାର୍ଯ୍ୟାକୟ ଇତ୍ୟାଦି)	ଏକତାଲା / ବହୁ ତାଲା ଏବଂ ପ୍ରକୋଷ ସଂଖ୍ୟା	ଧାରଣ ଛମତା	ଯୋଗାଯୋଗ ବ୍ୟକ୍ତି ଏଙ୍କ ଫୋନ ନୟର	ଗ୍ରାମ ଠାରୁ ଦୂରତା (କି.ମି)	
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ଉଚ୍ଚ ସ୍ଥାନର ପ୍ରକାର	ଟ୍ରାମ ଠାରୁ ଦୂରତା	ମନ୍ତବ୍ୟ
ପାହାତ	୧କି.ମି.	
	ରଚ୍ଚ ସ୍ଥାନର ପ୍ରକାର ପାହାତ	ରଚ ସ୍ଥାନର ପ୍ରକାର ଗ୍ରାମ ଠାରୁ ଦୂରତ। ପାହାତ ୧କି.ମି.

୩.୭.୫ ଗ୍ରାମ ଷରୀୟ ଅନୁଷାନ

ୟୁ	ବେକ ସଂଘ, କୃଷକ ସଂଘ)					
6 40	ସଏଚ୍ଚ	690	-	-	(a)	-

୩.୭.*୬* **ଇ**ଣ୍ଡାର /ଗୋଦାମ ର ସୁବିଧା

କ୍ର.ସଂ	ଯେ କୌଶସି ଗୋଷୀମୂଳକ ଭଷ୍ଠାର ଘର /ଗୋଦାମ	ପ୍ଥାନ /ଅବସ୍ଥିତି	ଧାରଣ କ୍ଷମତା	ମାଲିକ / କ©ିୃପକ୍ଷ	ଯୋଗାଯୋଗ ନୟର
6	କେନ୍ଦୁପତ୍ର ଗୋଦାମ ଘର	ମନକୋ		ରାଜପ୍ଥାନ ଏକ୍ଟା	

ପରିଚ୍ଛେଦ-୪

୪. ବିପର୍ଯ୍ୟୟ ପ୍ରସ୍ତୁତି ଏବଂ ପ୍ରଶମନ ଯୋଜନା

୪.୧ ବିପର୍ଯ୍ୟୟ ସମୟରେ ସ୍ଥାନାନ୍ତରଣ ପାଇଁ ନିରାପଦ ରାଷା ବିହ୍ନଟ

କ. ସର୍ବନିମ୍ନ ବିପ©ଁ ଓ ବାଧାଥିବା ନିରାପଦ ରାୟା ଚିହୃଟ :

ଖ. ବୟୟ, ମହିଳା ଏଙ ଶିଶୁମାନେ ବ୍ୟବହାର କରିପାରୁଥିବା ନିରାପଦ ରାଷ୍ଟା ।

(ଗ୍ରାମ ସ୍ଥାନାନ୍ତରଣ ରାଷା ର କକ୍ସାକୁ ଅନୁହେବ ରଖା ହେବ ।)

ଗ. ଗ୍ରାମ୍ୟକ୍ତରୀୟ ଟାସ୍ଟ ଫୋର୍ସ ପାଇଁ ମକ୍ ତ୍ରିଲ ପ୍ଲାନ

କ୍ର.ସଂ	ମକ୍ ତ୍ରିଲ ପ୍ରକାର	ସମୟ	ପ୍ରକ୍ରିୟା (ଉପଯୋଗ, ରକ୍ଷଶାବେକ୍ଷଣ, ରେକର୍ଡ କିଫି ଇତ୍ୟାଦି	ବାୟିତ୍ୱରେ ଥିବା ବ୍ୟକ୍ତି
6	ବନ୍ୟା	ନାହିଁ		
9	ବାତ୍ୟା	ନାହିଁ		
ๆ	ସୁନାମୀ	ନାହିଁ		
8	ଭୂମିକମ୍ପ	ନାହିଁ		
8	ଶିନ୍ମ (ରାସାୟନିକ)	ନାହିଁ		2
٩	ଅନ୍ୟାନ୍ୟ	ନାହିଁ		

୍କ ଘ. ପ୍ରଶିକ୍ଷଣ ଏବଂ ଦକ୍ଷତା ବୃଦ୍ଧି

କ୍ର.ସଂ	ପ୍ରଶିକ୍ଷଣ ବିଷୟ	ସମୟ	ପାଖରେ ଥିବା ସମ୍ବଳ	ଆବଶ୍ୟଳତା
6	ପରିମଳ ଓ ସ୍ୱାସ୍ଥ୍ୟ ରକ୍ଷା	ସେପ୍ଟେୟର ୨୦୨୧	କୁବ ଘର	ତାଲିମଦାତା ତାମିଲ ଉପକରଶ
9.	ପ୍ରାଥମିକ ସହାୟତା (ସାପକାମୁଡା ସମେଚ)	ଅକ୍ଟୋବର ୨୦୨୧	କୁବ ଘର	ତାଲିମଦାତା ତାମିଲ ଉପକରଣ
୩	ସନ୍ଧାନ ଓ ଉଦ୍ଧାର	ନଭେୟର ୨୦୨୧	କୁବ ଘର	ତାଲିମଦାତା ତାମିଲ ଉପକରଣ,(ଷ୍ଥେଚର ଆଦି)
8	ବନ୍ୟା ମୁଜାବିଲା		କୁବ ଘର	
8	ଅନ୍ୟାନ୍ୟ			

୪.୨ ଗୋଷୀୟରୀୟ ପ୍ରଶମନ କାର୍ଯ୍ୟ

(ଗ୍ରାମର ବିପର୍ଯ୍ୟୟକୁ ଆଧାର କରି ପ୍ରଶମନ କାର୍ଯ୍ୟକ୍ରମ

୪.୨.୧ ସ୍ପଳମିଆଦୀ ପ୍ରଶମନ କାର୍ଯ୍ୟ

	and and and	-	ରାନିରରେ ଥିବା ଫ୍ଟା	ซแตลงด ซเย้	ଟମୟହୀମା
କ୍ର.ସଂ	ପ୍ରଶମନ କାସ୍ୟ ଯୋଜନା	ଅବ୍ୟକ୍ଷ ପଦକ୍ଷେପ	A1898000 0 41 4 81	Girdine da	
6	ବନ୍ୟା ପ୍ରଶମନ	ନାହିଁ			
9	ବାତ୍ୟା ପ୍ରଶମନ	ବାତ୍ୟା ନିରୋଦି ଗୃହ ନିର୍ମାଣ			
ฑ	ସୁନାମୀ ପ୍ରଶମନ				
8	ମରୁତି ପ୍ରଶମନ	ଉଠାଜକ ସେଚନର ସୁବିଧା ଆବଶ୍ୟକ	ସରକାରୀବିଭାଗ	-	ନଭେୟର- ଡିସେୟର-୨୦୨୧
8	ଅନ୍ୟାନ୍ୟ	ନକକୁଅ, ପାଇପ ପାଣି ପର୍ଏଟ ଆଲୋକ ବ୍ୟବସ୍ଥା	ସରକାରୀବିଭାଗ	-	

୪.୨.୨ ଦୀର୍ଘମିଆଦୀ ପ୍ରଶମନ କାର୍ଯ୍ୟ

କ୍ର.ସଂ	ପ୍ରଶମନ ଯୋଜନା	ଆବଶ୍ୟକ ପଦକ୍ଷେପ	ଦାନ୍ଦିତ୍ରରେ ଥିବା ସଂସ୍ଥା	ଆବଶ୍ୟକ ଅର୍ଥ	ସମୟ ସୀମା
6	ବନ୍ୟା ପ୍ରଶମନ				-
9	ବାତ୍ୟା ପ୍ରଶମନ				-
ๆ	ସୁନାମୀ ପ୍ରଶମନ				
8	ମରୁଡି ପ୍ରଶମନ	ଭଠାଙ୍ଗଳସେଟନ			
8	ଅନ୍ୟାନ୍ୟ	କୁବଘର ନିର୍ମାଣ	ସରକାରୀ ବିଭାଗ		

୪.୩ ଢନ୍ନୟନ ପରିକଳ୍ପନା ଏଙ୍କ ବିପର୍ଯ୍ୟୟ ପ୍ରଶମନ

(ଗ୍ରାମରେ କାର୍ଯ୍ୟକାରୀ ହେଇଥିବା ବିକାଶମୂଳକ କାର୍ଯ୍ୟ / ଯୋକନା ପୁଡିକ ମାଧ୍ୟମରେ କିପରି ବିପର୍ଯ୍ୟୟ ପ୍ରଥମନ ପ୍ରଷ୍କୁତି କରାଯାଇ ପାରିବ ।)

କ.ସଂ	ବିପର୍ଯ୍ୟୟ ପଶମନ / ପ୍ରସ୍ତୁତି ପାଇଁ ଉଦ୍ଦିଷ୍ଟ କାର୍ଯ୍ୟ	ବିକାଶମୂଳକ ଯୋଜନା	ବିଭାଗ

ୁଗ୍ରାମରେ କାର୍ଯ୍ୟକାରୀ ହେଇଥିବା ବିଲିନ୍ଦୁ ଯୋଜନା ଓ ପ୍ରକଳ ଗୁଡ଼ିକୁ ତିହୁଟ କରକୁ ଏବଂ ବିପର୍ଯ୍ୟୟ ସମ୍ପର୍ଦ୍ଦିତ ପ୍ରତିକାର ଓ ପ୍ରସ୍ଥିତି ଲାଗି ସେରୁଡିକୁ ଅଇଗା ତିହୁଟ କରକୁ ।

ପରିଚ୍ଛେଦ ୫

୫. ବିପର୍ଯ୍ୟୟ ମୁକାବିଲା ଯୋଜନା

୫.୧ କ୍ରାମ୍ୟ ବିପର୍ଯ୍ୟୟ ପରିଚାଳନା ସମିତି (ଭି.ଡି.ଏମ୍.ସି)

କ୍ର.ସଂ	ସଦସ୍ୱଙ୍କ ନାମ	ପଦବୀ	ଲିଙ୍ଗ	ବୟସ	ତିକଣା ଏବଂ ଟେଲିଫୋନ ନୟର
6	ମନୋଜ ଏକ୍ଟା	ସରାପଡି	ସୁ	88	୮୭୬୩୪୩୨୫୩୫
9	ଶୁକ୍ରା ଏକ୍ସା		ସୁ	স্থন	00000000000000000000000000000000000000
ฑ	ରଶ୍ମୀ କିଶୋରି ଏକ୍ଟା		ମ	ବ୍ୟାକ୍ୟ	୯୪୩୭୩୦୪୯୮୦
8	ଆଏସା ଖାତୁନ୍		ମ	9 0	୮୭୬୩୪୧୫୧୭୪
8	ଏଓ୍ୱାରୀ ଧାନଫ୍ୱାର		ମ	ମମ	LL686L0084
Ð	ଜାନହକୀ ସରଲୀଆ		ମ	80	
୭	ମାଙ୍ଗେ ତିଲ୍ବା		Q	88	୭୦୦୮୨୮୬୭୩୭
Г	ସୋମା ଟସୋ	ସମ୍ପାଦକ	Q	<u> ४୭</u>	08779908860
C	କୁଧୁଆ ଏକ୍ସା		Q	80	୬୩୭୨୯୮୦୯୭୩
60	କୈଳସ ଏକ୍ଟା		Q	90	LL48899699
66	ଗୁଣ୍ଡୁ ମିଞ୍ଚ		ସୁ	88	୬୩୫ ୧ ୧୮ ୧ <i>୬</i> ୫ ୧
69	ଭାଟି ଟପୋ		ସୁ	ণা০	FFC8989998
୧୩	ଶୁକ୍ରା ଏକ୍ସା		ସୁ	80	୭୬୫୬୦୩୦୬୭୩
68	ଲାଖିରାମ ଏହା		ସୁ	୩୫	
8.8	କିଶୋର ଏକ୍ଟା		Q	୩୭	9999088966C

୫.୨ ଗ୍ରାମ୍ୟ ବିପର୍ଯ୍ୟୟ ପରିଚାଜନା ସମିତି ଦ୍ୱାରା ବିପର୍ଯ୍ୟୟ ପ୍ରଷ୍ଟୁତି, ପ୍ରଶମନ ଓ ମୁକାବିଲା ପାଇଁ ନେବାକୁ ଥିବା ବିଭିନ୍ନ ପଦଷେପ

ମାସ	କାର୍ଯ୍ୟକ୍ରମ	ଆବକ୍ଷ୍ୟକ ଉପକରଣ
ଜାନୁଆରୀ	ଭଦ୍ଧାର ଓ ନିରାପଦ ସ୍ଥାନତରଣ	ତାଲିମଦାତା ଓ ତାଲିମ ଉପକରଣ
ଫେବୃୟାରୀ	୧-ପରିଛନ୍ନତା ଉପରେ ପ୍ରଶିକ୍ଷଣ	ତାଲିମଦାତା ଓ ତାଲିମ ଇପକରଣ

	୬ - ପ୍ରାଥମିକ ଚିକିସ୍।(ସାପକାମୁଡା ସମେତ)	
ମାର୍ଚ୍ଚ	ବିପର୍ଯ୍ୟୟ ପରିଚାକନା ଯୋଜନା ପ୍ରଶିକ୍ଷଣ ବିପର୍ଯ୍ୟୟ ଯୋଜନା ଆବଶ୍ୟକ ସଂଶୋଧନ ଓ ଜନୁତି ପ୍ରବଭ୍ୟସ	ଡାଲିମବାତା ଓ ତାଲିମ ଉପକରଣ
ଏପ୍ରିଲ	ପୂର୍ବିଅତଳ ବର୍ଷର କାର୍ଯ୍ୟ ସମୀକ୍ଷା(ଜିସାବ ସମେତ)	ଡାର୍ଲିମଦ୍ୱାତା ଓ ତାଲିମ ଉପକରଣ(ରେଜିଷ୍ଟ ଇତ୍ୟାଦି)
ମେ		
କୁନ		
କୁଲାଇ		
ଅଗଷ୍		
ସେପ୍ଟେୟର		

୫.୩ ଟାସ୍ଟ ଫୋର୍ସର ଗଠନ

(ଗ୍ରାମର ଯୁବକ/ଯୁବତୀ ମାନଙ୍କୁ ନେଇ ଦଳ ଗଠନ କରାଯିବା ଦରକାର । ଗ୍ରାମର ଜନସଂଖ୍ୟା ଓ ଯୁବଗୋଷୀ ସଂଖ୍ୟାକୁ ଆଧାର କରି ଆବଶ୍ୟକ ମୁତାବକ ବଳ ଗଠନ କରାଯାଇ ପାରିବ)

୫.୩.୧ ପ୍ରାକ୍ ସୂଚନା ପ୍ରଦାନକାରୀ ଦଳ

କ୍ର.ସଂ	ସତସ୍ୟ ନାମ	ଲିଙ୍ଗ	ବୟସ	ଟେଲିଫୋନ ନୟର
۴.	ସରୋଜୀନୀ ଲାକ୍ରା	ก	ণা০	L66988L848
9.	କିରାନ ଗୁଡିଆ	ମ	88	୮୨୮୦୪୫୩୪୮୭
୩.	କରୁଣା ଧାନୱାର	ମ	90	୯୪୩୮୫୯୩୦୭୩
Χ.	ମିଲା ଓରାମ	ମ		
8.	ବିଶ୍ଚରାମ ଏକ୍ଟା	Q	ฑร	୯୩୪୮୩୯୫୫୭୪

୫.୩.୨ ସ୍ଥାନାନ୍ତର, ସନ୍ଧାନ ଏବଂ ଉଦ୍ଧାରକାରୀ ଦଳ

କ୍ର.ସଂ	ସଦସ୍ୟ ନାମ	ଲିଙ୍ଗ	ବୟସ	ଟେଲିଫୋନ ନୟର
۹.	କାଶିନାଥ ଧାନପ୍ୱାର	ସୂ	ฑร	୯୪୩୮୫୯୩୦୭୫
9.	ଅନିତା କେର୍କେଟା	ମ	98	୭୦୦୮୨୮୬୭୩୭
ๆา.	ଚାମରା ଓରାମ	ସୁ	୩୩	୯୪୩୮୨୮୧୭୩୪
Χ.	ତମରୁଧର ଏହା	ସୁ	98	<i>୬</i> ୩୭୦୩୪୮୭୮୮
8.	ଶୁକରାମ ଏକ୍ଟା	Q	୩୩	୭୭୩୫୨୭୨୭୭୩

୫.୩.	୩ ସ୍ପାସ୍ଥ୍ୟ ଏବଂ ପ୍ରାଥମିକ ଚିକିସ୍	ବଳ			
କ୍ର.ସଂ	ସଦସ୍ୟ ନାମ	ଭିଙ୍ଗ	ବୟସ	ଟେଲିଫୋନ ନୟର	
	ଇକ୍ଷ୍ମୀ ଏକ୍	ମ	୩୭	F9F08898F8	
6.					
ę. 9.	କିରନ ଗୁଡ଼ିଆ	R	88	L3L088498L5	
e. 9. 9.	କିରକ ଗୁଡ଼ିଆ ପ୍ରତିମା ଓରାମ	ନ ମ	४୫ ୩୨	L3L08848L9	
e. 9. 9. 8.	କିରନ ରୁଡିଆ ପ୍ରତିମା ଓରାମ ଓିମୋଚ କାଣ୍ଟୁଲନା	ନ 11 ହ	১% ୩୨ ୩୫	Г9Г0088938Г9 Г9Г0008995 Г9Г0008990	

୫.୩.୪ ଆଶ୍ରୟପ୍ଥଳୀ ପରିଚାଳନା ଦଳ

କ୍ର.ଙ	ସଦସ୍ୟ ନାମ	ଲିଙ୍ଗ	ବୟସ	ଟେଲିଫୋନ ନୟର
۴.	ବିରଶା କେର୍କେଟା	ସୁ	গাঙ	୬୩୭୦୫୭ ୯୩୩
9.	ବିରଶ ଏହା	Q	88	୯୪୩୯୭୩୩୩୨୭
ฑ.	ରାଥୁ ଟସ୍କୋ	Q	୩୭	୯୪୩୯୧୦୬୩୫୬
۲.	ସୁକରାମ ତିର୍କୀ	ସୁ	9୩	C89C8978977
8.	କୁଆଁରୀ ଟକ୍କୋ	দা	9.8	୭୭୩୫୧୦୬୮୩୨

୫.୩.୫. ଜଳ ଓ ପରିମଳ ଦଳ

କ୍ର.ସଂ	ସଦସ୍ୟ ନାମ	ଲିଙ୍ଗ	ବୟସ	ଟେଲିଫୋନ ନୟର
۴.	ରୀମସେନ୍ ଗୁଡିଆ	Q	<u> </u>	9989C8088C
9.	ବାସିଲ ଗୁଡିଆ	ସ	80	L 2344432602
ฑ.	ଗୀତା କାଞ୍ଚା	ମ	98	୮୭୬୩୩୫୦୦୧୪
8.	ବୁଦା ଟଢୋ	ସୁ	ฑก	0877976860
8.	ରାଙ୍କା ଏକ୍ଟା	Q	99	୯୪୩୯୯୬୨୮୩୦

୫.୩.୬ ରିଲିଫ ବ[ନ ଏଙ୍ ଙ୍ମଯୋଜନାକାରୀ ଦଳ

କ.ସଂ	ସଦସ୍ୟ ନାମ	ଲିଙ୍ଗ	ବୟସ	ଟେଲିଫୋନ ନୟର
e.	ଗୀତା ତର୍କୀ	ମ	៣ខ	୯୩୩୭୮୦୧୬୫୨
9.	ବିନୟ ପ୍ରକାଶ ଗୁଡିଆ	ପୁ	୩୫	୮୭୬୩୮୩୪୮୦୫
୩.	ରେଧା ଲାକ୍ରା	ମ	99	୯୩୪୮୦୫୭୫୦୯
Χ.	ଜଗନ୍ନାଥ ଜିଶପଟ୍ଟା	đ	99	L688638L63
8.	ଅଚ୍ଚିତ ଏକ୍ସା	Q	99	୮୮୯୫୨୦୮୧୩୬

୫.୩.୭ ଷୟଷତି ଆକଳନ ଦଳ

କ୍ର.ସଂ	ସଦସ୍ୟ ନାମ	ଲିଙ୍ଗ	ବୟସ	ଟେଲିଫୋନ ନୟର
۹.	ରାଢକୁମାର ଏକ୍ଟା	Q	9 🗁	୬୩୭୦ ୯୩୮ ୫.୧ ୨
9.	ବିନୟ ଏକ୍ସା	ସୁ	98	99996669699
୩.	ବିରନ୍ ମିଞ୍ଚ	ମ	9.8	L660883003
۲.	ଚାରି ରୋମ	ମ	গাস্ত	୭୬୫୬୦୨୯୬୬୩
8.	ରିମଲା ଏକ୍ଟା	ମ	୩୫	୭୮୫୪ <i>୯୬</i> ୩୨୧୫

୫.୩.୮ ମାନସିକ ଆଘାତ ପ୍ରାସ୍ତ ବ୍ୟକ୍ତିଙ୍କୁ ପରାମର୍ଶ ଦଳ

କ୍ର.ସଂ	ସଦସ୍ୟ ନାମ	ଲିଙ୍ଗ	ବୟସ	ଟେଲିଫୋନ ନୟର	
۴.	ରକ୍ତିତା ଓରାମ	Q	ฑก	୮୩୨୮୯୬୮୬୬୦	
9.	ବାସୁ ମିଞ	ą	98	୮୩୨୭୭୪୦୦୨୬	
ฑ.	ସୁନା ଖାଲଖୋ	ସୂ	8.6	୮୬୩୭୨୬୨୫୯୮	
Χ.	ପିକିସିତା ଗୁଡିଆ	ମ	88	୮୭୬୩୮୩୪୮୦୫	
8.	କ୍ରିପା ତିଗ୍ଧା	ମ	88		

୫.୩.୯ ଶବ ନିକାଶ ଦଳ

କ୍ର.ସଂ	ସଦ୍ଦସ୍ୟ ନାମ	ଲିଙ୍ଗ	ବୟସ	ଟେଲିଫୋନ ନୟର	
۴.	ସଶ୍ମିତା ଲାକ୍ରା	ସୁ	ฑก	୭୮୫୪୦୧୩୯୦୫	
9.	ମାଙ୍ଗା ଲାକ୍ରା	ସୂ	80	୭୬୫୩୮୭୫୩୬୫	
୩.	ଚ୍ଚେନା ଏକ୍ସା	ସୂ	ฑก	C9C9029908	
۲.	ଶୁକ୍ରା ଏକ୍ଟା	ପୂ	9Г	L6886L0666	
8.	ରାଥୁ ଟସ୍ତୋ	ସୂ	ฑิต	୯୪୩୯୧୦୬୩୫୬	

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ପରିଶିଷ – ୧

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ପରିଶିଷ୍ଟ – ୨

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ପରିଶିଷ-୪

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I. Annexure 4 – DLI 9 Technical Note

1. Introduction

Odisha State Mitigation Authority was established by Government of Odisha vide Finance Department Resolution No. IFC-74/99-51779/F, dated 28th December 1999 in the immediate aftermath of the Super cyclone 1999. The Authority has mandate not only to take up mitigation activities but also the relief and reconstruction and other measures. The activity covers entire gamut of disaster management including preparedness activities. With the climate change impacts looming large frequency and intensity and magnitude of climate induced disaster and geotechnical hazards are posing newer and much bigger challenges for states than before. Besides, more emphasis is required to attach to disaster resilience in Governance frame work as well as preparedness among communities. OSDMA is having some dedicated human resources from diverse professional background to handle disaster management activities. But it has already crossed 22 years now, in the meantime the activities of OSDMA in the field of Disaster Risk Reduction and Climate Change Adaptation. In this context, it is required to do a detailed analysis of Human Restructuring of OSDMA and possible measures to be taken for strengthening and empowering of SDMA to meet the present and future challenges posed by various natural as well as manmade disasters.

Assessing the capacity requirement in the Disaster Risk Reduction and Climate Change Adaptation of State, it is decided by Government of Odisha for setting up State Institute of Disaster Management to cater the need of training and capacity building activities under Odisha Disaster Recovery Project implemented by OSDMA with the support of World Bank. A cell is working at Revenue Officers Training Institute (ROTI), Bhubaneswar as Disaster Management Training Cell for training of response forces and civilians on disaster management. The construction work of SIDM is under progress and would be completed before December 2022. After full functional of the SIDM, the DMTC would be merged with SIDM. SIDM would function as nodal Agency for capacity building on disaster risk reduction and climate change adaptation

2. Background

a. Odisha State Disaster Management Authority(OSDMA)

A study has been conducted for restructuring of OSDMA with the support of the World Bank to assess the capacity of OSDMA and further capacity required for strengthening OSDMA. The study report has been submitted by the consultant and as per the study report, it is recommended by Governing Body of OSDMA to constitute a highly level Committee for recommendation suggested in the report for restructuring of OSDMA. A committee is constituted under the Chairmanship of Principal Secretary, Finance Department and committee is working on for further recommendation to Government for restructuring of OSDMA.

b. State Institute of Disaster Management (SIDM)

A study has been conducted for initiate the process for establishing a State Institute of Disaster Management with the overarching goal of building disaster management capacity in all spheres and at all levels under UNDP DRR Project. The Institute's approach will be based on focus in functions, comprehensiveness in perspective, informed process of addressing gaps, and outcome based orientation. The Institute will have state-of-the-art infrastructure and facilities to enable it to impart high quality training and carry out supporting capacity building activities. At the same time it will promote local appropriateness through its content as well as its own design. Functionally, it will aim to be a comprehensive centre, capable of operating as a back-up emergency operations centre in time of need. The software in terms of content is the key to the quality of an institution, and attention will be paid to the detailing of the training courses and modules. The link between academia and practice will be the foundation of the courses, and modules will thus be developed based on specific identified needs from the field. Online tools will be tapped for greater outreach, and alignment with local, national and international institutions and processes will be ensured to keep the institute updated. Quality assurance for research, training and education not only at the institute, but also across the state will be a priority.

3. Activities proposed under DLI 3

i. An updated HR plan for OSDMA

The recommendations of High level Committee on restructuring of OSDMA would be approved by the Government. As per the approval of Government, the recruitment process of OSDMA would be initiated. The Internal agencies, foreign universities would be consulted for taking different skilled and technical manpower required for OSDMA.

ii. Hiring or deputation of technical staff as per OSDMA's HR plan

After submission of the report by the high level committee, an internal Committee of OSDMA would be constituted for hiring of required Technical Human Resources for OSDMA. Different technical human resources would be recruited/deployed in different thematic areas. The recruitment process may be included like deputation, deployment, direct hiring through advertisement and hiring through service providers.

iii. A business plan for State Institute of Disaster Management(SIDM)

To make the State Institute of Disaster Management (SIDM) functional a business plan is required for both hostel and administrative building. The Business plan would developed by hiring an agency through open sources maintaining all Government formalities. A team of Officers with consultants would be visit different national and international training institutions to study their human resources pattern and management of training institutions to prepare the business plan. The business plan would also be finalized through series of consultations with related stakeholders at state, national and international level.

iv. Hiring or deputation of staff is completed as per SIDM business plan

After submission of the report by the hired agency, a committee will be constituted for hiring of required Human Resources for SIDM. The manpower hiring process will include deputation from Govt. department, deployment from Govt. Departments, direct hiring and also hiring through service providers.

v. Setting up of four Smart Classes in SIDM

The classroom sessions for any training programme will be conducted in the smart class rooms. These will be well lit and ventilated, equipped with state-of-the-art audio visual equipment, and aesthetically designed to create a positive learning environment. They will have ergonomic furniture with a flexible layout to support lectures as well as group work.

vi. Setting up of Museum and creating learning space for students and others at SIDM

In managing disasters, Odisha is a pioneering State in the country having experience of both success and failure. The lesion learnt from the success and failure in managing disasters might be learning for future generation. The reports, documents, process documents, posters, banners, audio & video, success stories in digital form will be displaced in the museum. Different video walls would be created to display different learning materials for different audiences. The museum would create learning environment for students, scholars, DRR Practioners having with state-of-the-art equipment.

4. Proposed Budget

DLI:3 Enhanced operational capacities of OSDMA and SIDM				
		Unit of Measure	Total Allocated Amount	As percent of Total Financing Amount
		Text		
Period	Value	Allocated Amount (USD) /INR		Formula

Baseline	OSDMA's operational manual does not account for emerging HR needs;	Type of DLI	Scalability
	business plan or human resources		
Year 1	An updated HR plan/restructuring HR for OSDMA is developed /approved	Outcome	No
Year 2	Hiring or deputation of technical staff is completed as per OSDMA's HR plan	10.00cr.	 Recruitment process Hiring of technical staff as per the recommendation of the Business Plan Orientation, training and exposure visit of newly recruited staff
Year 3	A business plan for SIDM is developed	3.00cr	 Tender process, Hiring of agency, Series of consultation workshop Sharing of final report
Year 4	Hiring or deputation of staff is completed as per SIDM business plan	10.00cr.	 Recruitment process- tender, advt., etc. Hiring of technical staff as per the recommendation of the Business plan

			• Orientation, training and exposure visit GIDM, NIDM, ADPC academy of newly recruited staff
	Setting up of four Smart Classes in SIDM	5.00Cr.	Audio & video system, computer camera, microphone furniture, projector, screen
Year 5	Setting up of Museum and creating learning space for students and others at SIDM	5.00Cr.	
	Total	33.00cr.	