IFAD
Investing in rural people

BANGLADESH

Promote Resilience of Vulnerable Through Access to Infrastructure, Improved Skills and Information (PROVATi^3) Project

Final Project Design Report

Main report and appendices

Document Date: 6-Nov 2017
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Asia and the Pacific Division
Programme Management Department

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Fiscal year

1 July to 30 June

Currency unit and equivalents

Currency Unit = Bangladesh Taka
March 2017 1 USD = 82 Bangladesh Taka

Unit and conversion

1 Lakh = 100,000
1 crore = 10,000,000
1 acre = 0.407 ha
1 decimal = 0.01 acre

Weights and measures

1 kilogram	=	1000 g
1 000 kg	=	2.204 lb.
1 kilometre (km)	=	0.62 mile
1 metre	=	1.09 yards
1 square metre	=	10.76 square feet
1 acre	=	0.405 hectare
1 hectare	=	2.47 acres

Abbreviations and acronyms

ADB	Asian Development Bank
ADP	Annual Development Plan
AE	Assistant Engineer
Aman	Main rice crop grown during the rainy season
Aus	Early rice crop grown during the early part of the rainy season
BARI	Bangladesh Agricultural Research Institute
BBS	Bangladesh Bureau of Statistics
BC	Bitumen carpeted (road)
BDT	Bangladesh Taka (currency)
Boro	Irrigated rice crop grown during the winter season
BRAC	A large Bangladeshi NGO
BGMEA	Bangladesh Garments Manufacturers and Exporters Association (BGMEA), Bangladesh
BKMEA	Knitwear Manufactures and Exporters Association
BRRI	Bangladesh Rice Research Institute
BUET	Bangladesh University of Engineering and Technology
BWDB	Bangladesh Water Development Board
CARE	An international NGO
CC	Climate Change
CI	Corrugated iron sheet
CCRIP	Coastal Climate Resilient Infrastructure Project
CDSP	Char Development and Settlement Project
Char	Newly accreted land
COSOP	Country Strategic Opportunities Paper (of IFAD)
PROVATi^3	Climate Resilient Community Development project
DAE	Department of Agricultural Extension
DAM	Dhaka Ahsania Mission (an NGO)
DDM	Department of Disaster Management
DFID	Department for International Development (UK)
DLS	Department of Livestock Services
DPP	Development Project Pro-forma
DYD	Department of Youth Development
EFA	Economic and Financial Analysis
EIRR	Economic Internal Rate of Return
ERD	Economic Relations Division
ERR	Economic Rate of Return
EU	European Union
FAPAD	Foreign Aided Projects Audit Direc
FAO	Food and Agriculture Organisation
FALS	Financial Action Learning System
FFWC	Flood Forecasting and Water Center
FY	Financial year
GB	Grameen Bank
GALS	Gender Action Learning System
GDP	Gross Domestic Product
Ghat	A Bangla word of boat landing boat platform
GoB	Government of Bangladesh
HBB	Herringbone brick bond
Haat	A Bangladesh word for a rural market or bazaar, which assembles everyday with small number of buyers/sellers but meets twice a week in a large-scale
hh/HH	household
HIES	Household Income and Expenditure Survey

HILIP	Hoar Infrastructure and Livelihood Improvement Project
IA	Implementing Agency
IFAD	International Fund for Agricultural Development
IGA	Income generating activity
IRR	Internal Rate of Return
IRRI	International Rice Research Institute
IWM	Institute for Water Modelling
IWFM	Institute of Water and Flood Management
Khal	Drainage channel (natural or man-made)
Kharif	Summer cropping season
LCS	Labour Contracting Society
LGD	Local Government Division (of MLGRD&C)
LGED	Local Government Engineering Department
MDMR	Regional Integrated Multi-Hazard Early Warning System
M&E	Monitoring and Evaluation
MIDPCR	Market Infrastructure Development Project in Charland Regions (IFAD)
MFI	Microfinance Institution
MIS	Management Information System
MLGRD&C	Ministry of Local Government Rural Development and Cooperatives
MMC	Market Management Committee
MOF	Ministry of Finance
MoU	Memorandum of Understanding
MPAT	Multidimensional Poverty Assessment Tool
MTR	Mid-Term Review
NATP	National Agricultural Technology Project (World Bank – IFAD)
NGO	Non–Governmental Organisation
OC&CAG	Office of the Comptroller & Auditor General
O&M	Operation and Maintenance
PROVATI[3]	Promoting Resilience Of Vulnerable through Access To Infrastructure, Improved Skills and Information
p.a.	per annum
PCR	Project Completion Review
PD	Project Director
PIM	Project Implementation Manual
PKSF	Palli Karma-Sahayak Foundation, government established apex funding agency for MFIs/NGOs
PMU	Project Management Unit
PPEP	Pathways to Prosperity for the Extreme Poor
PSC	Project Steering Committee
PY	Project Year
QA	Quality Assurance
Rabi	Winter cropping season
RCC	Reinforced cement concrete (e.g. road)
RDRS	Rangpur Dinajpur Rural Services (a Bangladeshi NGO)
REHAB	Real Estate and Housing Association of Bangladesh
RIMES	Regional Integrated Multi-Hazard Early Warning System
RIMS	Results and Impact Management System
RMG	Ready Made Garments
SAE	Sub-Assistant Engineer
SCBRMP	Sunamganj Community Based Resource Management Project
SDC	Swiss Development Cooperation
TA	Technical Assistance
TTC	Technical Training Centre
UCEP	Underprivileged Children's Educational Programs
UE	Upazila Engineer

UNO	Upazila Nirbahi (Executive) Officer
UP	Union Parishad
Upazila	Sub-district
USAID	United States Agency for International Development
VST	Vocational Skills-training
WEAI	Women's Empowerment in Agriculture Index
WFP	United Nations World Food Programme
XEN	Executive Engineer (of LGED)

Figure 1 Map of the PROVATi[3] Project Area

Executive summary[1]

In a nutshell: The PROVATi[3] Project (**P**romote **R**esilience **o**f **V**ulnerable through **A**ccess **t**o **I**nfrastructure, **I**mproved Skills and **I**nformation) is located in Bangladesh's poorest area. The central-north is affected by seasonal flooding, river erosions, and low density and quality of rural infrastructure (low percentage of paved roads). The area lacks access to in-put and out-put markets, given bad connectivity. In addition, population tends to have only one secured agricultural season. Remoteness causes low levels of investment and few off-farm businesses. Yet, population growth and overall gradual increase in income in Bangladesh (partly due to remittances and increase in export earnings from Ready-made Garment Sector) has created demand for off-farm services (construction, small businesses, etc.).

As in other parts of Bangladesh, IFAD through its implementing partner - the Local Government Engineering Department (LGED) - provides last mile connectivity to stimulate growth/ commercialisation through market access (roads + markets), and increases resilience through diversification of incomes, and infrastructure design improvements and better maintenance. In addition, and in partnership with a new implementing partner - Department of Disaster Management (DDM) – the PROVATi[3] project will provide accurate and early flood information at local levels. All these will increase resilience (objective) and ultimately livelihoods (goal) for local population.

With a total budget of ca 92.3 Mio USD, this project has a strong *rural infrastructure* focus, investing about 70 Mio USD (75% of project cost) in climate proof rural infrastructure (markets, roads and shelters). It builds on successful past projects in Bangladesh, such as the Coastal Climate Change Resilient Infrastructure Project (CCRIP). Finally, it contributes significantly to increased disaster and flood preparedness through *improved information* quality and accessibility for the rural population in flood-vulnerable northern Bangladesh.

1. **Background:** The concept of the PROVATi[3] Project had been endorsed by the Government of Bangladesh (GoB) in December 2016 and by the International Fund for Agricultural Development (IFAD)'s senior management in February 2017. An initial design mission was mobilized during 6-29 March, 2017. The project design report (PDR) presents the detail design features of the project prepared by a final design mission fielded during 15-28 July 2017. This is one of the two projects designed in 2017 under IFAD COSOP 2012-18. The project concept and design builds on past successful projects implemented by LGED, particularly the Coastal Climate Change Resilient Infrastructure Project (CCRIP) project and replicates good practices. Several innovative features have been incorporated in the area of climate-proofing infrastructure, economic empowerment of ultra-poor people working on construction and maintenance through continued guidance towards income generation activities (IGA), improved

[1] The *project name* used to be Climate Resilient Community Development (CRCD) Project and was up-date during the last mission to allow local ownership.
Mission composition: Mr. Ahsan Uddin Ahmed (Team Leader), Ms. Sherina Tabassum (IFAD Country Programme Officer), Mr. Eduardo Angeles (Financial Management Specialist), Mr. Shamsul Hoque (Infrastructure Specialist), Mr. AKM Saiful Islam (Hydrologist), Mr. Abdul Mohamad Alam (Economist), Ms Anja Rabezanahary (Gender and Social Inclusion Specialist), Mr Khairul Islam (Livelihoods Specialist), Mr. AHM Saiful Islam (Evaluation & Policy Specialist), Mr. Philipp Baumgartner (IFAD Programme Officer for Bangladesh). Ms. Sharmid Neelormi (Economist), and Mr. Rezaul Karim (PD assigned for CRCD, LGED) and Mr. Md Harun Ar Rashid (Focal Point CRCD, DDM) joined the field trip and most of the mission meetings.
Mr. Benoit Thierry (CPM, IFAD) attended pre-wrap up meeting with LGED. Mr Nigel Brett, IFAD Portfolio Advisor participated the wrap-up meeting at ERD. Mr Álvaro Fernández (Finance Officer for Bangladesh) and Ms. Shameem Ara Sheuli, IFAD Communication Officer, supported the missions and participated in various meetings. Mr. Dewan Alamgir lead the first design mission and project conception phase. Mr. Mawira Chitiwa (Lead Advisor, PTA), Ms. Zainab Semgalawe (Lead Specialist Rural Institutions, PTA), Ms. Soma Chakrabarti (Gender Specialist) and PD Luthfur Rahman (CCRIP, LGED) participated in the first design mission in March 2017.

maintenance of structures for long-term sustainability, vocational skills-training (VST) for on- and off-farm employment, local flood information and dissemination at village level, project management and monitoring, and knowledge management for wider mainstreaming of good practices. Improved resilience of the population in a flood vulnerable and extremely poor area is the central theme of the project.

2. **Rationale**: The PROVATi[3] project reflects a deep commitment of GoB and IFAD to reduce extreme poverty. Although Bangladesh is now considered at the lower end of a middle-income country (MIC), mass poverty persists, and extreme poverty is pervasive in various parts of the country. The situation is aggravated due to adverse impacts of climate variability and change. The project districts are some of the poorest and most vulnerable districts in the country. The rural population in project area, especially char dwellers, the poor and the small producers, face several constraints: a) poor transport and market infrastructure that limits access to larger markets, increases cost of production through higher input and transportation costs, and lowers farm-gate prices due to remoteness; b) over dependence on agriculture and daily agricultural labour with very limited opportunities for off-farm sources of income; and c) vulnerability to the effects of climate change, such as increased frequency of extreme weather events, which in consequence damage standing crops, livestock and other assets. Hence, the project is grounded on strong justification of reduction of extreme poverty, enhancing preparedness against annual floods and adverse impacts of climate change, mitigating measures against loss due to climate change, promoting diversification into off-farm income, and creating a platform for further economic and social development by catalysing new investments in agriculture, non-farm businesses and improving access to social services including locally-relevant people-centric flood early warnings.

3. **Development interventions**: In the above contexts of poverty and vulnerability, the PROVATi[3] project will:

   (a) Build climate resilient markets and village/union roads by (a) assessing impacts of climate change on the Brahmaputra-Teesta river system, (b) connecting the infrastructure (markets and linked road networks) with the farms/households and bigger markets that will not only ensure all year mobility but also facilitate new investments in agriculture and non-farm businesses, and access to social services, (c) build a few flood shelter-cum-schools (primary level) so that flood vulnerable communities in *char*-lands can save their lives and productive assets during high floods;

   (b) Improve the capacity of the poor and ultra-poor households to prepare for climate shocks and build more resilient livelihoods by a) enabling male and female workers of labor contracting societies (LCS) to learn and adopt income generating activities (IGA) which are less vulnerable to climate-driven shocks, thereby making their livelihoods insensitive to climatic stresses and gradually moving out of poverty through adoption of such IGAs; b) create more off-farm employment opportunities through vocational training for youth; c) developing accurate local early inundation and flood forecasting systems.

4. **PROVATi[3] Project Area**: The project will be implemented in six districts (Gaibandha, Kurigram, Rangpur, Nilphamari, Lalmonirhat, and Jamalpur) with main focus in the worst poverty stricken districts – Jamalpur, Kurigram and Gaibandha - of Bangladesh. Major parts of these districts are flood prone due to convergences of the Brahmaputra (the Jamuna river) and Teesta rivers. Within the six districts the project will implement development activities in 25 poorer and vulnerable Upazilas. The project infrastructure will be primarily built in 90 unions, which are mostly char and low-lying, and worst poverty stricken areas within the 25 Upazilas. However, for local flood forecasting (see 7 below) 19 Upazilas (174 unions) of Kurigram, Gaibandha and Jamalpur districts, which are affected by monsoon floods of the Brahmaputra river, have been selected.

5. **Target groups and benefits**: Overall population of 90 project Unions is 2.6 million (637,000 HHs). The project covers some 303,000 households (approximately 45% of the total

population) from 90 Unions within the 25 target Upazilas. Target beneficiaries include the poor women and men[2], marginal and small farmers, traders and shop owners in the markets, micro-entrepreneurs and other local private and government institutions. The infrastructure and flood information system will benefit overall population of the project areas. The direct beneficiaries will include households that profit from at least 330 km of improved rural roads, households benefitting from 135 improved small and large markets, and 15,000 households benefitting from Labour Contracting Society[3] (LCS) economic advancement through IGA and skills enhancement of 30,000 youth through vocational training.

6. The **goal** of the project is to promote 'sustainable livelihoods for poor households and smallholders in selected 25 Upazilas of the Brahmaputra-Teesta flood plain area of six North-central districts of Bangladesh'. The **development objective** is to 'enhance resilience of population of 25 selected flood-prone Upazilas *through resilient infrastructure development, resilience building at community level, off-farm employment creation through vocational training, and flood/climate adaptation research and early-warning dissemination*'.

7. **Components**: The project comprises two technical components and project management:

   a) **Component 1: Climate resilient infrastructure and community shelters (USD 70.11 million)**: The Outcome of Component 1 is '*Climate resilient infrastructure and community shelters built, and used*'. It is divided into five sub-components, namely: (1) climate change/flood preparedness research for building climate resilient infrastructure; (2) climate resilient rural communication infrastructure; (3) climate resilient rural market development; (4) climate resilient community shelter cum school; and (5) training on climate/flood-proof resilient infrastructure design.

   b) **Component 2: Resilient communities through employment and early flood warning (USD 13.62 million):** The outcome of this component is 'Building resilience of communities through access to flood information (early warning), economic self-reliance and policy support. It has four sub-components: (1) Capacity building of LCS members' and livelihood development; (2) skill development of youth for employment; (3) development of accurate local inundation and flood warning system; and (4) practical policy actions.

   c) **Component 3 - Project implementation and coordination (USD 9.26 million):** The project implementation will be led by the Local Government Engineering Department (LGED) of the Ministry of Local Government Rural Development and Cooperatives (MLGRDC). LGED will partner with Department of Disaster Management (DDM), Bangladesh University of Engineering and Technology (BUET) on people-centric fine tuning of flood early warning and research, and with World Food Programme (WFP) on mapping of ultra-poverty and malnutrition, respectively. Overall coordination will be through an Inter-Ministerial Steering Committee, chaired by the Secretary of the Local Government Division of MLGRDC and represented by relevant line ministries including the Ministry of Disaster Management and Relief (MDMR), and agencies including the Economic Relations Division (ERD) of the Ministry of Finance (MOF).

8. **Capacity building and Country Programme Support:** To strengthen project implementation, further cross-project learning and fostering programmatic approach among IFAD projects and within country programme, a Country Programme Support (CPS) consisting of a Project Assistance Team (PAT) will be established at LGED or ERD that will jointly support all on-going IFAD financed projects in the areas of knowledge management (KM), monitoring and evaluation (ME), procurement and thematic areas, such as financial management. The CPS will not add

[2] A significant proportion of them are young men and women, within the age group of 18 and 35.
[3] *Labour Contracting Societies* (LCS) are widely used in Bangladesh for infrastructure construction and maintenance of roads. Crews of 15 to 30 ultra-poor, often consisting of 70% or more women, work collectively for 1-2 years to construct simple structures and/or to maintain infrastructure such as roads. LCS are provided with training and supervised by technical staff to ensure quality structures. LCS groups are contractually involved through a legal mandate.

any hierarchical layer to LGED, but work as a team of consultants to facilitate cross-learning and allow timely support to implementation and capacity building, if needed. The project will also support capacity building at LGED cooperate level through contribution to newly created climate units, and targeted activities with ERD.

9. **Site selection and implementation of infrastructure**: LGED has selected village markets by applying certain criteria which include the following: (a) locational advantage which allows riverine and/or road transportation of agricultural produce from the catchment areas and also multi-modal transportation opportunity for linking with greater markets, (b) growth potential of the market, (c) availability of khas land enabling accommodation of current shops and future expansion. Union and village roads and locations for building flood shelters cum schools are identified and validated.[4] The selected infrastructure and respective locations will be part of approved Development Project Pro-forma (DPP)[5]. The PMU with the help of District Engineers (XENs) and Upazila Engineers will finalize cost estimation for individual roads before tendering out and develop master plan for development of each selected market in close consultation with local stakeholders. Basic engineering design and typical unit cost estimation for roads and markets have already been completed.

10. **Project costs and financing**: The PROVATi[3] project is estimated to have an overall cost of US$ 92.324 million of which IFAD will be providing USD 63.25 million as loan and USD 1.25 million as grant and GOB will be funding USD 27.851 million. The financing ratio is 70% IFAD and 30% GOB. Three major costs allocations are as follows: (a) Component 1: USD 70.114 million (75.4%); (b) Component 2: USD 13.618 million (14.6%); and (c) Component 3: Project Management: USD 9.260 million (10.0%). Further review of costs will be done during final design mission.

11. **Economic analysis**: Following key assumptions were used in the economic and financial analysis of the Programme: (i) the benefits have been estimated over a 20 year timeframe using a discount rate of 7.5%; (ii) the benefits that have been included in computing the economic and financial analysis include only those benefits which could be realistically quantified; (iii) applying a SCF of 0.85 both for output and input prices, (iv) accounting only the incremental net benefits and (v) all other interventions yielding substantial environmental benefits have not been quantified and hence have not been accounted for in the EFA. Current calculations show that the PROVATi[3] project as a whole yields an Economic Rate of Return (ERR) of 17%, a benefit-cost ratio of 1.54 and the Net Present Value of BDT 2,634 million at a discount rate of 7.5%.

12. **Timeframe**: The planned project implementation period is six (6) years beginning April 2018.

13. **Innovative features of PROVATi[3]:** Several innovative features have been incorporated in the project, of which some have been piloted in earlier IFAD projects and are scaled up, others are new/modifications of existing practice: a) design standards of infrastructure will be up-dated according to state-of-the art (studies partly funded by the project under sub-component-1.1, information partly available in-country); b) vetiver grass application on road slopes mainstreamed in all project-built and maintained roads; c) improved focus on infrastructure maintenance arrangements from design/planning stage onwards; d) risk reducing measures introduced in LCS modalities (price escalation procedures, insurance and safety equipment); e) economic and social empowerment of LCS members with close monitoring and measurement (evidence for policy review); f) strengthening of vocational skills-training with optimised and GOB endorsed duration of training, certification, apprenticeship and placement support; g) local flood information and dissemination system to provide advance flood information at the village

[4] See Working Paper 1 on the site selection approach.
[5] The DPP in Bangladesh is used by government as project planning tool and specifies project budgets by activities and amounts per year. Over the period of a project life, only two changes in the DPP are foreseen, making accurate planning a crucial ingredient of for successful implementation. Revisions of DPP can significantly slow-down and stall projects.

level (ensuring higher precision); and h) more programmatic approaches of project management introduced through the CPS.

14. **Sustainability and exit strategy:** The roads will be maintained beyond project period by LGED with resources from the government. The markets will be properties of the government to be managed by Market Management Committees (MMCs), traders' associations and local government institutions. An improved management system will be practiced in the flood shelters cum schools involving the recipient communities. The vocational training and LCS support services are expected to create sustainable livelihoods for the trainees and LCS members. The flood information system is expected to become a mainstream service from DDM, as par prevailing GOB legal mandate. The benefits of infrastructure are expected to continue beyond project period by encouraging new investments in agriculture, non-farm businesses and social services. Similarly, the benefits of flood early-warning services are also expected to continue to provide critical information support that are needed towards attaining resilience against climate change induced floods.

15. **Scaling-up and policy engagement**: Besides the above mentioned pilots that will be scaled-up by this project, the project foresees a range of scaling up activities that are linked with policy engagement. Firstly, the technical training on new infrastructure design and maintenance (comp 1.5) in partnership with the leading national university and specialists, builds a pathway to change design features across all LGED implemented infrastructure projects in Bangladesh (currently 1bn USD annually). Secondly, the policy and regulatory reviews financed under comp 2.4 will feed into LGED's internal reviews of regulations and good practices, such as the use of LCS for construction/maintenance work, etc.. Thirdly, rigorous monitoring and contribution measurement of various economic and social empowerment modalities will create evidence for policy engagement (with LGED and beyond). Forth, the early flood information system – building on successful small-scale pilots – has the potential to go at national scale, if proven effective and sustainable in this project with major risk reducing elements for huge parts of Bangladesh's population. Finally, a potential partnership with WFP in the area of micro-insurance for rural households will enhance RBA collaboration and potentially allow introduction of micro-insurance at larger scale.

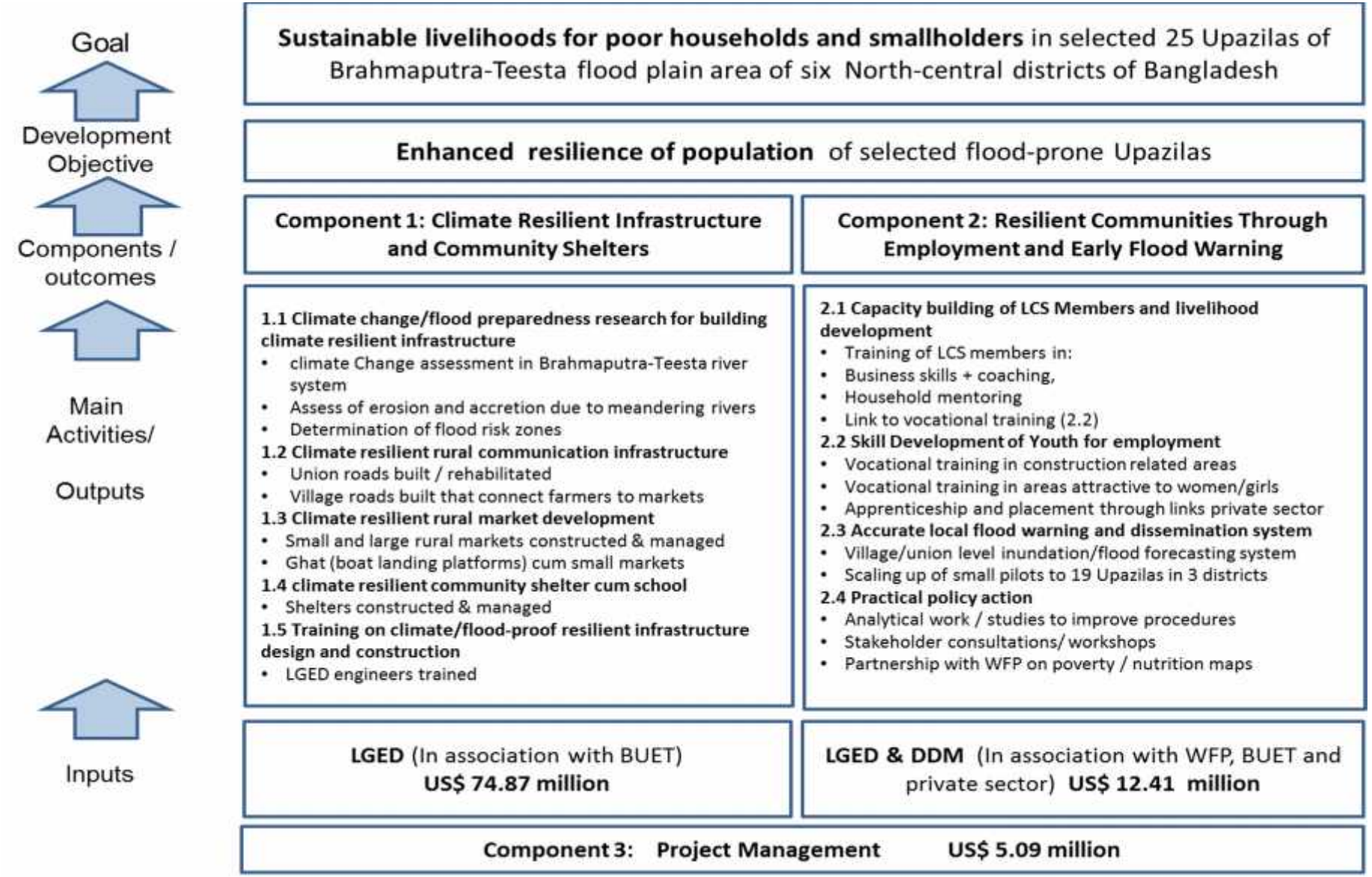
Logical framework

Results Hierarchy	Indicators				Means of Verification			Assumptions (A) / Risks (R)
	Name	Base	Mid-term	End target	Source	Frequ-ency	Respon-sibility	
Outreach:* **Based on EFA, finalised after DPP revision*	▪ Planned total number of HHs reached by PROVATi³ RIMS 1a ; EFA	0	120,000	360,000	ME system; RIMS survey; impact surveys	Annually	PMU	
Goal: Sustainable livelihoods for poor households and smallholders in selected 25 Upazilas of Brahmaputra-Teesta flood plain area of six North-central districts of Bangladesh	▪ Percentage of households reporting improvements in household asset ownership index RIMS	-	25%	66%	MPAT and RIMS surveys Impact surveys at baseline, mid-term and completion	Three (baseline, Midterm and end of Project)	PMU	A:Economy maintains or increases growth rates A: Price inflation for staple food (rice) remains below 10%. A: GoB emergency assistance is adequate for communities to recover
Development Objective: Enhanced resilience of population of selected flood-prone Upazilas (*through resilient infrastructure development, climate adaptation research and dissemination, promotion of selected construction technologies and improved economic opportunities)*	▪ Percentage increase in income of extreme poor households (disaggregated by sex of HH head)	0%	15%	35%	Beneficiary surveys and periodic assessments	Annually	PMU	A: Community acts upon flood warning and mobilized to use flood- shelters R: extreme flood in project area destroys target populations livelihood base during implementation
Outcomes/ Components: **Outcome 1:** Climate resilient rural roads, markets and community shelters in project area are built, used and maintained.	▪ Percentage of infrastructure that are fully functional and maintained one year after rehabilitation/up-grading	0%	30%	100%	Market, road and shelter survey; mid-term and completion survey.	Annually	PMU	A: Infrastructure construction completed on time, no severe damaged due to floods
Outputs: 1.1 Infrastructure design standards updated based on CC assessment research	▪ Number of design standards incorporating climate change/resilient aspects	0	2	4	Design manuals of LGED	Annually	PMU	A: Willingness of LGED to internalize research outputs
1.2 Climate resilient rural communication infrastructure constructed by the project	▪ Kilometres of village and Union road upgraded/paved RIMS 2.1.5: EFA	0	120	330	Project reports and MIS	Annually	PMU,	A: Construction material costs remain within projected level; no prolonged flood restricting construction.
	▪ Kilometres of roads rehabilitated RIMS 2.1.5; EFA	0	300	500	Site inspections Environmental assessment			
1.3 Climate resilient rural markets built	▪ Number of rural markets built in project area RIMS 2.1.6: EFA	0	70	135	Project reports and MIS Env. assessment	Annually	PMU,	A: *as above (1.2)*

1.4 Multi-purpose school-cum-flood shelters built in charlands	▪ Number of school-cum flood shelters newly built in charlands EFA	0	10	15	Project reports & MIS	Annually	PMU,	A: *as above (1.2)*
1.5 Training on climate resilient infrastructure design and implementation conducted	▪ Number of engineers trained on climate resilient infrastructure	0	30	60	PMU report	Annually	PMU	A: LGED makes trainees available on time for the training courses.
Outcome 2: Increased adaptive capacity of vulnerable communities through diversified incomes and access to precise location-specific and early flood information in project Upazilas	▪ Percentage of beneficiaries report increased empowerment and resilience (scorecard)[6]	0	30%	60%	Annually survey	Annually	PMU	A: Proper annual monitoring of representative sub-set of households
Outputs: 2.1 LCS members are trained for socio-economic progress through income generation activities (IGA)	▪ Number of LCS households trained in IGA and -business management RIMS 2.1.2 & 1.1.8; EFA; SEX	*TBD*	6000	15000 (70% female)	Surveys	Baseline, mid-term	PMU	A: Sufficient number of motivated micro-entrepreneur available A: 75% success rate building on project phasing (1 yr lag)
2.2 Employment for youths in project area expanded through vocational skill development	▪ Number of VT youths employed (disaggregated by sex) 1 year after completing training SEX	*TBD*	10000	30000 (30% female, 90% youths)	PMU report, MIS	Every quarter	PMU	A: Sufficient number of motivated micro-entrepreneur available A: No major slow-down of economy
2.3 Development of local flood forecasting and dissemination system established	▪ Number of vulnerable unions in project area received and used flood early warning information RIMS 3.1.2	0	70	174	DDM/developer and PMU reports Site visit report	Annually	DDM, developer of model	A: Funds released on time to DDM/ Model Developer
2.4 Institutional regulatory review conducted and integrated in policies	▪ Number of policy-relevant reviews completed *RIMS Policy 1*	0	2	6	PMU report	Annually	PMU	A: Funds released on time to DDM/Developer

[6] The score-card elements will build on positive experiences from IFAD Tanzania project and finalised at start-up to be include in baseline survey.

Figure 2 Project overview: components, activities and budget



I. Strategic context and rationale

A. Country and rural development context

16. **Background:** The PROVATi[3] project will be implemented in the North-central region of Bangladesh. The Government of Bangladesh (GoB) and IFAD had confirmed the project concept on 5 December 2016 and 23 February 2017. The Concept Note has been the basis for the initial design completed in March 2017 and the subsequent detailed design completed in July 2017. The detailed design of PROVATi3 project has been discussed in Country Programme Management Team (CPMT) meeting, on 16 March and 27 July 2017 at the ERD, and during wrap through the submission of an aide memoire dated 27 July, 2017.

17. With 160 million inhabitants Bangladesh has the highest population density (more than 1000 per square kilometer) in the world excluding a few city states. It is striving hard to come out of mass poverty through strong economic growth. The average GDP growth over the last two decades ranged between 5-6.5% and is expected to grow at an annual rate of 6.5%. Yet the growth has been uneven among regions as well as population groups. The economy of rural people depends predominantly on agriculture. The sector as a whole contributes about 16% to the total GDP, however it employs about 47% of the workforce. Recently the inflation rate has been below 6%. The interest rates of commercial banks have come down from 14-18% to 8-10% per annum. Over the last three decades, social indicators such as primary education and health care, girls' education, access to safe water and sanitation, reduction in child mortality, higher life expectancy improved significantly.

18. **Policy alignment**:[7] The PROVATi[3] project reflects a deep commitment of GoB and IFAD to reduce extreme poverty. Bangladesh ranks as lower middle-income country and the rate of incidence of poverty has declined. Yet extreme poverty persists in pockets, and poverty remains pervasive in various parts of the country.[8] The situation is aggravated due to adverse impacts of climate variability and change, especially in coastal, haor and low-lying riverine areas. All major rivers such as the Ganges, Brahmaputra, Meghna, Teesta and many other tributaries of these rivers originating from the Himalayas pass through Bangladesh that makes annual floods as part of normal life of Bangladesh.[9] But increasing and untimely rainfall in Bangladesh and Assam/Meghalaya basin of India is expected to add extra level of devastation to life, property, standing crops and livestock. The government's main priority stated in the 7th Five-year plan as well as in its Vision 2021 is to reduce rural poverty through assuring investments in education, in agriculture and other livelihoods, in infrastructure, and in expanding financial services. Special emphasis is given on the poor, marginal and small farmers and women.

19. Bangladesh is committed to addressing differential needs of women and ending gender based discrimination in its national Constitution. The country is signatory of international conventions and agreements for women's and girls' rights and development: the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) in 1984, the Beijing Platform for Action (BPFA) and is now aiming to achieve the Sustainable Development Goals (SDCs) by 2030. They are translated into action plans and included in all Five Year Plans. Participation of women in politics has increased with 20% of National Parliament now being female. Yet, signs of discriminatory practices persist such as child marriage, abandonment, dowry, and gender based violence. Traditional and social norms are identified as root causes and still prevalent at home, in the workplace and in public spaces. Climate change is affecting differently men and women. Access and control over resources and decision making is lower for women than those of men. A vast majority of the poor are women and they are affected

[7] See also para120ff for discussion on harmonisation with major policies.
[8] See Appendix 1 for further discussion on the country's economic performance.
[9] See Working Paper #4 / SECAP study on further details.

adversely by disaster. Women also bear an additional burden to maintain livelihoods and human development aspects at the household level.

20. **Agriculture.** Rural development in Bangladesh is explicitly linked to the development of agriculture and the farming community. Over the last decades, agricultural growth has been around 4% per annum. The country is currently almost rice self-sufficient in a normal year. Due to the dense population and the continued loss of arable land, caused by urbanisation and other reasons[10], the need persists to enhance the productivity of rice cultivation and other staple food.[11]

21. Among agricultural commodities, fruits, vegetables and fisheries are considered to be more profitable than rice which in turn is encouraging farmers to diversify production away from rice. Consultations with farmers reveal that they are increasingly looking for more profitable commodities. The price of rice remains usually steady at the time of harvest, whereas cost of inputs and labour goes up causing a drop of the net profitability of rice cultivation. The PROVATi^3 project is expected to reduce production costs, simply by lowering transport costs through establishing better connectivity of farm areas with rural markets and bigger markets located far away from the farm lands.

22. **Concept:** The PROVATi^3 project builds on many successful projects involving LGED, a few of them IFAD funded such as the Coastal Climate Resilient Infrastructure Project (CCRIP), and Haor Infrastructure and Livelihoods Improvement Project and Climate Change Adaptation and Livelihoods Improvement Project (HILIP-CALIP). These projects have been the forerunners in providing for climate resilient infrastructures and also promoting livelihoods of rural poor people, mostly poor women, making the local population increasingly resilient against climate induced hazards and disasters such as floods, droughts and cyclonic storm surges.

23. PROVATi^3 will replicate and scale up good practices in rural infrastructure investments in one of Bangladesh poorest areas. It will promote resilience of poor communities through improving options for on- and off-farm employment, advance management and maintenance of rural infrastructure, and provide precise monsoon floods information. The focus lies on making the most vulnerable communities more resilient to climate change and related shocks.

[10] It is estimated that about 0.56% of agricultural land is converted into non-agricultural use annually. (Quasem (2011) 'Conversion of Agricultural Land to Non-Agricultural Use in Bangladesh: Extent and Determinants", Bangladesh Development Studies, Vol. XXXIV, March 2011, No. 1).
[11] See Appendix 1 for additional discussion.

B. Rationale

24. The project is grounded on strong justification of reduction of extreme poverty, enhancing preparedness against annual floods and adverse impacts of climate change, mitigating measures against loss due climate change, diversifying into various on- and off-farm sources of family income, and hence creating a platform for further economic and social development.

25. Extreme **poverty in the project area:** Bangladesh consists of eight administrative divisions where Rangpur division, which is the main site of the proposed project is the poorest. The Bangladesh Bureau of Statistics (BBS) quarterly data (April-June 2016) shows nationally 23.2% and 12.9% of population live below upper and extreme poverty line, respectively[12]. Rangpur division, Kurigram district, the main project district with nine Upazilas is the poorest district of Bangladesh where 67.3% of the population live below poverty. Similarly, the whole Kurigram district, and parts of Gaibandha and Jamalpur districts where extreme poverty is also the highest, more than 35% of population live below extreme poverty line. Kurigram and Rangpur districts are known for high incidence of poverty and seasonal extreme poverty.[13]On other indicators such as agricultural labor rate and education of family heads, which has strong correlation with poverty, the whole Rangpur region, and Kurigram and Gaibandha districts in particular are among the worst performers. The agricultural labour wage rate was only between Taka 82 and 100 in 2010, which was less than half of better performing regions in the same period. The poor regional wage rate may be attributed to low income from agricultural production, the latter being linked with poor market access. Although wages have risen in the past years, the regional difference remained. Similarly, all three districts – Kurigram, Gaibandha and Jamalpur – rank lowest in educational attainment of household heads, more than 47% have less than five year of schooling.[14]

27. Social indicators: Bangladesh has made commendable stride towards advancing in social fronts in recent years. Yet, social indicators for the selected district exhibit dismal performance for the region. The dismal performances in social indicators such as adult literacy rate, housing conditions, access to safe drinking water, sanitation, access to electricity and employment in the three main project districts – Gaibandha, Kurigram and Jamalpur – provide important justification in favor of the project (see Table 1):

Table 1: Social indicators in three project districts

Indicator	Kurigram	Jamalpur	Gaibandha	National
Adult literacy rate (%)	43.0	38.4	42.8	56.1
Houses made of weak materials (‘*Kutcha*’) (%)	90.1	89.5	85.2	30.6
Drinking water from tube-wells (%)	96.6	96.3	94.9	97.2
Non-sanitary toilets plus no-toilet (%)	42.4	48.2	69.0	38.4
Households without electricity (%)	79.0	60.0	70.6	40.1
Employed (10 year+) (%)	36.0	36.6	36.8	39.9*
Agriculture as source of employment (%)	72.0	69.4	70.6	77.0*

Source: Bangladesh Bureau of Statistics (BBS) census 2011; *15 years and above

28. **Causes of high incidence of poverty in project areas**: The high incidence of poverty can easily be explained by the following major factors that justify addressing several of them in the project:

[12] BBS/World Bank: National Poverty Level of Bangladesh: Based on Quarterly Estimates
[13] See Appendix 2 for further discussion on poverty issues.
[14] IFAD/BBS/WFP/World Bank: Poverty Maps of Bangladesh 2010.
The main reason for such low educational attainment among adult is distance (lack of schools nearby and poor road connectivity between villages and schools).

29. ***Annual floods and climate change*:** The main cause of extreme poverty in this region can easily be traced to annual floods in the Brahmaputra (Jamuna)-Teesta basin. The mighty Brahmaputra and the Teesta enter Bangladesh in Kurigram and Lalmonirhat districts, respectively. Because of the flat topography of the deltaic country, the Jamuna[15] widens within the country, and flood water inundates the project Upazilas of Kurigram, Gaibandha and Jamalpur causing devastations to property, productive assets, standing crops and livestock, and rural infrastructure, especially earthen roads. Prolonged floods lead to loss of work for the poor, and associated shortage of safe water, cause high incidence of diseases, especially among the children and elderly, and food shortage. Such incidences lead to draining out of whatever meagre cash savings the poor families accumulate, and distress selling of labour in advance, livestock and other assets. Distress selling of labour in advance is one of the reasons which explain why the wage rate is so low in the region. One episode of severe flood such as the flood of 2016 in parts of the project area wiped out any economic improvement the poor families might have gained in the past, and pushed them back to poverty. Available research[16] suggests that, a severe flood occurring any time between mid-August and end of September has the potential to cause significant crop loss of marginal farmers, inflicting upon food insecurity and forcing adult male member(s) to out-migrate within the country in search of employment.

30. According to latest research[17], the adverse effects of climate change will be prominent in the area: more frequent devastating floods (instead of every 10 years, every 5-6 years), increased flow of water through the rivers due to increased rain fall in Assam/Meghalaya basin of India. The climate change impacts will aggravate the infrastructure vulnerability as a result of increased wet season rainfall; increased annual temperatures and increased frequency of severe floods. That would require construction of raised and stronger infrastructure.

31. ***Sand casting*:** To make the matter worse, due to deforestation in upstream countries (namely India and Nepal), river water carry raw sand, and consequently, high deposition of sand in these rivers has reduced river water storage and flow capacity that causes inundation even in relatively high land. The worse impact is loss of agricultural land because excessive sand covers fertile land (sand casting), destroying agricultural production, which is now clearly visible in char and low-lying areas of both banks of the Jamuna and Teesta.

32. ***River erosion*:** Since the Jamuna changes its course frequently, river erosion is common in some parts of the project area and a major cause of poverty and high migration from the area. The physical stability of some parts (*chars*) is uncertain; historically chars disappear every 10-15 years because of changes in courses of the Brahmaputra and the Jamuna, which has major implications on development interventions and type of investments. In this context, it will be also important to learn about the risk zones, the area of erosion as well as accretion to decide about sites of project interventions. Of the total 231 Unions in the project Upazilas, 90 (40%) are considered remote and low-lying.[18]

33. ***Poorest level of rural infrastructure and remoteness*:** An analysis rural infrastructure of 23 Upazilas of Kurigram, Gaibandha and Jamalpur districts shows a dismal picture: on an average only 11% of village roads in Jamalpur, 9% in Gaibandha and 9.3% in Kurigram are paved. The pavements are also of different types, while maintenance is usually uneven and irregular reducing usefulness of the paved roads. Some of the sub-districts are worse off within each district. Low lying and char areas are void of any road infrastructure. Whereas small country boats become common during monsoon, people's movement is worse off during the dry season

[15] The commonly used local name of the Brahmaputra river. The river is meandering, braided and it causes severe erosion and annual flooding.
[16] Ahmed, A.U., Hassan, S.R., Etzold, B. and Neelormi, S., 2012. Rainfall, Food Security and Human Mobility: Case Study: Bangladesh, Institute for Environment and Human Security, Bonn, United Nations University, pp. 156.
[17] Research reports and interviews with experts from the Institute of Water and Flood Management (IWFM), Bangladesh University of Engineering and Technology (BUET).
[18] see Appendix 4 for list of project Upazilas and Unions

due to lack of road infrastructure. People need to walk miles to bring water or get any services or to carry agricultural produce to nearby markets – the latter severely restricting charland people's ability to gain from agricultural activities. Kurigram is one of the remotest districts of the country; remote from large urban centers such as Dhaka. Within each district and sub-district major parts are remote within the area because of poor road communication. The consequences of such lack of connectivity and remoteness are severe on the poor people because it: discourages investments; lowers price of agricultural produces; causes rise in price of agricultural inputs; reduces supply of social services; and delays in reaching any aid in case of natural disasters. Of the available rural markets, only a fraction offers marketing/retail services for both the traders and buyers. The retailers generally receive very low price, virtually compensates for the higher transportation cost being borne by the middle-men. This partially explains why the smallholders remain poor in remote areas of the target districts.

34. ***Low agricultural intensity and productivity*:** In many parts of Bangladesh cropping intensity is 300%[19] due to good fertility of land and access to irrigation during winter/dry season. In contrast, cropping intensity in most of the char and low lying plots within the project Upazilas is hovering around 120 to 150% only. And in most parts, the intensity is maximum of about 200%. Given high seasonality, sandy soils and strong rains, most farmers can only produce limited number of crops namely wheat/maize, grounds nuts and watermelon, and limited number of vegetables. This situation leads to low demand for agricultural wage labour, low production, limited amount of trading, and consequently, continued poverty, seasonal food insecurity, very low standard of living, and migration. While agriculture is low, given above limitations and the risk of flooding, livestock rearing for fattening and milk production is becoming popular. But limited access to market and low price has prohibited the farmers and the poor households to exploit the full potential of this sector.

35. ***Non-existent non-farm private investment*:** As expected, the economy in the project area is fully dependent on agricultural production (rice, maize, wheat, jute, tobacco, chillies, bananas, vegetables etc), related petty trading, and some investments is housing etc. No private industry in agri-processing or non-farm business is available in the area due to the reasons mentioned above and lack of industrialization. Low rate of industrialization may also be attributed to high susceptibility to floods and erosion, in addition to poor road transportation – the latter affecting competitiveness of industrial products.

36. ***Limited livelihoods options*:** Major part of the project area is dominated by subsistence agriculture, open water fisheries, rural transport, petty trading etc. No major push for diversifying the livelihoods options is seen.

37. ***Poor or absence of social services*:** The abject poverty is also reflected in low to non-availability of social services such as primary education, access to water and sanitation, poor primary health care, opportunities for skill development in remote parts of project the area. These aspects are symptoms as well as causes of poverty. Food insecurity in number of months among a large proportion of poor households, high child mortality, and wasting and stunting among children are common.

38. **Constraints to poverty reduction:** The rural population in project area, especially char dwellers, the poor and the small producers, suffer several constraints: a) poor transport and market infrastructure that limits access to larger markets, increases cost of production because of higher input and transportation costs, and lowers commodity prices due to remoteness; b) over dependence on agriculture and daily agricultural labour as the main sources of income for vast majority of the population; very limited opportunities for off-farm sources of income; and c) vulnerability to the effects of climate variability and change. Lack of all-weather road connections limits their access to markets. During extreme weather events, the poor lose their

[19] Defined by number of times (seasons) crops can be produced on a piece of land in one year, and expressed in %, i.e. one season means 100% and three seasons means 300%. Average cropping intensity in Bangladesh is 210%.

productive assets as well as livelihood options. Often after extreme weather conditions, men tend to migrate, leaving their families behind.

39. **Development responses for desired change:** Table 2 summarizes the cause and effects of extreme poverty in the area and potential development responses to eliminate or at least mitigate the causes and adverse effects as described above constraints. The main desired changes are reduction of poverty and sustained improvement of quality of life.

Table 2: Analysis of causality and selection of interventions

Issues/causes	Adverse effects	Potential range of interventions
Annual floods of various severity	Loss of life, properties, houses, productive assets, crops etc. Leads to loss of livelihoods and savings, and consequently, migration. Hinders investments in economic and business development.	Early warning about floods; Strengthen community preparedness about floods and climate change by providing information; Temporary floods shelter for people and livestock during severe floods.
Sand casting	Loss of good quality agricultural land; limits options for farm produce.	Improve productivity and diversity of crops within the limits of quality of soil.
River erosion	Loss of land and houses, livestock. Leads to abject poverty and migration from rural to urban centers.	Construction of pre-fabricated modular houses so that they can easily be disassembled and transported; other public structure such as schools and markets can be built in similar fashion.
Poor rural communication and market infrastructure and remoteness	Limits access to market, results low price of farm produces, and discourages investments in high value agriculture.	Construct climate resilient rural roads both all-weather and submersible depending on specific locations; Develop planned markets.
Low agricultural productivity	Low labour and household income; low standard of living; chronic extreme poverty.	Diversify agri-produces with new high yielding and high value varieties; introduce agri-processing; provide access to larger markets; provide irrigation services; promote non-farm business and employment
Lack of private investment	Limited employment opportunity and low income	Promote public and private investment when issues of natural disasters and connectivity issues are resolve.
Absence of social services	Low level social and human development	Promote investment in social services through public and private sectors, promote changes in social behaviour

40. **Development strategy:** All causes of poverty cannot be addressed at a time by one project due to diverse nature of challenges, limited amount of financial resources, and limited capacity of implementing agency(ies) involved. Therefore, the strategy is to select, from the above summary, a limited range of interventions that collectively attacks on several fundamental causes to produce significant results. The selection of project activities will, therefore, be guided by the following *principles*: a) building resilience of affected communities against natural disasters (i.e. floods) and impacts of climate change; b) strategic interventions that catalyse investment in economic opportunities and social services from private sector (households included); and c) interventions that GoB is uniquely capable to implement (e.g. rural infrastructure). For other aspects such as livelihoods, access to finance, promotion of specific farm and non-farm sectors the strategy will be to collaborate with other agencies, programs, NGO-MFIs and private sector.

41. **Theory of change**: The project focuses on increasing resilience of communities through two components that have three mutually re-enforcing pathways. The first component improves design of infrastructure, builds, rehabilitates and up-grades infrastructure to create connectivity that in turn reduces production costs, and creates access to services and markets. The second component strengthens vocational- and IGA-skills creating on- and off-farm employment to increase and diversify incomes (especially through off-farm activities) of poor households; and fine-tunes locally-relevant people-centric flood warning systems and dissemination of warnings to improved decision-making, preparedness, planning and emergency response; in addition,

practical regulatory reviews will inform policy makers for wider institutional uptake. Hence, improved infrastructure, increased skills for employment and access to information for preparedness and re-plication build the three trusts driving the project towards its objective.

42. The project's entry point is development of climate resilient infrastructure in most remote, vulnerable and poor Unions of the project area (i.e. markets and connecting roads). Infrastructure investments will benefit from improvements in technical specifications given input from leading national experts/institutions (BUET), and participatory development of site-specific master-plans. Ultra-poor women and men working on the construction and maintenance of these infrastructures (Labour Contracting Societies – LCS), will benefit from capacity building and will be enabled to gradually move out of poverty. Road connectivity and increased investment in market infrastructure will increase economic activities within the project Unions, reduce input prices and increase sales volume, contribution to agricultural and non-agricultural growth of the local economy. Skill training to young household members of poor and economically active poor households, result in increased employment and subsequent diversified income-streams of participating households (reducing their vulnerability, increasing adaptive capacity and household income). Provision and improvement of monsoon flood information to villages will reduce losses during annual floods. Capacity building and awareness raising of, and introduction of appropriate incentives for market management committees and trader association will ensure proper operation and maintenance of infrastructure. This proposed theory of change forms the basis for tracking project results summarized in the log-frame.[20] Evidence collected through project monitoring and evaluation, as well as analytical work, shall lead to engagements to improve regulations and implementing procedures, as well as help scaling up results from PROVATi^3 in the future.

43. **Selected development interventions**: By adopting the above theory of change the project will:

(a) *Thoroughly analyse* the need for change in design criteria for infrastructure in view of climate change induced enhanced flooding and erosion in Brahmaputra-Teesta river basins, *build capacity* of engineers of LGED and *construct* climate resilient village/union roads and market infrastructure to connect the farms/households with markets that will not only ensure all year mobility but also facilitate new investments in agriculture and non-farm businesses and access to social services; also *construct* a limited number of flood shelters in selected chars to safeguard lives, livelihoods and productive assets during high floods;

(b) *Improve* ultra-poor and poor's *capacity* to prepare for climate shocks and build more resilient livelihoods by a) enabling (some) members of labour contracting societies (LCS) to *gradually move out of poverty* through adoption of income generating activities (IGA), b) increase connectivity and arrange physical places where smallholders can sell their surplus goods which will increase the livelihoods of local communities, c) *create more off-farm employment opportunities* through vocational skills-training in activities such as house/shops/office/factory building, road/bridge building, and ancillary services related to various economic sectors, and garments, computer applications etc.; d) *create* fine-tuned locally-relevant *people-centric flood warning information* and *disseminate* those by involving local people as well as through the use of Information and Communication Technologies (ICT) to assist local level decision-making to avoid exposures to floods, and e) *inform policy-makers* for wider uptake of knowledge products emanating from the project.

44. **Resilience**: The concept of resilience used in PROVATi^3 project is to equip target population with the ability to regain a better situation after a climate-induced shock more quickly as

[20] According to IFAD practice, Logframe indicators shall be linked with Economic and Financial Analysis (EFA), and LGED /GoB existing data collection systems.

elsewise (*recovering*).[21] The project uses five main channels to improve resilience. (i) the fact of providing improved access to remote areas will increase the population living there with option to link with assured markets for their agricultural produces and gain from such improved access; (ii) improved design of infrastructure will make the infrastructure (especially roads) less vulnerable to shocks/extreme events (robustness); (iii) increased focus on maintenance of infrastructure will ensure long-term sustainability, and hence reduce vulnerability (robustness & coordination); (iv) the creation of on- and off-farm employment through LCS, skills development and vocational training of youth will diversify household's income (diversification) which are not affected by climate induced hazards and extreme events; (v) access to information and flood-shelters will hugely reduce vulnerability, safeguard livelihoods and productive assets, and increase preparedness (information & planning).

II. PROVATi[3] Project description

A. Project area and target group

45. **Project districts and Upazilas (sub-districts):** The project will cover selected vulnerable Upazilas (see Figure 1) to reduce high incidence of poverty in the North-central region of Bangladesh. The inception mission evaluated poverty and vulnerability data for 42 Upazilas of the six districts using the several criteria (including both national poverty lines, agricultural wage rage, river erosion, remoteness and road density). The process identified 25 flood-prone, low-lying, and infrastructure-poor Upazilas. This is in line with GoB and IFAD targeting policies. Within each Upazila the most vulnerable and least developed Unions (collection of villages) have been given priority for selection of markets and constructions of infrastructure. The design mission validated the selection of Upazilas through field visits. The project has avoided "spreading thin" its resources over too many Upazilas but followed a strategy to rather have significant impact and reduced management costs in a few selected Upazilas.[22] Table 3 lists target districts and Upazilas:

Table 3: List of districts and project Upazilas

	District	Project Upazilas (#)	Names of PROVATi[3] Project Upazilas
1	Jamalpur	5	Madarganj, Melandaha, Islampur, Dewanganj, and Bakshiganj
2	Gaibandha	5	Shaghata, Fulchari, Gaibandha Sadar, Sadullahpur, and Sundarganj
3	Kurigram	9	Char Rajibpur, Chilmari, Raumari, Ulipur, Rajarhat, Kurigram Sadar, Phulbari, Nageshwari, and Bhurungamari
4	Rangpur	2	Gangachara and Kaunia
5	Nilphamari	2	Dimla and Jaldhaka
6	Lalmonirhat	2	Hatibandha and Patgram
	Total: 6	**25**	

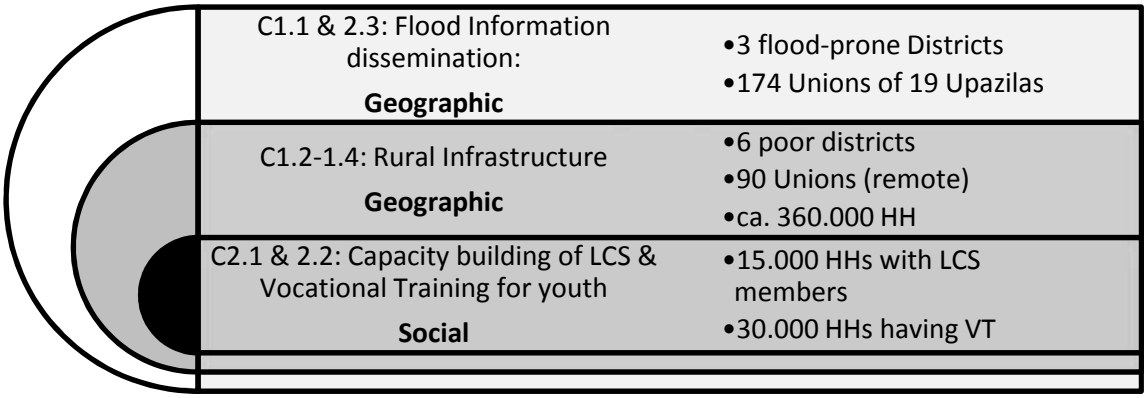
46. The market and road survey identified 135 markets meeting targeting criteria. Out of these 90 markets can be prioritised and construction work may begin on a priority basis. Investment in markets those are established in erosion-susceptible locations and are at risk of climate-induced erosion will be avoided. The finalization of roads and markets at the design stage is considered to be critical in order to ensure expedited start-up of the project implementation, as no additional time would be required anymore to select the project sites. The selected markets and roads will become part of the Development Project Pro-forma (DPP) to be approved by the government prior to the implementation of the project. The experience of CCRIP validates the

[21] See IFAD How To Do Note: Climate Resilience link
[22] See Working Paper 1 for Upazila selection data and scoring.

importance and effectiveness of such criteria-based prior selection of markets, roads and school-cum-shelters for speedy and seamless implementation of the project.[23]

47. **Target population**: The nature of the project, primarily construction of roads and markets, eventually determines the target population of the project. First, since roads and markets will be used by all, the population irrespective of income level and profession will benefit from the project. Second, the area is dominated by agricultural labour, marginal and small farmers, petty traders and transport workers, micro-entrepreneurs, landless people, poor women and youth - who will constitute the biggest users and beneficiaries of the project. Third, the area face seasonal unemployment (September to November) when a lot of poor and marginalized people migrate to cities who may continue to stay in the area if economic development is stirred due to investment in infrastructure. The project will indirectly benefit this category of population, particularly of women who face different forms of gender inequalities such as prolonged out-migration of male household members[24]. Fourth, the economy and livelihoods in the selected Upazilas is predominantly dependent on agriculture (rice, livestock, vegetables, fruits, fish, maize, pulses, oil seeds, and spices) and agricultural labor. As seen in other projects, the number of agricultural input sellers, extension workers, small traders, shop-owners etc. increase in large numbers in the developed markets who are also indirect beneficiaries of the project. Fifth, the young men and women and adults from poor and near poor households and LCS groups, majority of whom are poor women, will be particularly targeted for off-farm employment through IGA-related and vocational training. And finally, the local flood forecasting system will be targeting all population of 174 unions of 19 Upazilas involving the three districts, especially those living in 69 char unions (of these three districts). Wherever rights, access to land, resources and livelihoods of people representing small ethnic minorities may be affected, the project will seek their free, prior and informed consent (FPIC).

Figure 3 Target population by component



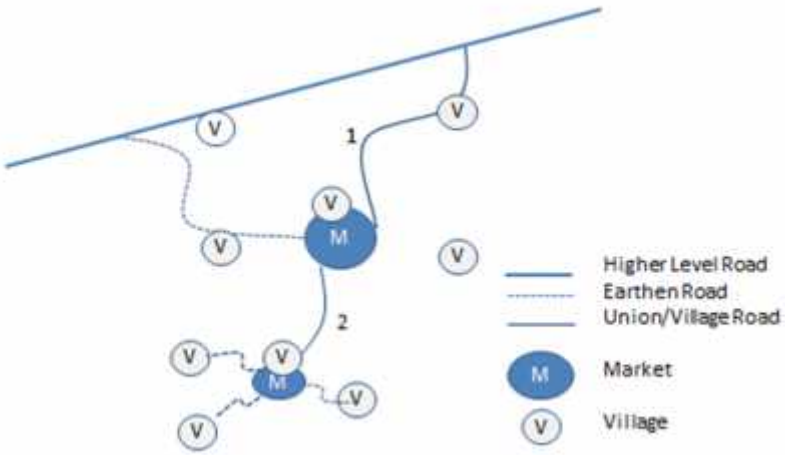
48. **Strategy for poverty targeting**. The basic geographic targeting for the project is itself a testimony to the fact that the PROVATi[3] project serves amongst the poorest districts of the country. The project later has made different stages of targeting. Firstly, there are two types of geographic targeting for component 1 and component 2: (1) The selection of project districts, Upazilas and unions has included the very poor and hazard-susceptible geographical areas (unions) that will ensure most of the project benefits reaching the poor and the vulnerable; (2) within these poor and vulnerable unions (90 are selected), the second selection focusses on rural markets and connecting roads within the least developed villages/unions, especially rural markets from char, low-lying and disaster prone (floods/erosion) and infrastructure poor villages. This targeting ensures highest value for money as it creates maximum impacts serving the least developed areas and their vulnerable population. In addition, (3) targeting for

[23] See Working Paper 10 and 11.
[24] Please see Etzold et al., 2015.

component 3 selects worst flood affected Upazilas, potentially reaching their entire population. Furthermore, targeting measures based on poverty characteristics and self-selection is applied for component 2: (4) Poverty indicators such as household income, households headed by women and/or having members with disability etc. are used as selection criteria for LCS members. (5) Similarly, for participants for vocational training, 'poverty', 'willingness to invest time and efforts' and 'youthfulness' (i.e., age ranging 18 to 35, who would simultaneously contribute to national economy for a long time as sustained income earners) are important criteria for selection. In addition, to the project will ensure participation and benefits for women. Finally, (6) One important element in this project is to access to and management of flood shelters at times of weather events. Usually the poor people whose houses go underwater because they live in low-lying areas, mostly in chars, need shelters during floods. The locations of the proposed shelters will be in low-lying char areas with high chances of inundation (Geographic targeting). The poor households are given priority in the shelters and the associated *killas* for relocation of productive assets (poverty targeting), to be managed by the local school/shelter management committees. Similarly, a share of the rehabilitated markets will be preserved for poor traders/ salesmen/women. The 35 markets having designated 'women's corners' will create access for poor women to run their business in preferentially located areas within each market. All these approach are proven in on-going IFAD funded projects with LGED.[25]

49. Figure 4 below indicates the geographic targeting approach. The project will start with selecting markets in marginal areas, that can be connected with higher order roads. Once a market is selected, adjunct roads are assessed and priority is given to roads of high importance in terms of connecting to higher order roads, potential agricultural hinterlands, growth centers or water-ways. Roads connecting other villages might also be considered for either pavement/upgrading or simpler earth-work/back-filling and subsequent maintenance. Preference is given to markets enjoying multi-modal communication connectivity through roads and waterways.

Figure 4 Geographic targeting of markets and roads (stylised)



50. **Strategy for gender equality and women's empowerment.** The project gender strategy aims at empowering women and men aged of 18 and above to develop skills for resilience and sustainable poverty reduction. At least 70% of LCS members and 30% of vocational trainees will be female. The strategy will be translated into a gender action plan that will: (i) improve economic empowerment through LCS contracts and livelihood development, (ii) build capacity of women and men beneficiaries for better and informed decision-making at household and community levels and (iii) support structural changes to provide equal chances to participate

[25] See Appendix 2 on poverty targeting

and benefit from profitable activities for women and men (such as redistribution of roles at household level for women to engage in LCS). The Gender Action Plan will introduce innovations through a pilot model for LCS and vocational training for young men and women. will also build upon successful LCS experiences of CCRIP. A household-based development and economic & social empowerment approach through livelihood coaching and mentoring will foster participation of young female thanks to planning tools that encourage participation of any family member to economic activities. Social safeguards will be put in place to ensure a female-friendly working environment for the construction and maintenance works. Lessons learning, monitoring and evaluation of the gender action plan will use specific tools such as the Women's Empowerment in Agriculture Index (WEAI) and participatory review exercises. For the early flood information system, women participation among data reporter and early warners will be considered, as well as gender sensitive reporting channels.[26] The Gender Action Plan will be led by the Gender and Social Inclusion Specialist of the PMU in close collaboration with the Gender and Development Platform of LGED.

B. Development objective and impact indicators

51. The **goal** of the project is to promote 'sustainable livelihoods for poor households and smallholders in selected 25 Upazilas of the Brahmaputra-Teesta flood plain area of six North-central districts of Bangladesh'. The **development objective** is to 'enhance resilience of population of 25 selected flood-prone Upazilas *through resilient infrastructure development and building adaptive capacity at community level*'[27].

C. Outcomes/Components

52. **Structure of the project:** The PROVATi[3] project is structured in two technical components and one management and coordination component. While component-1 deals with climate resilient infrastructure (i.e., roads and markets) and community shelters, the component-2 aspires to build further resilience of communities through on- and off-farm employment generation for the youth, provisioning of accurate community-centric flood early warning, and involvement of Labour Contracting Groups (LCS) to benefit from the projects for attaining economic self-reliance. In addition to the above two components for achieving development objectives, there will be a third component which will deal with project management, M&E and Knowledge management (KM). Table 5 (see below) presents an overview of main project activities and physical targets.

[26] A pilot project of similar nature showed that women disseminate flood information more efficiently and use such information more effectively (Working Paper #5). See Appendix 2 for further details on target population, gender issues and gender action plan and for poverty and gender checklists.
[27] The project logical framework in this PDR outlines hierarchy of Objectives, Outcomes and Outputs.

Component 1: Climate Resilient Infrastructure and Community Shelters

(USD 74.87 million)

53. The Outcome of Component-1 is climate resilient infrastructure and community shelters are built, used and maintained. It is divided into five sub-components, namely: (1) climate change/flood preparedness research for building climate resilient infrastructure; (2) climate resilient rural communication infrastructure; (3) Climate resilient rural market development; (4) climate resilient community shelter cum school; and (5) Training on climate/flood-proof resilient infrastructure design.[28]

54. **Sub-component 1.1 Climate change/flood preparedness research for building climate resilient infrastructure (USD 252 thousand)**. The objective of this component is to enhance the resilience of physical infrastructures against flood risks and impacts of climate change. The sub-component will have three research activities, namely, (a) *Assessment of climate change on Brahmaputra-Teesta river system; (b) Assessment of erosion and accretion of land/char due to maundering of rivers;* and *(c)Determination of flood risk zones.*

55. The research results should indicate the necessary modifications in design on roads, culvert/bridge, markets, *ghats*, slope protection etc. and will lead to up-dates in design standards at LGED. This sub-component will be implemented by IWFM of BUET. The project will provide USD 0.25 million as grant fund to IWFM to conduct the researches.

56. **Sub-component 1.2 Climate Resilient Rural Communication Infrastructure (USD 54.74 million):** The 'outcome' of this component is 'Improved road connectivity for men and women living in project Upazilas to access markets and social services'. The activities will be to build a) union road; b) village roads; c) rehabilitate existing paved roads; and d) maintain surfaces and slopes of earthen roads that connect the selected markets. The road connecting school-cum-flood shelter would also be improved. All these roads will accommodate adequate drainage infrastructure.

57. ***Union and village roads construction*.** The project will construct/improve Union and Village roads by paving different types of surfaces (BC, RCC, HBB) on existing earthen alignment. Essentially, the emphasis of the activities is given on the improvement of village roads as well as on the 'remote and isolated Char-land road. The strategy for selecting roads will be led by selection of markets (see Subcomponent 1.3). The roads that connect villages with markets and then markets to larger markets or to upper tier road such as Union Road or Upazila road will receive priority. Three different types of union and village roads are envisioned under the project as done in other similar projects: a) Bituminous roads (Unions roads will be BC type only; no union roads will be RCC or HBB roads); b) Reinforced Concrete Cement (RCC) roads where roller (road compacting machine) cannot be taken and in flood prone areas; c) HBB roads in selected locations. In addition, submersible roads at suitable locations will be designed, as deemed necessary.

58. The selection of roads type will depend on prevalent local situations. In some areas, HBB roads may be upgraded to bituminous or even RCC roads. In some remote areas it may be necessary to provide access through earthen roads. Usually village roads are 8' wide but it is proposed that PROVATi^3 builds 10' wide village roads to allow two small vehicles to pass safely. But the width can only be expanded if public land is available along the existing alignment as no provision for land acquisition will be available under this project. The good of road construction and slope stabilizations developed under the Coastal Climate Resilient Infrastructure Project (CCRIP) will be adopted with adjustments for the flood prone area.

59. It will be a mandatory design feature that the project use vetiver in all roads for slope protection. It will be part of LCS's/contractor's job to plant vetiver and maintain for one year, as has been the practice in CCRIP. LCSs will be used for maintenance of vetiver. As a matter of principle, no

[28] For further details see Appendix 4 and Working Paper # 2.

natural rivulet/creek/*khal* will be obstructed while construction of roads. PROVATi^3 project will ensure that adequate drainage infrastructures, in the forms of small rural bridge and culverts, will be constructed to facilitate climate induced greater discharge of runoff and fish passage in the floodplains.

60. ***Rehabilitation of existing paved roads***. In all cases, the project built roads will connect to existing paved roads. Due to lack of timely maintenance works these roads have developed numerous potholes and large broken sections. A small amount of resources (from GOB part @Taka 0.6-1.5 million per km) will rehabilitate an estimated 330 km of such roads in project unions (some time beyond project unions to provide full connectivity).

61. ***Maintenance of earthen roads by LCS crews*.** The project will build only about 330 km of roads in 25 Upazilas (90 unions) that will fall short compared to the need of connecting all villages with selected markets. It has been found that each market is connected by 2-5 roads where the project may choose 1-2 such connecting roads for construction. One complementary activity of the project will be to select the remaining earthen roads to be maintained by LCS crews.

62. ***Number and management of LCS crews for roads maintenance*.** The LCS members will be recruited by the project for construction or markets, road maintenance of existing roads and to do post-construction slope/shoulder maintenance of newly built 330 km of project roads and additional 480km of existing roads connecting markets to villages and/or higher level roads/markets.

63. Usual selection criteria will be applied for selection of LCS crews. An open, participatory and transparent process will be adopted to ensure unbiased recruitment and to avoid elite capture. The road LCS members will be provided with appropriate training, protective gears and tools for the maintenance works. Besides, they will be trained on vetiver plantation and slope/shoulder maintenance for earthen as well as project built roads. Each LCS member (road maintenance crews) will be paid for a period of two years for fixed monthly salary, with a provision for forced savings so that after the tenure, each member can find a start-up capital towards adopting a suitable income generating activity. This part establishes synergies with sub-component 2.1, mentioned below.

64. **Sub-component 1.3 Climate Resilient Rural Market Development (USD 16.71 million).** The outcome of this component is ‘Enhanced marketing of farm and non-farm produce in project markets’. The outputs of this component include: improved community (village) market facilities (multi-purpose shed, fish shed, open paved area, women section, toilet block, internal road and drainage) for remote living farmers and fishermen to bring their produce for sale to be transported to nearby markets; improved hygienic conditions; functioning Market Management Committees (MMCs), employment for poor women as LCS members; and construction and management of dustbin and garbage pit for disposal of solid waste.

65. About 818 markets dot the project Upazilas. During the design mission, a total of 135 markets have been identified which needs significant development In general, the village and remoter markets remain undeveloped. PROVATi^3 project will not construct new markets, but up-grade existing markets sites. The Mid Term Review of CCRIP just provided evidence on the significant economic stimulus an improved market-cum-road connection gives to local communities. Markets in rural areas are not only a place of selling and buying but also center of social services and dissemination of information. Often schools are located nearby and health services (drug stores, physicians) are only available in rural markets. Moreover, market users in other projects greatly appreciated the fact that most markets were connected by water and that toilet facilities are created after rehabilitation.

66. Though validation exercise has revealed that all the visited sites are not found to be suitable for investment in terms of availability of space and placing suitable layouts, most of the small *haat*/bazars (Type III) are observed to have less sustainable potential. It is also revealed that to some extent the prospect of smaller sized market (Hat/Bazar) is diminishing with time and is

found to be being replaced by stationary shop based full-fledged market. Accordingly, it is recommended that the market development target should primarily be focused on type II particularly which has more potential to support farmers sustainability. Along with this, the advent of new rate of schedule prompted further scrutiny and revision of the list to be incorporated in the project DPP. Given the development budgetary allocation, the estimation exercise has revealed that the market development component will be comprised of 20 big (Type I), 100 medium (Type II) and 15 small (Type III) markets. An estimated 35 markets will include women market sections (WMS).

67. ***Market rehabilitation, typology and selection*****:** Villages markets found in the project unions are categorized as follows: a) Type I: Larger markets (current number of permanent shops are 100 or more) where traders from urban centers gather to buy in bulk; b) Type II: medium sized rural markets with several shops (less 100 shops) where small farmers from neighboring villages bring their produces including fishers who catch fish in the nearby rivers; and c) Type III: small markets where main development interventions will be development of internal roads, drainage system not sheds due to lack of public land. A total of 135 will be developed as per selection criteria set by the design mission.

68. The main activities for development of village markets will be a) market planning and preparation of master plan (design and participation/consultation)[29]; b) construction of markets; and c) capacity building of stakeholders managing market (before and after hand-over) (management and maintenance).

69. ***Market planning process*****:** The primary selection criteria for markets (hat/bazar) is: a) availability of enough *khas* land for development and or community must provide land for development; b) market must be declared as 'market' by UNO; c) small, medium and large markets (haat) will be selected, but no growth centre should be selected; d) MMC and traders' association must assure support during development and assure proper cleaning and maintenance after development; and e) important local markets that serve many neighboring villages, having multi-modal connectivity for accessing greater marketing opportunities.

    Before implementation the project will prepare a master plan for the market in consultation with traders, shop owners, local community to ensure its proper function, clean environment, proper disposal of garbage, and future scope for development.

70. ***Market construction*****:** Depending on the size, location and functions of rural markets, a combination of the following elements of structures will be provided: multi-purpose shed, fish shed, open paved area (no raised sale platform will be constructed as it reduces service area), women market section, toilet block with access to water, internal road and drainage, and garbage pit. All markets will be appropriately raised to remain above flood level, taking into consideration the impacts of climate change. In island char or low-lying chars, where the chance of river erosion will be high, all structures, especially market sheds will be pre-fabricated portable type that can be disassembled quickly.

71. ***Involvement of Local Government in the management of markets*****:** The project will develop a sustainable market management and O&M system in collaboration with Market Management Committee (MMC), traders associations, and local government to addresses this. For the smooth operation and maintenance of the improved markets, MMCs will be responsible for properly maintaining the markets after handover of the market from LGED to the respective MMC. The Regional Offices of the project will mobilize respective Upazila Engineers to impart training to the MMC Office Bearers in relation to generation of and mobilization of finance, operation and regular maintenance of the markets. Besides, a mix of motivational meetings,

[29] During development of the Market Master Plan, consultations will involve local government authorities, traders, surrounding villagers and other stakeholders. Discussion will focus on current and future needs, as well as management aspects of the infrastructure investments. Wherever people representing small ethnic minorities are concerned, the project will seek their free, prior and informed consent.

awareness raising and trainings throughout the project period are planned. Incentive-based approaches will be piloted in few locations. This will have potential to influence government policy and market management arrangements. All these will be done in close collaboration with the Local Government Institution.

72. ***LCS for market development***. In principle, all markets will be constructed by using LCS members under 1-1.5 year contract. While attempts will be made by the project to involve LCS members in all activities that require little skill, in view of safeguarding them from potential exploitation by skilled personnel/technicians, the construction-related activities requiring specialized skills can be separately packaged for contracting out. For each market, such skill-based contractual packages will be developed by the PMU/LGED, ensuring LCS members' interests and income optimization. As practiced in CCRIP, there will be three separate contracts: a) for construction of internal roads, drainage, garbage pit, toilet blocks and paving open areas; b) for construction of sheds; and c) for construction of women sections, if women section is built in a specific market. Unlike in other projects, PROVATi^3 will provide training, necessary protective gears and tools to LCS members for safe working environment and for efficient construction of markets. LCS groups will receive training on construction, management of group, record keeping, and social issues from the project. PROVATi³ will pilot price escalation scheme application for LCS contracts, mitigating potential loss-making from cost-escalation.

73. **Sub-component 1.4: Climate Resilient Community Shelter cum School (USD 3.079 million)** The sub-component will be an important part of community preparedness for floods. Climate resilient community flood shelter cum school offer an adaptation option towards addressing flood vulnerability of char-land people. The shelter is usually a two storied building with open ground floor. Under normal circumstances, the building will be used as informal or formal school, community education centre for adult/children, and during floods will be used as a temporary shelter. Typical design is available with LGED. One important consideration will be that the ground as well as open premise will be above highest flood level, taking into consideration of climate change effect. The open premise in front the shelter will be used as a shelter for cattle and other protective assets during high floods. PROVATI³ can consider replicating market-cum-school shelters as piloted in CCRIP, depending on final assessment of the CCRIP experience. A total of fifteen shelters will be built as per LGED standard design, preferably in charlands where flood affected people often do not find places to relocate during an episode of high flood. Each shelter must have paved access road, water supply and proper sanitary toilets.

74. As in the case of rural markets, local LCS groups will be given the contract as per GOB procurement rule to build the facilities. While attempts will be made by the project to involve LCS members in all activities that require little skill, in view of safeguarding them from potential exploitation by skilled personnel/technicians, the construction-related activities requiring specialized skills can be separately packaged for contracting out. For each market, such skill-based contractual packages will be developed by the PMU/LGED, ensuring LCS members' interests and income optimization. Again, as in case of rural market construction, LCS groups will be provided with training on construction, management of group, record keeping, supervision services on quality construction, and social issues from the project.[30]

75. ***Management of shelter-cum-school involving local government bodies*.** A number of challenges have been observed during visits to several existing shelters: a) poor up-keep of the shelter premises and building; b) no-water supply to toilets; and c) 'un-managed' use of shelter during flood. Because of weaknesses in management in absence of a specific management body, the buildings have become inoperable. Once the school-cum-shelters are established under the PROVATi^3 project, the structures will be handed over the school management committees (SMC). Generally, SMCs are Chaired by elected Chairman of relevant Union

[30] See Appendix 4 for technical design and specifications of various elements of schools-cum-shelters. Depending on out-comes from CCRIP experience with market-cum-shelter, replication might apply.

Parishad. Under the leadership of the Chairman of the Union Parishad (i.e., the local government), the SMC and teaching staff will be given the responsibility of day-to-day management of project-built shelters. Prior agreement will be reached with the respective SMCs and Union Disaster Management Committees (UDMC) and communities (potential users of the shelter) regarding up-keep and management.

76. **Sub-component 1.5: Training on Climate/Flood-Proof Resilient Infrastructure Design and Construction (USD 83 thousand).** The said training is targeted for engineers of LGED who have been involved in design and construction of road, culvert/bridge, markets, flood shelters etc. The focus of the training will be to highlight additional issues and factors that will be needed to consider during design and construction of infrastructure in a flood prone and vulnerable area, which is constantly influenced by dynamic river systems. The training is expected to focus on improvements in construction and maintenance of infrastructure in flood prone and climate vulnerable areas.

77. Such a course will be designed and offered by experts from LGED, Dept. of Civil Engineering of BUET, IWFM/BUET and by individual experts. The PMU will facilitate the development of course materials and organizing the training course (multiple batches).

Table 4: Summary of Project Targets

Description	Infrastructure type or activity	Quantity
Component 1:	Climate change induced flood and erosion vulnerability research	3
	Union Road (BC) (km)	55
	Village Road (BC, RCC, HBB) (km)	260
	Maintenance of earthen road in project area (Km)	411
	Rehabilitation of existing paved roads in project area (km)	60
	Flood shelters (#)	15
	Large markets - Type I (#)	20
	Small markets - Type II (#)	100
	Small markets - Type III (#)	15
	Women market sections (#)	35
	Persons trained on climate resilient engineering design (#)	60
Component 2:	LCS income generation (# Indv)	15,000
	Participants trained in Vocation (# Indv)	30,000
	Unions to be covered under local flood forecasting and dissemination system in Kurigram, Gaibandha and Jamalpur districts (# Unions)	174
	Institutional level small policy initiatives	5
	Analytical studies on revision of existing design standards/practices	6

Component 2: Resilient Communities Through Employment and Early Flood Warning

(USD 12.41 million)

78. The outcome of this component is building resilience of communities through access to locally-relevant information and early warning on flood, economic self-reliance and policy support. It has four sub-components: (1) capacity building of LCS members and livelihood development; (2) promotion of appropriate vocational skills for employment generation; (3) development of accurate local flood warning and dissemination system and its seamless dissemination; and (4) practical policy actions.

79. **Sub component 2.1 Capacity building of LCS Members and livelihood development (USD 3.052 million).** The objective of this sub-component is to empower about 15,000 men and women[31] from ultra-poor households (particularly female heads of households) engaged in LCSs to gradually and sustainably move out of extreme poverty. The PROVATi[3] project will build capacity of LCS contracted for construction of rural roads, markets, and school-cum-shelters under sub-component 1.2, 1.3 and 1.4 and roads maintenance crews under sub-component 1.2. In collaboration with the respective elected Chairman and members of Union Parishads, poor and destitute (but physically able and willing to take the job) women will be selected (i.e., targeted) as LCS members in a transparent selection process. Under component 1 the LCS members will be supported to ensure that they make substantial profits to kick-start their economic empowerment, with protecting measures from cost escalations in procurement of materials and skilled labor for specific construction works. This will be achieved through two models of intervention 1) a replication of existing model in CCRIP with an integrated training on IGA and social issues for LCS members; and 2) a pilot model based on the introduction of transformative and innovative methodologies[32] that will develop business skills, leadership, financial education, mindset and behavioural changes that also address structural causes of poverty and gender inequalities.

80. The socio-economic empowerment model involving LCS draws lessons and experiences from previous and on-going IFAD funded infrastructure projects, particularly CCRIP, CDSP-IV and MIDPCR; and other government and donor funded projects in Bangladesh and projects implemented in other countries.

81. The proposed replication model will benefit 8,000 workers and will follow the CCRIP model for capacity building of LCS. In addition to the training on construction/maintenance works, the LCSs receive short trainings on social issues (health, nutrition, gender) and a training on income generating activities within the contracting period. The trainings are delivered by LGED field supervisors or a livelihood officer where appropriate.

82. The proposed pilot model for LCS' socio-economic empowerment will benefit 7,000 workers. It is suggested for a duration of 18 months with the following activities: (i) after selection of LCS members, a seven-day training including five days for a change catalyst training (business/leadership skills, gender, nutrition, climate, behaviour for change) and two days for the construction work. The change catalyst phase will be incremental for visioning the pathway out of poverty through the opportunity given by the LCS and ensuring gender issues related to labour intensive work for women and men are transformed; (ii) after six months, a five-day training will develop skills and behaviour for livelihood development and market access that will involve all household members; (iii) after one year, a participatory gender review will be undertaken to assess if their participation in the LCS is translated into empowerment and resilience (iii) at end of contract, a five-day training on financial education, financial literacy and linkage with MFIs (Figure 5).

[31] The number of LCS members is linked with number of markets and length of roads built. The final target will depend on re-costing infrastructure work based on LGED revised schedule and will be included in the final PDR.
[32] Based on Participatory Action Learning System, mainly the Gender Action Learning System and the Financial Action Learning System, implemented in several IFAD-funded loans and grants in various contexts.

Figure 5 Steps of pilot empowerment model for LCS members

83. The two models will concur to an improved LCS modalities that will provide sufficient evidence for policy-making and further up-scaling for LGED. The training models will have the following features:

84. **a) Training approach and modalities**: The trainings aim to develop skills on: (i) awareness creation of available non-farm income generating opportunities and on-farm enterprises (awareness/information); (ii) identification of individual or group business ideas (business opportunities) (iii) basic training on how to plan, establish, manage and finance a business or an enterprises (business training). In addition to these technical trainings, promotion of practical tools for achieving gender equality, sensitisation on safety and health related aspects, such as nutrition awareness and education, sanitation and hygiene will be provided (Livelihood & nutrition improvement).

85. **b) Coaching model:** Peer learning and peer coaching is embedded in the training methodology and will foster social empowerment and a social capital that will also support resilience and self-reliance. The coaching model (involving continued mentoring) will incorporate all key aspects of business management, such as analysis of markets opportunities, price setting and profitability and negotiating skills. The coaching will provide additional needs based skills such as basic financial management, cost benefit analysis; linkage with various technical and social services required to support implementation of the business plans, including extension services.

86. **c) Innovative feature based on household approach for collective development plan**: Since 70% LCS members will be women, the pilot model will apply holistic capacity building/training based on a household approach to impart business skills to all households members. It will permit joint learning, develop a shared household vision, agreed implementation plans and division of responsibilities in and operating the business/IGAs. The approaches will help to mitigate potential risks to economic and social empowerment associated with intra-household pressure and conflicting expenditure options. IFAD has successfully showcased in several countries that household methodologies, including the development of joint development plan (vision), is key in overcoming aspiration failures and breaking through mental models that hold poor back poverty. The project will pilot with an estimated 7,000 LCS members and their households with the household approach in Bangladesh. LCS members and their households are encouraged to develop a common vision and development plan, identify their respective constraints and discuss how to overcome them. In a context where female LCS members often face constraints from their husbands/families and mothers in law regarding their own business aspirations, this seems a potential game changer in poverty reduction. In fact, structural and root causes of poverty and inequalities are discussed within the household according to their specific context and will foster a joint plan for change. Close monitoring will be applied through a participatory review exercise by beneficiaries themselves.

87. **d) Fostering vocational training for off-farm employment:** In unions where opportunities for skilled employment exist, particularly in construction industry some of the LCS members who are interested and capable will be linked to vocational training under sub-component 2.2. The

service provider will identify specific vocational training placements including apprenticeship in the project areas and match them with potential LCS members. Women specific opportunities, such as handicraft - embroidery, low technology tailoring and jewelry making will be explored to ensure that women also take advantage of these additional livelihoods enhancing avenues.

88. **e) Strengthening LCSs' members financial resilience**: Through in Bangladesh there are financial services in the rural areas the extreme poor have limited use of such services due to their low income levels and consumption based livelihoods. The experiences from previous/on-going IFAD projects in Bangladesh show that the LCSs' members have spent substantial proportions of their earnings on immediate consumptions and have often succumbed to households pressure to use the earnings on immediate household consumption needs. The PROVATI3 project will strengthen financial resilience of the LCS through improved access to financial services, complemented with financial literacy. The project will link LCS members to microfinance institutions (MFIs) operating in the project area to facilitate saving of small portions of their contract earnings. The savings will help them build saving habit and become resilient to personal or household economic shocks/pressures during and after their contracts, thus reduce the probability of falling back to extreme poverty.

89. **d) Replication and scaling up**: The LCS process tracking will also include documentation of lessons (approaches, successes and challenges) towards economic and social empowerment throughout the change process to support learning, as part of project knowledge management; scaling up of good practices; and to establish/document evidences on which GOB/LGED can make informed policy recommendations under sub-component 2.4.

90. **Sub-component implementation approach.** The sub-component will be implemented partially by LGED and partner NGOs that will be contracted by the PMU. University and research institutes will partner to document and produce scientific evidence for replication and scaling up within the country. See Annex 4 for details and Annex 5 on implementation arrangements.

Sub-component 2.2 Skill Development of Youth for employment (USD 5.64 million).

91. The project Upazilas are fully dependent on basic agriculture, which has strong seasonality leading to no or little work during monsoon (whole area goes under water) as well as in between two cropping seasons for the poor. Besides, natural disasters (nor'wester, flash floods, river erosion, and severe monsoon floods) often damage the crops and other asset. Thus, creation of off-farm employment can address limitations of over-dependence on agriculture, seasonality of employment and high unemployment among youth.

92. ***Primary focus of vocational skills – construction*:** Construction (concrete houses, shops/office buildings, roads/bridges and wooden/tin houses and ancillary activities) industry is expanding fast in all project Upazilas, even in villages, and reportedly, creating demand for products as well as services related to the industry such demand for masons, welders, plumbers, electrical technicians, carpenters (wooden home builders) and many other such works. That has led to shortage of skilled workers. One phenomenon is common in the char unions of the project Upazilas that people are forced to relocate their houses due to river erosion[33] and flooding in addition to normal relocation. That requires houses that can be assembled or dis-assembled quickly without damage. But such designs are not common in the area, because carpenters follow traditional system of house building.

93. Several skill-based occupations within the construction sector such as masonry, carpentry, plumbing, tiles fitting, rod binding, CI sheet/wood based rural housing, sanitary materials manufacturing, painting, piling, metal works, wood works (door, frame and window making) and electric works, architectural drafting, concrete block making, land surveying, construction estimators etc. are expanding fast. Besides, many micro-entrepreneurs pre-fabricate RCC

[33] The design mission met a family that relocated their homes four times in last 20 years due to river erosion.

pillars, RCC pipes, sanitary latrines, door/window and many other construction components who are also creating demand for skilled workers. Though the entry point for the project will be construction sector, the mentioned skills are equally required in non-housing construction sector providing access to a larger job-market for the skilled people. Therefore, the focus of skill development through vocational training will be in construction and related sectors. However, jobs in this sector may not be suitable for women. Therefore, a number of areas such as garments, embroidery, basic computer training and so forth where women traditionally have some advantages will be included. The training on carpentry/wooden house building will specifically include construction method on pre-fab wooden/tin house making that would be easy to assemble and dismantle. Similarly, training on masonry will include block brick making, an environment friendly product as opposed kiln-burned bricks.

94. ***Vocational skills beyond construction***: Though the primary focus is to promote vocational skills in construction sector, the project will also tap other job market opportunities mainly for two reasons. First, jobs in this sector may not be suitable for women. Therefore, a number of areas such as garments, embroidery, karchupi, block-batik, basic computer training and so forth where women traditionally have some advantages will be included. Second, the target areas provide ample opportunities for off-farm employment which are beyond construction related activities. For example, increase of cell phone usage has increased the demand for mobile repairing; increase in road infrastructure has resulted into higher usage of bicycles, motor cycles in the target areas and therefore, increased demand for the repairing of such vehicles; increased intensity and land coverage for agriculture has increased usage of diesel pumps/engines thereby need for repairers of such items. All these indicate the need of inclusion of non-construction related skills also in the overall portfolio of vocational skills promotion and the project will accordingly identify and select appropriate skills.

95. ***Job market absorption target – local versus outside*****:** One fundamental assumption of the project is such that improved infrastructure and markets under Component 1 is likely to create job opportunities in the local economy which will be tapped by the targeted youths under vocational skills program. However, absorption capacity and also growth of the local economies may not be able to absorb all new entrants. Therefore, the project will have a balanced vision where at least 50% of the targeted youth will find their jobs in the local economies while the rest may find elsewhere in the country. It is identified that migrants keep sending money to their family members and thus contribute to the growth of local economies. Also, many migrants come back to their locality after gaining improved skills and exposure elsewhere and start business at local level; and thereby create employment opportunities for other locals.

96. ***Target group and selection criteria*****:** The main target population for vocational training will be **unemployed young adults** (18-35 years of age who are willing to invest time for the training which may range from one to six months) from project Upazilas, preferably from vulnerable unions and from poorer families including LCS members or their family members. The training courses must be demand driven from two sides: a) demand from the market for recruitment of persons or self-employment who will receive training; and b) demand and strong willingness from the participants to invest time and make highest efforts to complete the courses. The criteria for selection will be as follows: a) unemployed young adults from poor/near-poor families who are willing to invest time and efforts to complete the courses. Persons who are already gainfully employed should be excluded as they may ask for income compensation; b) Willing to pay travel and other incidental expenses for attending the training courses; c) work as apprentice (paid/unpaid) after completion of training; and d) undertake profession related to their training. A total of 30,000 people (90% representing youth) will be provided with vocational skills training for wage and self-employment of which at least 30% is young women.

97. ***Implementation approach*****:** The PMU will implement this subcomponent through identifying and collaborating with appropriate training provider/s. In case of NGO/private/individual training providers, the project will follow competitive bidding process for provider selection while for government training providers it will sign MoUs. In both cases, the training providers will have

the following broad responsibilities – a) selection of participants based on criteria described above and by engaging local Union Parishad, elite people, MMCs/trade associations among others; b) develop/customize training module as per need and guidance by the PMU; c) conduct skill training for the selected participants; d) ensure active participation of the trainees throughout the course; e) arrange apprenticeship/internship for each participant following the classroom training; f) maintain and supply trainee database (for tracking) to the PMU. On the other hand, the project's overall role will be monitoring and guidance. Specifically, it will a) identify most demanded skills; b) select appropriate training provider d) suggest the training provider to develop/customize training module if needed; e) assist the provider in getting acquainted with the target areas and people such as local Union Parishad, MMC etc; f) monitor and ensure that the participant selection process is adhered to selection criteria; g) assist the provider to find and connect with potential employers for apprenticeship (as part of placement effort employers may be invited to observe training courses) and h) monitor and measure the impact of skills training. It will be an important job of the PMU to constantly identify potential job markets and employers, assess their needed skills, and re-organize training courses accordingly.

98. For an efficient and effective implementation, the project will follow a two-phase implementation: a) Phase 1 (Inception Phase for 1-2 years) will have two major streams of activities – a) offer courses on few skills (maximum four) of high demand identified such as masonry, garments etc. in all Upazila with limited number of batches (four batches per Upazila; 25-30 participants per batch); and b) continuously explore markets to determine opportunities for trainings that lead to good employment. The second phase (Scale-up Phase) will capitalize on the learning of the first phase and scale up courses of high demand in all Upazilas.

99. ***Training providers and mode of payment*****:** Four different types of training providers have been found: (i) government owned and operated training schools/centres; (ii) private training centres/apprenticeship; (iii) NGO-run training outfits; and (iv) individual trainers/coaches. The project will contract out all types of providers as per need of a particular training. If there is no existing training provider the project will organize own training courses by renting venues and hiring trainers if some trainings of higher demand are needed. It has been found that formal training courses by government and private institutions offer 3 to 6-month courses whereas informal training could vary from several days to weeks. As per mode of payment the project may sign MOU with government institutions, and sign contracts with private (institutions and persons) and NGOs to provide training. Appendix 4 provides further details on different types of potential providers.

100. As the project will engage different types of training providers (including large private sector), the concerned project personnel should have good understanding on job market, rural economies in the project area and how private sector works. The project may pay full or partial cost of training for the participants. The poor participants such as LCS members or their family members will qualify for fully project-paid training courses. Besides, if the trainees from the extremely poor families such as LCS members' families or families of similar income level, the project may consider payment of travel and accommodation expenses, in case of residential training courses. A detail policy will be developed for this purpose.

101. While few providers have presence in all project locations, some others do not and hence, the project may need to collaborate with different training providers in different districts/Upazilas as one provider may not provide the whole range of targeted skill training courses. Though from implementation and management viewpoint, the project could have been in a comfortable position to recruit the same or fewer providers to provide certain skill trainings, current situation will require collaborating with a number of providers in different districts or for different sets of skills training. However, this will provide a cross-learning opportunity to improve the service provisions.

102. ***Challenges and mitigation strategies*****:** The program may face a number of potential challenges during implementation and therefore, a few mitigation strategies have been

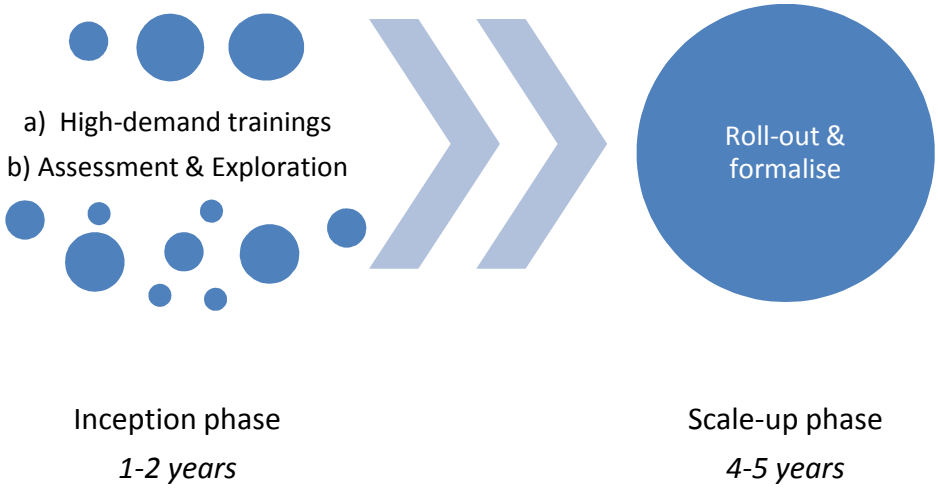
planned. Participants from the poorest households may find it costly to sacrifice their opportunity cost to attend the training courses. Three-fold mitigation measures are planned – a) subsidize or the project will bear the entire training cost with subsistence allowance for this target group, b) extend the training services nearer to participants (Upazila and even Union level) so that they can still manage to partly continue their current jobs, and c) improve the course curriculum and shorten the course duration where possible. Another challenge is the promotion of new technologies such as improved housing techniques or concrete block promotion. The mitigation strategy for such new technologies would be to demonstrate them by project financing, use them within the project infrastructure development scopes and incentivize the users and the providers by offering subsidies.

103. ***Access to finance through local partners***: Some trainees who may opt to be self-employed may need access to finance. PKSF has 11 partner organizations (NGO-MFIs)[34] offering financial services in the project Upazilas. These potential clients will be linked with one or more such NGO-MFIs for credit.

104. ***Effectiveness of training courses*****:** To make the courses effective the project will do the following: a) establish contact with potential employers to assess their skill need as well as demand for trained persons; b) after completion of formal trainees place the trainees as apprentices with potential employers (for example, masons with building and road contractors etc.); and c) select only enthusiastic trainees who are willing to invest time and efforts to complete the courses. The information about the program will be disseminated through MMCs/trade associations, LCS groups, NGO-MFIs operating in the areas, training institutions, local government institutions, through other LGED/GOB projects, and general publicity etc.

105. For an efficient and effective implementation, the project will follow a two-phase implementation: a) Phase 1 (Inception Phase for 1-2 years) will have two major streams of activities – a) offer courses on 1-2 areas of high demand such as masonry and garments in all Upazila with limited number of batches (selected at design stage); and b) continuously explore markets to determine opportunities for trainings that lead to good employment. The second phase (Scale-up Phase) will capitalize on the learnings of the first phase and scale up courses of high demand in all Upazilas. In this Phase, the project will also collaborate with large industry players (and Associations) in selected sectors (such as RMG) to facilitate women-targeted skills development.

Figure 6 Illustration of 2-phased approach of vocational training



[34] Already these 11 NGO-MFIs are offering 225,000 clients in the 25 project Upazilas. Besides, large MFI such as the Grameen Bank, BRAC and ASA and local small MFIs have a larger branch network in the project Upazilas.

Sub-component 2.3 Accurate local flood warning and dissemination system (USD 2.63 million)

106. Locally relevant and community-centric inundation and flood warning will be developed for improved preparedness and decision making. The objective is to develop *local* (village/union) flood information and dissemination system to provide advance local flood information to the communities. The present national flood warning by BWDB announces water level at a number of distant river locations, sometimes 20 to 30 kilometers away from flood vulnerable villages. Due to lack of local-relevance, the overall efficacy of the available flood forecasting diminishes. People often cannot relate to such warnings. People living far from the banks of major rivers, often do not find such warning meaningful to safeguard houses, livestock, crop and other productive assets. It is understood that, had there been a warning, disseminated through local people in locally-acceptable language, having references made with local benchmarks on inundation, the warnings could have been much more fruitful towards local decision-making and preparedness. PROVATi^3 project will take the main river-based flood warnings to reach out to the millions waiting for a locally-relevant accurate early warning on flood.

107. A small pilot project[35] has been implemented in four unions in two Upazilas by the Regional Integrated Multi-Hazard Early Warning System (RIMES)[36] in collaboration with respective communities. The process involves topographic survey of the sites (Upazilas), setting up water gauges (one per union), collecting water level data by local trained volunteers, use of water level data from various river locations (maintained by BWDB), and devising appropriate hydrological models for forecast inundation using these data. The community gets the flood level information through mobile voice message or text message. The system requires training community people how to interpret the message to use them for decision making.

108. The research and development process for replication procedure involves six major activities: (i) topographic survey of the flood prone area; (ii) installation of the local level gauges; (iii) establishment of correlation between the forecast stations of BWDB in the surrounding rivers and local level gauges; (iv) devise appropriate 1D/2D hydrodynamic models to develop flood inundation maps for target area; (v) train communities on flood information interpretation and response; (vi) disseminate local level customized flood information through voice SMS, emails, local FM radios etc. As in the cases of early pilot experiences, the system will also require training of community people towards interpretation the early warning messages, before such messages are disseminated in the 'last mile'.

109. The Department of Disaster Management (DDM) under the Ministry of Disaster Management and Relief (MDMR)[37], will lead the implementation of this component and collaborate with BUET and Bangladesh Water Development Board (BWDB). The design of the information system will be based on existing good practices (DDM pilot project in 4 unions in collaboration with the Regional Integrated Multi-Hazard Early Warning System) which can be scale-up under this project). This system will be implemented in 19 Upazilas in Kurigram, Gaibandha, and Jamalpur districts. These 19 Upazilas have 174 unions of which 69 unions are considered as char and island char. An appropriate targeting technique will be applied to identify the worst flood affected unions to bring them under the system. The necessary research and development service is available from RIMES, IWM and IWFM/BUET.

110. An MOU will be signed between the project (LGED) and DDM for transfer of funds as per annual plan to be developed by DDM. The present design mission has developed an overall technical and management system to be used by DDM. It will further refined during final design mission that will include overall management as well as activities of Sub-component 2.3 by DDM. Appendix 4 presents details of subcomponent 2.3.

[35] The system is now used by the Flood Forecasting and Water Center (FFWC) of BWDB.
[36] RIMES is an inter-governmental agency and Bangladesh has been a member since 2012.
[37] The DDM has expressed its willingness to participate in writing, with concurrence of the parent Ministry, the MDMR.

111. **Sub-component 2.4 Practical Policy Actions (USD 1.09 million)**: This sub-component focuses on internal governance, regulations and policies, as well as broader knowledge dissemination and policy engagement. It addresses aspects of more programmatic approaches, evidence-based learning and policy engagement, as well as partnership building. It contains three main sets of activities.

112. **(i) Practical policy initiatives**: This set of activities will address problems of silos and limited knowledge sharing and institutional learning. Often project generated solutions are forgotten once projects close, or staff moves, and are not mainstreamed into organisational regulations, standards and policies. The project will identify innovations in various past and ongoing projects and produce policy documents and action plans to replicate and mainstream such innovative activities across the organizations, with a focus on LGED. A number of studies will be conducted to revise existing standards/practices and to develop design protocols, so that LGED/DDM/GoB can integrate climate resilient practices in other projects across its portfolio. The PMU, and respective technical experts, will lead on the thematic discussion, potentially engaging external specialists/consultants and members of the CPS/PAT.

113. **(ii) Mapping of poverty and nutritional status**: As done in earlier partnership, PROVATi³ will continue joint collaboration of GOB, IFAD, WFP, and World Bank in mapping levels of poverty and extreme poverty, as well as nutritional status in Bangladesh. Efforts have started and WFP is leading on data compiling and analysis. The PROVATi³ project will contribute to this effort, producing up-dated maps of poverty and nutritional status and assist in dissemination. Implementation will be led by the WFP team, and the PMU will establish an MoU with WFP to channel required funds.

114. **(iii) Country Programme Support unit and LGED Climate Unit**: Under this sub-component, PROVATi³ will co-finance the Country Programme Support unit (CPS) and Project Assistant Team (PAT)[38] and the newly established LGED Climate Unit, finance from the Green Climate Fund. Both initiatives focus on programmatic approaches to development project implementation by fostering cross-learning, mutual support in technical aspects and continuous institutional memory, beyond project duration. For support to CPS, PMU and relevant technical experts will propose annual priority areas of collaboration (up to 3 areas per year), where CPS will provide thematic support and assists in knowledge generation and sharing. Furthermore the CPS can be used as support in times of difficulties, i.e. lack of adequate staff/skills. The support to and collaboration with the Climate Unit will be on technical aspects (link with sub-component 1.1 and 1.5), as well as knowledge sharing.[39]

[38] For further details see paragraph 164, Appendix 5 and Working Paper 7.
[39] During final design, plans foresaw start of the LGED climate unit for early 2018.

D. Lessons learned, adherence to IFAD policies and the SECAP

115. **Lessons from IFAD infrastructure projects**: The strategy adopted in PROVATi[3], especially emphasis on climate resilient connectivity and market infrastructure, is justified by positive impacts on economic and social development from past and on-going IFAD funded projects in remote and poverty stricken areas following similar approaches. Five IFAD projects - SCBRM, MIDPCR, CDSP-IV, HILIP and CCRIP - either had or have major infrastructure and market development components that have generated clear results as follows (see Appendix 3 for additional discussion):[40]

- Selling prices of agricultural produces increased as a result of an increased competition among a larger number of buyers in the village markets;
- Production and marketing costs for inputs and crops decreased due to factors such as access to improved technologies, equipment and inputs, reduced transportation cost and due to an increased volume of trade;
- Yields increased and the quality of production improved;
- Access to financial and social services improved; and
- Over a longer period of time, investments in agriculture significantly increase.

116. It has been observed that with improved connectivity investments from private and NGOs sources greatly increase. Some parts of the project districts are similar to starting conditions of new chars (similar to CDSPIV project areas) where thousands of poor people settled without any infrastructure, embankment, flood shelters and sanitation. Results similar to other projects are expected as well in the new project Upazilas. Numerous field visits during design and supervision missions of past and on-going projects show massive demand for rural paved roads. The demand from the poor population is more than others because they need mobility for livelihoods. This situation is expected to remain the same for decades, especially in vulnerable districts where past investment by GoB has been negligible.

117. The access to school education and primary healthcare usually improves with better communication, especially during the wet season, when river and canals are difficult to cross, pathways and roads are inundated. Poor women particularly benefit from health care services as their mobility within the area increases greatly. Another benefit from all-weather roads is the protection of lives and livelihoods (as roads include embankments and drainage systems) during severe floods.

118. Only the government can solve rural infrastructure problems such as rural road connectivity and markets development. Good connectivity facilitates other government and non-government services. Other constraints such as access to finance is being taken care of by MFIs, agricultural marketing and extension services by government and non-government organizations as well as private sector companies, although a lot more to be done. Overall, protection and enhancement of livelihoods would be greatly enhanced if adequate climate resilient communication and market infrastructure were in place in these poorest Upazilas along with other community resilient issues discussed earlier. This project will create a platform for overall development of the poorest region/Upazilas in the country.

119. Project management in LGED various across IFAD-funded projects. Several related lessons can be drawn from past and on-going projects: Careful recruiting of core PMU staff has proven to be one element of successful project start-up and implementation. The use of appropriate accounting software (TOMPRO) was identified as other main building block of sound financial management. Knowledge generated by projects is generally thorough, but not always distributed and shared to relevant target audience. Cross-learning happens at joint events and recently introduced project director meetings. Systematic tracking of ME data as done in ORMS and SIMES facilitate project supervision. Remote sensing data linked to market and road

[40] See also lessons from past infrastructure projects in life file / xDesk.

investments increases transparency and improves ex-post assessments and measurement of outcomes/impacts. Partnership with leading research institutes, such as BUET in the area of engineering design, introduced number of incremental changes that have significant positive impact (e.g. vertiver gras on road slopes). Market management depends on PMU commitment and follow-up with local government and stake-holders (CCRIP established good practice protocal).

120. **GOB Policy harmonization**. As mentioned earlier, the project fits very well with the government's seventh five-year plan. The COSOP 2012-18 and Project Concept Note (PCN) of PROVATi^3 reflected GOB's priorities of poverty reduction, rural infrastructure and agricultural development, employment creation, and mitigation of adverse impact of flood and climate change.

121. The Perspective Plan of GOB clearly emphasizes on economic emancipation of poor and reduction of vulnerability against vagaries of nature. It also highlights the need for creating employment involving youth and building infrastructure in remote rural areas to provide for a chance to the marginal farmers to enjoy access to larger markets. The Perspective Plan emphasizes on disaster preparedness and expresses its firm commitment to continue with flood forecasting and warning activities. The Disaster Management Act 2012 also provides for a legal mandate to advance the agenda so that flood vulnerable population can find greater lead time to plan and react to prepare themselves following receipt of a flood warning.

122. The much praised Climate Change Strategy and Action Plan of Bangladesh (BCCSAP) also calls for early actions to build national resilience, especially that of poor and climate vulnerable population, safeguard infrastructure against extreme weather events, building financial capacity to adapt better, improvement of early warning system including dissemination and promote synergy with other development sectors towards attaining holistic resilience. BCCSAP also highlights the need for multi-purpose shelters for flood vulnerable areas, with particular reference to char lands. PROVATi^3 project captures all these aspects in its delivery strategy for community resilience.

123. Following the early implementation of BCCSAP, the GOB has prepared a Gender Action Plan (GAP) for addressing various issues regarding gender equality in climate actions. PROVATi^3 project easily qualifies itself as one of the pioneering projects to deliver gender-differentiated resilience building in extreme-poverty stricken and flood vulnerable areas of Bangladesh.

124. The Seventh Five Year Plan 2016-2020 (7FYP) accommodates all the agenda highlighted above: namely poverty elimination, infrastructure development, disaster risk reduction through issuance of early warning, youth vocational training for self-employment, climate actions for resilience building, etc. The 7FYP emphasises the need to create employment opportunities for the rural poor and women and to build rural infrastructure for accelerated growth of the rural economy. The project perfectly matches with the overall vision of the government outlined in the Perspective Plan 2012-21.

125. In the past, GOB has made significant strides to achieve Millennium Development Goals. GOB expressed its firm commitment to invest for and achieve the Sustainable Development Goals (SDG), set forward by the international community under the United Nations. The PROVATi3 project finds strong synergy with a number of SDGs: SDG-1 on poverty agenda, SDG-2 on food security, SDG-5 on gender equity and advancement of women, SDG-8 on full and productive employment, SDG-9 on building resilient infrastructure and SDG-13 on enhanced climate action.

126. The project promises to address many of the development objectives of GOB and build harmony with relevant policies and international commitments of GOB. Other than finding its alignment with SDGs and United Nations Framework on Climate Change (UNFCCC), the PROVATi^3 project harmonizes with GOB commitment to Sendai Framework of Action (on disaster risk reduction).

Complementary donor funded projects in the area

127. IFAD gained a broad support from the donor community through in-country CPMTs and wrap-up meetings in Dhaka. The Asian Development Bank, WFP, UNDP, FAO, and IRRI supported the objective, selection of Upazilas, project components, and cohesiveness of the project.

128. An important example of complementarity between agencies and projects is the newly designed DFID/EU the 'Pathways to Prosperity for the Extreme Poor (PPEP)' project, a major six year (Phase I) poverty reduction project to be launched in 2018/2019 with USD 124 million budget. Subject to performance there is a commitment for a second phase for another 4-5 years.[41] The Rangpur region will be one of the main focus of this project where livelihoods (crop, horticulture, livestock, fisheries), nutrition, vocational training and market system development. The whole of Rangpur region (Rangpur, Kurigram, Lalmonirhat and Nilphamari districts) will come under this project with substantial resources. PKSF, a major IFAD partner/implementer in the country, will be the main implementer of PPEP with USD 84.5 million resources. Other two districts (Gaibandha and Jamalpur) may also be included during implementation. Both projects, although separately managed but implemented in many common Upazilas, will hugely benefit the population, especially the poor.

129. **WFP pilots:** The World Food Programme (WFP) is piloting a range of tools to reduce vulnerability and increase resilience, and is planning to align their pilot for forecast based cash transfers in the PROVATi³ project area. The details have to be discussed during implementation, but alignment of survey work to measure /attribute success of the WFP pilot is one agreed action with only marginal incremental costs for PROVATi³.

130. **UNDP project**: The Dept. of Civil Engineering of Bangladesh University of Engineering and Technology (BUET) will be implementing a year-long project in 2017 on 'slide slope stabilization work in river erosion prone clusters under Kurigram and Gaibandha districts in response to NW Flood in 2016', which will test bio-engineering techniques. The four Upazilas namely Nageshwari, Chilmari, Kurigram Sadar and Gaibandha Sadar of UNDP-funded project are also project areas of IFAD project. The research results are expected to benefit the project as well.

131. **World Bank project**. A World Bank funded project titled 'Strengthening Hydrological Information Services' under the Weather and Climate Services Regional Project, which will be implemented by BWDB, will install 200 river gauges that would provide more accurate river water level and flow data. The river (Brahmaputra) data will be fed in local flood forecasting system model to be developed under Component 3. Any improvement in the accuracy of river water level data will also directly improve local flood forecasting of PROVATI3.

132. **Financial services from PKSF partner organizations**. A very important complementarity will be PKSF's microfinance program through its partner NGO-MFIs. It has 11 NGO-MFI partners already offering financial services to 225,000 poor women and men through 132 branches in the project Upazilas. These NGO-MFIs have Taka 5027 million as loan outstanding to these clients. LCS members as well as trainees completing vocational training courses may easily join PKSF partners as well as other MFIs for accessing financial services (savings, credit, micro insurance, and remittance). Access to finance in rural areas of Bangladesh is a non-issue where all villages, even char villages, are served[42] by multiple MFIs.

[41] Mission consulted with DFID officials and found that second phase is yet to be confirmed, reducing potential alignment. Yet, project start-up will ensure consultation with DFID for increased coordination and harmonisation.

[42] In reality, this characteristic acts as a barrier to use PKSF Partner Organizations' micro-finance service, since PKSF imposes a policy *not* to provide a household MFI support if it has already received MFI support from other organization. The field experiences through two successive missions for PROVATi[3] suggest that, most of the LCS members or potential LCS members have already received micro-financing support from NGOs in the extreme-poverty stricken target districts, which would eventually act as a potential barrier to engage the PKSF Partner Organizations in mentoring and training services followed by MFI support provisioning for these poor LCS members (Component-2.1).

IFAD Policy Harmonization

133. **Environmental safeguards**: The project will built adequately designed cross drainage structure to maintain water flow and navigation as well as to act as fish pass/migratory routes. The use of vetiver will be mandatory for bioengineering of slope of rural roads. A proper waste management system will be developed within each market and in collaboration with MMCs and traders' associations and will be included in management manual and training for the respective MMCs. Wherever feasible the market waste will be converted into compost in collaboration with selected neighbouring households. For bigger markets (where animals are regularly slaughtered), a corner for environmentally sound slaughtering practices will be built. Where land availability can be ascertained, a pond next to a market place may be renovated/ excavated to store water towards fighting fire hazards.

134. **Social safeguards:** The potential LCS members require safeguards at the time of selection (i.e., targeting), against elite capture. A social safeguard, beyond the GOB procurement guidelines and LGED best practices on LCA recruitment, is indeed needed to be implemented. In this regard, the project calls for following a open, participatory and transparent public discussion to be held, much publicized in public places well ahead of time, in presence of all stakeholders so that the right targeting is achieved. Similarly, the LCS members may be given a preferential treatment while selecting youths for vocational skills-training. In such cases, however, the other criteria for the selection of youth participants must also be applied so that the opportunity created by the project is not wasted.

135. Safety gears, including retro-reflective vests will be made mandatory for LCS members, and accident and life insurance for the LCS workers and contractors. Measures have been taken in LCS management so that women workers avoid carrying head-loads. There will be gender differentiated toilet design for school-cum-shelters, keeping in view of specific needs of adolescent girl-students as well as in the markets. Strategic locations will be designated for women market sections. For greater road safety, the paved roads will have structures to limit speed of vehicles and the roadsides will be marked accordingly exhibiting maximum allowable speed limits. No vegetation will be allowed in the inner bend to allow clear vision.[43]

136. **Land acquisition.** There will be no relocation of housing settlements to build roads and markets under the project (Sub-component 1.2 Union/village building, Subcomponent 1.3 Village market development and Subcomponent 1.4 Flood shelter). As such, no land acquisition is foreseen. All roads and markets will be built on existing alignment and *khas* land (or land donated to markets) respectively. Resettlement or eviction is not foreseen in the project components. However, within each market there might be situations where a few shops (wooden/tin structures built on moveable platforms) may be moved a few feet to straighten internal roads or construct internal drainage. Such minor issues are usually settled by MMCs and traders' associations themselves. However, a lump-sum amount has been kept in the budget to pay for expenses for moving shops, if needed.

137. **Participation of private sector**. The project may not have direct participation from the corporate private sector. A number of private training providers are expected to offer services under subcomponent 2.2 and non-government organizations (NGO-MFIs, which operate as 'pseudo-private sector') will be main implementers of Sub-component 2.1. But road and market constructions will promote business of small farmers, traders and other producers who in effect supply to large markets as part of supply chain. It has been found in CCRIP and other similar project areas that with good roads and improved markets large companies such as pharmaceutical, seed, fertilizer, processed food, consumer durables, construction material companies expand their marketing networks even in formerly disconnected remote areas. Therefore, the project in fact would assist larger business as well as increase access to better

[43] See Working Paper # 4 on environmental and social safeguard (SECAP study report).

quality goods and services in rural areas. See Appendix 12 for further discussion on compliance of IFAD policies.

138. **Targeting, gender and inclusion.** IFAD aligns its activities to promote sustainable development by means of targeting vulnerable countries and population. Moreover, it supports pro-poor growth with uninhibited participation of poor smallholders to achieve agricultural growth in an inclusive manner where gender equity is duly harmonized. IFAD therefore finds strong alignments with PROVATi[3] project where all these aspects are well integrated. These three issues have been described earlier in this document. See Appendix 2 for detail discussion on these issues.

Outreach and benefits

139. Estimated total number of directly benefiting households is about 417,640. These include 59,640 households including 35,780 agricultural households benefited under rural roads, 303,000 households under rural market development, 30,000 households under vocational training and 15,000 households under LCS (Table 5). In addition, a total of about 0.5 million households will benefit from issuance of flood early warnings in the target areas.

Table 5: Project beneficiaries

	Beneficiary type	Beneficiaries (#)	Nature of benefits
I.	**Overall beneficiaries**		
	Households and population in 90 project Unions (#)	Project Target: 637,000 HHs, & overall population 2.5 million	Improved transport and access to market, educational institution, health services; improved livelihoods opportunities due to increased investments.
II.	**Direct beneficiaries**		
1	LCS members for construction of markets, rehabilitation and maintenance of project roads (at least 50% are poor women) (#)	15,000	Assured employment as day labour; profit from LCS contracts; skill development training; investments in income generating activities.
2	Permanent shop owners and temporary traders (large and small markets) (#)	10,000	Increased sales due to increased number of buyers and future investments; increased profits.
3	HHs from market and road catchment area (#)	362,640	Farmers will have greater economic opportunity by means of improved access to buyers, better price, improved access to good quality inputs and support services.
4	LCS members in income-generating program for socio-economic advancement (#)	15,000	Training and advice on business management, on-farm and off-farm income-generation, financial literacy, nutritional improvement and social issues.
5	Participants in skill development and vocational training	30,000	Self and wage employment and increased income
6	Households covered under local flood information system (174 Unions of Kurigram, Gaibandha and Jamalpur districts) area (#)	488,370	Early flood information; reduction of loss of assets; better planning for relocation during extreme flood conditions; better farming decision making.

III. PROVATi[3] Project implementation

A. Approach

140. **Management Responsibility.** The overall management responsibility of the project will be on the Local Government Engineering Department (LGED) of the Ministry of Local Government, Rural Development and Cooperatives (MLGRDC). LGED will be responsible to prepare one DPP, taking into account certain activities which will be implemented under sub-component 1.1, 2.3 and 2.5 by partner national institutions namely DDM and IWFM/BUET, based on their national mandate (in connection with DDM) and comparative advantage (in case of BUET for higher technical capacities on research). However, the single DPP will elaborate how LGED will implement various components, which are detailed out in Appendix-5.

141. The implementation of the project activities under Components 1 and 2 will be mainly managed by establishing LGED organizational units: the central level organizational unit will be named as Project Management Unit (PMU), while there will be district and Upazila based LGED offices. LGED, through the PMU and District/Upazila based offices, will employ and supervise professional contractors, LCS groups, govt./private training providers, and NGOs, ensure quality outputs and receipt of time-bound reports. The approach to project management is similar to the Coastal Climate Resilient Infrastructure Project (CCRIP) with added responsibility of managing Component 2.1, 2.2 and 2.3 described above. All roads, markets and flood-shelters will be built by LGED through its six district offices and 25 Upazila offices by employing LCS and/or professional contractors as elucidated above. The maintenance of project and other earthen roads, and rehabilitation of roads will be implemented by LCS groups formed and trained by the project. DDM will be primarily responsible to carry out activities under sub-component 2.3 and report to LGED/PMU. Supervision of work and M&E activities will be administered by the PMU, District, Upazila and regional offices (please see later) of LGED.

B. Organizational framework

142. **Organizational structure of the project.** Figure 7 presents overall organizational structure of the project. The Government of Bangladesh, represented by the Economic Relations Division (ERD) of the Ministry of Finance, is the Borrower of the loan. The Local Government Engineering Department (LGED) of the Ministry of Local Government, Rural Development, and Cooperative is the Implementing Agency (IA). The executing agency will be the Local Government Engineering Department (LGED) under the Local Government Division of the Ministry of Local Government, Rural Development, and Cooperatives. A Project Steering Committee (PSC), headed by Secretary, Local Govt. Division (LGD) will be established, which will provide overall strategic guidance, monitor overall implementation progress, facilitate interagency coordination required for smooth project implementation, and resolve any outstanding issues requiring high-level decisions.[44] The committee will meet twice a year to review the progress of project implementation. Supervision of work and M&E activities, particularly data collection will be supported through the three regional offices.

143. **Project Management:** A brief description of the project management is as follows: a) a project management unit (PMU) will be established in LGED headquarter headed by a Project Director and supported by professional and support staff; b) three Regional offices will be set up – one each in Rangpur, Kurigram and Jamalpur - headed by a Regional Engineer (Senior Asst.

[44] The Secretary of the Local Government Division will chair the committee, which will include representatives from the Local Government Division (LGD); LGED; DDM; Roads and Highways Department; Bangladesh Water Development Board (BWDB); Planning Commission and Implementation, Monitoring, and Evaluation Division of the Ministry of Planning; Economic Relations Division and Finance Division of the Ministry of Finance.

Engineer) with a small number of professional staff to assist the PMU towards implementation of the project; c) district support staff; and d) Upazila implementation staff will be mobilized. All four structures will be housed at the LGED offices at Dhaka, three Regional Offices, six districts (Cost centres) and 25 Upazilas, respectively. The staff strengths and designation of officials/staff/personnel at different tiers are presented below (Table 6). In addition, staff will be hired by DDM to implement sub-component 2.3 (see below).

Table 6: Personnel distribution in different management tiers across LGED

	Staffing		
Level / tier of project management	**GOB deputised civil servants (full time on project)**	**Project TA (hired by project)**	**Total**
PMU (Dhaka based)	Project Director (1) Deputy Project Director (1) Senior Assistant Engineer/ Assistant Engineer (1) Sub-Assistant Engineer (2) Administrative Officer (1) Accounts Officer (1) Computer Operator (1) Office Assistant (1) Accounts Assistant (2) Driver (2) MLSS (2)	Team Leader /Procurement (1) Design Engineer (civil works) (1) Assistant Design Engineer (1) Market Design Planner (1) Livelihood Specialist (1) Hydrologist/Climate Change Expert (1) Gender & Social Inclusion Specialist (1) Finance Manager (1) Procurement Specialist (1) Accounts Assistant (1) M&E and KM Specialist (1) Office Assistant cum Computer Operator (1) Autocad designer (1) Assistant Programmer/ Accounting software Operator (1) MLSS (1)	30
Regional Offices (in 3 strategic districts, independent of LGED office, reporting to PD)	Senior Assistant Engineer (3)	Assistant Livelihood Officer (3 pos.) Office Assistant cum Computer Operator (3) Driver (3)	12
District office support (within LGED the 6 district offices, reporting to XEN)	Sub-Assistant Engineer (6) Accountant/Accounts Assistants (6)	Assistant Engineer/ QC Engineer* (1) Market supervision, Livelihoods Officer (6) Accountant (6) TOMPRO Data Entry Operator (6)	31
Upazila office support (supporting the 25 LGED Uppazila offices, reporting to XEN)	none	LCS & Livelihood Officers (25)	25
Total	**30**	**68**	

Note: However, Upazila Engineers of LGED will directly supervise all activities conducted at Upazila level and report to Executive Engineer deployed at respective District level.
*The Assistant engineer/QC Engineer will be based in Kurigram district.

144. All field-level project activities (construction of roads, shelters and markets) will be managed at the Upazila level by LGED Upazila Engineer and his/her staff, and by LCS cum Livelihoods Officer (1 in each of the 25 Upazilas) for mobilization of LCS groups, their training, and management of vocational training activities respectively. LGED districts offices will contract out roads and markets to contractors and LCS respectively as per standard procedures. The Regional offices will have the responsibilities of i) monitoring and supervision of works (progress and quality), approving payments to contractors/LCS and overall management of the project, including tracking of project outputs and outcomes in line with the project log-frame. Since the Regional Offices will be located in three District Headquarters, the respective Executive Engineers of the District will be supervising and guiding the activities carried out by the Regional Officers.

145. All 25 Upazilas will be divided between three Regional Offices (Rangpur – 11 Upazilas of Gaibandha, Rangpur, Nilphamari and Lalmonirhat districts; Kurigram – 7 Upazilas of Kurigram district excepting Rajibpur and Roumari Upazilas; and Jamalpur – 7 Upazilas consisting of all 5 Upazilas of Jamalpur district and Rajibpur and Roumari Upazilas of Kurigram district). Jamalpur district needs a separate Regional Office as it is on the east bank of the Brahmaputra where direct communication between Gaibandha and Jamalpur does not exist. The two Upazilas of Kurigram namely Rajibpur and Roumari are located in the left bank of Brahmaputra and difficult to access from Kurigram[45]. However, the two Upazilas are accessible from Jamalpur and therefore, activities of those two Upazilas will be administered, supervised and monitored by the Jamalpur Regional Office, in conjunction with Jamalpur District Office and the relevant Upazila level offices. The PMU has the responsibility of overall implementation and management of the project.

146. The PMU in LGED will have fund management and progress reporting responsibilities. The PMU will be assisted by a TA team with expertise in engineering design and supervision, climate resilience, livelihoods/employment, finance, social inclusion and gender development, participatory approaches, environmental and climate assessment, monitoring and evaluation, and local governance. On sub-component 2.3, the DDM will be responsible to monitor progress and report to PMU/LGED quarterly. The DDM will set up an office of its own using DDM premise, engage GOB officials (including a Project Director) as well as hire relevant TA members and experts to carry out responsibilities on hydrology, Information and Computer Technological aspects, GIS support, field facilitation, etc.

147. **Human resources**: As indicated in the table above, the project will need 30 staff members to be deputed by LGED. In addition, LGED will deploy Upazila Engineers and her/his staff in all 25 Upazilas as and when needed, i.e. the project is mainstreamed through LGED. The project will hire additional 68 staff members (16 in TA team in the PMU in Dhaka and rest in the region to support LGED staff). Their job, skill need and responsibilities are included in the PIM. Similarly, the DDM will engage 4 DDM staff and 13 TA staff for implementing the sub-component 2.3. The roles/tasks, skills & experiences needed by the TA staff for DDM is presented in Appendix 5.

148. **Management of Component 1**: *Management of Component 1*: The PMU/LGED will implement this component in close collaboration with the Bangladesh University of Engineering and Technology (BUET). The overall responsibilities of construction will be on PMU/LGED through offices of Executive Engineers and Upazila Engineers. Construction of roads (BC and RCC) will be outsourced to professional contractors. LGED district XENs and Upazila Engineers will be responsible for managing these contracts. But construction of small RCC roads (linked with markets) will be implemented by LCSs. As a usual practice all markets will be built by LCS groups. Construction of school-cum-flood shelters will be outsourced to professional contractors. The LGED district offices, headed by executive engineers, will be responsible for implementing subprojects under the guidance of the PMU. The activities regarding training and policy integration (sub-components 1.5 and 2.4) will be led by PMU in collaboration with experts from LGED, Department of Civil Engineering, IWFM/BUET/BAU and other external experts. The researches under sub-component 1.1 will be conducted by the Institute of Water and Flood Management (IWFM) of BUET, the most reputed public engineering university in Bangladesh. The grant money for these works will be transferred to IWFM/BUET against a technical proposal by IWFM via an MOU between PMU/LGED. The outputs (reports) of the sub-component will be used by the project. The PMU/LGED will manage funds and monitor progress.

[45] The 12 to 14 kilometres span of the Brahmaputra river bed and the existence of numerous chars in between make the accessibility extremely difficult during the dry months (November-April), while the improvement of accessibility by water transportation during monsoon is often challenged by storms and perilous circular flow patterns on the river – making the ride in rural boats highly risky.

149. **Management of Component 2**: The PMU/LGED and DDM will implement this component, in collaboration with private sector and non-governmental organisations. The focus of the component is to (i) strengthen capacities of LCS members to come out of extreme poverty; (ii) transfer of technical and management skills to rural and semi-urban micro-entrepreneurs and individual persons through training, demonstration, and establishing linkage with employers. For component 2.1 experienced NGOs/MFIs will be contracted by the PMU to advice and coach LCS members on business and other relevant skills, and help them join MFIs for financial services. The Component 2.2 will be implemented by PMU/LGED by enlisting govt., private and or NGO training providers. If such providers are not available for specific training PMU may directly organize the training courses by developing modules, and hiring trainers. The lead implementer of sub-component 2.3 will be the Department of Disaster Management (DDM), which will recruit an experienced organization for developing the local flood forecasting and dissemination system. A detail background paper on the technical and management aspects will be prepared by IFAD as part of the design mission.

150. **Management of Component 3:** The PMU/LGED, led by a Project Director (PD), will manage the overall function of the project. The Team Leader of the TA team will act as his alternate and oversee the TA team on technical aspects.

151. **DDM:** The lead implementer of sub-component 2.3 will be the Department of Disaster Management (DDM), which will recruit an experienced organization for developing the local flood forecasting and dissemination system. A detail background paper on the technical and management aspects has been prepared as part of the design mission (see Appendix 4). DDM will set up a project management unit to implement and monitor progress. More importantly, it will set up a technical and management team as part of project implementation, which will produce local flood forecast and disseminate them to village committees, Upazila/Union Disaster Management Committees, other local administrative and local government organizations for dissemination of flood information. the DDM will engage 4 DDM staff and 13 TA staff for implementing the sub-component 2.3. The roles/tasks, skills & experiences needed by the TA staff for DDM is also presented in Appendix 5. DDM will continue forecast and dissemination of local flood information as its regular service beyond the project duration.

152. **Human resources development:** The mission has made an assessment of training needs of project staff and LGED officials in technical as well as management areas. The areas of training will be: a) design, construction and maintenance of climate resilient rural infrastructure in vulnerable areas; b) Infrastructure project management; c) management of livelihoods through LGA and LCS mentoring for economic improvement; d) flood early warning and disaster risk management and dissemination of risk information; and e) accounts, finance and internal control. The training courses will be organized within and outside Bangladesh. For example, an overseas exposure visit is planned in Cambodia and/or Vietnam to learn from on-going best practices.

153. The entire sub-component 2.2 will be delivered through vocational training, where the PMU in cooperation with the Regional Offices will arrange a trainers' gathering/workshop per year for cross learning and refresher capacity building of trainers. The training courses will be organized within and outside Bangladesh.

154. ***M&E capacity development***. To ensure an inclusive M&E and KM system, the project will provide capacity building trainings to project staff. The short-term M&E/KM consultant will design a capacity building plan, based on prior capacity assessment, to support the PMU, regional and district level staff on both concepts and practical skills to manage the M&E system, especially data collection, data analysis and reporting. Some of these trainings are

- the importance and role of M&E and KM (to all project staff)
- identification, analysis and dissemination of information (to all project staff)
- website and MIS management (to M&E and KM officers); and
- data management and reporting (to all project staff) etc.

155. According to IFAD project practice, logframe captures key indicators on project goal, objectives, outcomes and outputs. PMU staff will up-date regularly and provide up-dated version including GIS representation for supervision missions. The PMU is responsible for sound project monitoring. Data for the ME system will be generated by respective sub-component lead agency/actor. RIMS/ORMS data will be reported annually, with level 2 reported from year 4.

156. Project will conduct baseline studies within 3 month of commencement of the project, using terms of reference provided in PIM. Given focus on evidence-based learning, high quality surveys at early stage are key. During implementation, partnership with academic institutions for a range of studies is suggested to enhance learning and knowledge sharing.

157. **The role of Local Government**: As such, local government institutions in respective Unions, Upazilas and Districts have no mandated management responsibility for the smooth implementation of the project. However, the project envisages strong complementary roles by the respective local government institutions in the delivery of certain sub-components of the project. In any GOB-led engineering-based development, the Upazila Engineer representing the LGED is the most important driver on behalf of the Upazila Administration. S/he is the representative in decision making on behalf of the Upazila Nirbahee Officer (UNP, the top administrator of the GOB at Upazila level). The project will be administered through the UE, therefore the Upazila Administration is already taken on board in the local level design and subsequent implementation. Local government will be represented in consultations for the policy papers as one of the key stakeholder. Moreover, the following are the specific modalities how local government institutions will be taken on board while delivering various components of the project:

158. Selection of roads, markets and school-cum-shelters along with their alignment and locations have been identified in consultation with respective administration of target Unions/ Upazilas/ Districts.

159. Roles in hand-holding for the market management: Once developed, markets will be handed over to the MMCs. While the local Upazila Administration will lease out these markets, they will collect the revenue and as per by laws of the GOB, up to 25% of the leased value will be handed over to the MMCs – Chaired by the Chairman of the Union Parishad – for covering regular maintenance of the infrastructure. Both the MMC and the Upazila Administration will have central roles in administering a governance process involving the management and maintenance of the markets.

160. The school-cum-shelters will be handed over to another local body, the School Management Committee. During regular time, the MMC will deploy people and a management framework towards functioning of the premise and regular maintenance works. However, as per Standing Orders on Disaster and the Disaster Management Act 2012 of GOB, the Union Disaster Management Committees (UDMC) in respective Unions will be activated during high floods and they will co-manage the shelters (cleanliness, supplies, peace keeping and conflict resolution, etc.) along with the respective SMCs, with active support from the community.

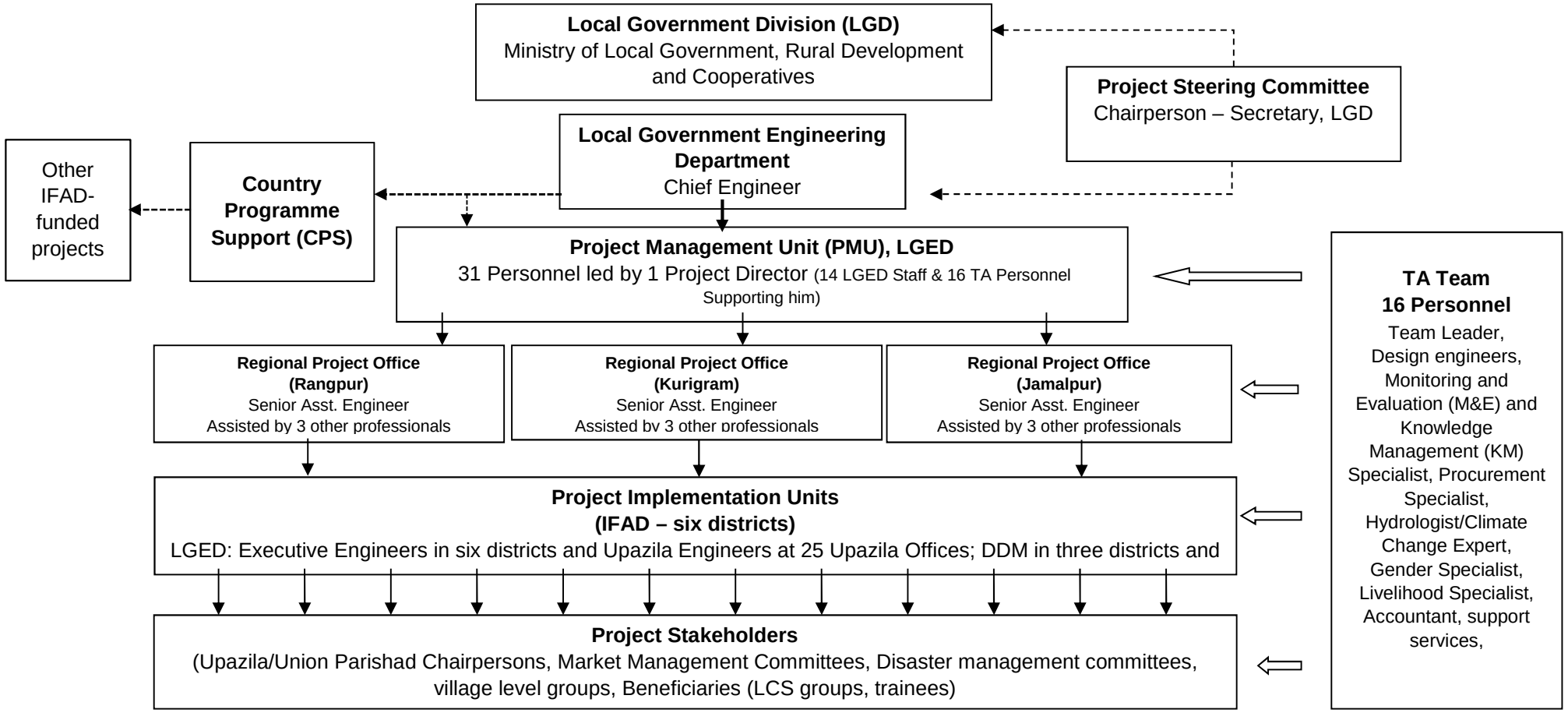
161. The role of UDMC will be prominent in fine tuning of flood warning (local level validation of model outputs), delivery of data to DDM during monsoon period through a participatory and volunteer based approach, and dissemination of flood information following issuance of warnings and advisories. A few volunteers will be collecting local level flood data and help DDM fine tune the model outputs towards generating accurate locally-relevant flood data. The Regional project offices and Upazila level LGED offices will help create such voluntary participation of local people towards the dissemination of flood information and early warning.

162. The local stakeholders along with local government institutions will be instrumental in selecting the LCS and youth members for contractual work and vocational training, respectively. The local Upazila Engineer's office will convene an open and transparent dialogue so that an impartial selection and targeting can be taken place where the local poor women will find immediate employment/opportunity for making money. The office bearers will make sure that no

'elite capture' takes place during the selection process and the interests of the poor women as LCS members are duly protected as potential recipients of shops in women's corners in project-built markets.

163. **Capacity building and Country Programme Support:** The IFAD independent evaluation office country evaluation of Bangladesh highlighted a weakness in the areas of programmatic approaches and knowledge sharing. In addition, past experience showed on average very strong implementation capacity within LGED, yet significant variation across on-going projects, some falling behind in specific areas. To strengthen project implementation, further cross-project learning and fostering programmatic approach among IFAD projects and within country programme, a Country Programme Support (CPS) consisting of a Project Assistance Team (PAT) will be established at LGED or ERD that will jointly support all on-going IFAD financed projects in the areas of knowledge management (KM), monitoring and evaluation (ME), procurement and thematic areas, such as financial management. The CPS will not add any hierarchical layer to LGED, but work as a team of consultants to facilitate cross-learning and allow timely support to implementation and capacity building, if needed. The CPS will initially be financed by IFAD grant resources and if proven successful, gradually co-financed by project funds. The project will also support capacity building at LGED cooperate level through contribution to newly created climate units, and targeted activities with DDM and ERD.

Figure 7 Project Organization Structure



C. Planning, M&E, learning and knowledge management

164. **Planning and implementation.** The PMU will be responsible for overall planning, implementation and achieving the quantitative and qualitative targets of the project. Specifically, it will perform the following functions:

- Start Up: Project Start-up is planned for April 2018 and will be finance through project advance. Activities include: a) Recruit and mobilize all staff members as per plan of the project; b) train all staff members as per plan; c) recruit TA team (both in the PMU/LGED and in DDM); d) procure goods and services as per plan; e) conduct start-up workshops as planned; f) Install accounting and financial management system; g) Install full management system; h) define project key indicators in collaboration with CPS specialists and finalise study ToRs;
- Project support Studies: a) Conduct baseline studies; b) Conduct RIMS studies; and c) Conduct environmental study and receive environmental clearance from the Department of Environment;
- Planning: a) Prepare a six year and annual plan for PROVATi[3] to be approved by IFAD; and b) revise DPP, if needed, as per GOB guidelines;
- Implementation: a) Develop village markets and union/village roads already selected by LGED/IFAD; b) Prepare master plans for each market in a participatory manner, taking into consideration local needs, aspirations and vision, and prepare/customize engineering design for each market by following typical designs already prepared during the final design mission; c) Customize design for union/village roads already selected, taking into consideration resilience aspects in response to climate change; d) Authorise tendering of all construction works; e) perform all activities related to LCS, MMC, staff development etc.; f) Recruit NGOs for management of Sub-component 2.1; g) select trainees for vocational training program; h) Select training providers (GOB, Private and NGO providers) and coordinate all training activities; coordinate placement of trainees with potential employers; and i) select research institutions/experts and conduct research/studies/policy notes under sub-component 2.4.
- Supervision: a) Upazila engineers will supervise progress and quality of work done by the LCS groups and contractors; b) Professional staff members from Regional Offices will perform additional supervisions of construction works; c) Engineers from TA team will perform independent monitoring of construction works; d) Specialist from PMU and LCS/Livelihoods Officer will supervise quality of training by providers.
- Financial payment: Payments against goods and services will be made by the PMU through XENs after clearance from Regional Offices and Upazila Engineers. Separate payment methods may be followed for vocational training program.
- Fund withdrawal: PMU will be responsible for the function.
- Progress report: PMU will prepare all reports including financial reports for all activities. It will prepare quarterly reports and annual reports to be shared with IFAD.
- IWFM and DDM. Both institutions will designate Project Coordinators (PC) for activities under PROVATi[3]. The designated PCs will coordinate with PMU/LGED, attend progress review meetings and PSC meetings. IWFM and DDM will prepare separate progress reports to be shared with IFAD via PMU/LGED.
- PMU will coordinate with IWFM and DDM for payment, disburse funds and receive monitoring progress reports.
- Coordination: PMU will be responsible for overall coordination with IFAD, LGD, MLGRDC, ERD, IWFM, DDM, WFP and other stakeholders of the project.

165. See Appendix 6 for details discussion on planning, monitoring, learning and knowledge management.

Monitoring and evaluation

166. The log frame of the project provides goal, objective, outcome-, and output-level indicators, sources of data, frequency of data collection, etc.. Some of the indicators are required by IFAD, and others are direct or proxy indicators representing impact of project activities. All indicators will easily be measured by adopting low-cost and simple data collection techniques.

167. The project will conduct three monitoring-related set of studies: at baseline, at mid-term and at end-of-project. Besides, interim (quarterly and annual) reports will be produced as per IFAD provided formats are incorporated in the PIM. Various media such as website, baseline and impact study reports, case studies, sector reports, newsletters, training materials in print and video form etc. will be used for KM. In addition, seminars and workshops on research findings and site visits will be organized. It is suggested to apply the Multi-dimensional Poverty Assessment Tool (MPAT) for the surveys.

168. The project will partner with scientific research institution/university for applied research, primarily in the area of LCS economic and social empowerment, but potentially other areas of interest for the research partners. Objective of the partnership is generation of time-series data useful for quantitative assessments at MTR stage and later on, systematic generation and analysis of high quality qualitative assessments of specific project interventions and forward looking knowledge sharing for policy influence.

169. **Learning and Knowledge management:** The project is expected to produce important lessons and knowledge in areas such as impact of climate change on infrastructure, management of village markets, effectiveness of local flood forecasting and dissemination system, LCS economic improvement processes involving adoption of IGAs, effectiveness of vocational training for employment creation, appropriateness of various types of climate resilient roads (RCC, BC, block road), slope stabilization using bio-engineering techniques in vulnerable areas, management of rural infrastructural projects, impact on livelihoods, overall impact of the project etc.

170. **Objectives.** The integrated monitoring and evaluation (M&E) system will be developed with three main objectives:

- *guide project implementation:* it should provide project stakeholders particularly to the PMO with information and analysis required to: measure project outcomes; assess project effects on the livelihoods of target groups, and in particular households with less access to market, road and climate information, LCS women, poor households, agro based households and youth; assess the relevance of the project strategy, methodologies and implementation processes; detect difficulties and successes; support decision-making to improve project performance; and measure project contribution to the achievement of COSOP[46] targets;
- *support judicious decisions and policy making:* it should provide project stakeholders, and, in particular, entrepreneurs, service providers and ESCs, with the information and analysis they need to assess the return brought by innovation, to develop profitable and sustainable activities and to adapt their strategies accordingly, by monitoring both quantitative (production, margins, credit management…) and qualitative results (clients' satisfaction). It should also provide the LGED, DDM, BWDB, relevant ministries of government of Bangladesh (GOB), researchers and other stakeholders, with the information needed to make policy decisions;
- *share knowledge and upscale good practices:* it should develop lessons learnt, showcase good practices and successful innovation, and share knowledge under appropriate formats to support project performance and policy dialogue.

171. The data on various project-based learning aspects will be gathered in the form of documents of experience and successes, technical papers, impact studies, case studies, field visit observations, progress reports, newsletters, occasional papers etc. The project will share them with IFAD, government and other national and international stakeholders by widely distributing, publishing them on websites as well organizing seminars and workshops. It will use IFAD's knowledge management network to publish all activities as well as studies and publications.

[46] See detail on https://webapps.ifad.org/members/eb/105/docs/EB-2012-105-R-5.pdfhttps://webapps.ifad.org/members/eb/105/docs/EB-2012-105-R-5.pdf about COSOP- Bangladesh.

LGED, DDM, IWFM and IFAD will document lessons learned from this project through supervision missions, impact studies, research papers, and feedback from the stakeholders including the beneficiaries.

172. **The M&E Implementation**: The M&E system will be setup and managed by the PMU, in consultation with project stakeholders. A short-term M&E/KM consultant will be hired by the PMU/CSP to: (i) agree on a shared understanding of project objectives, approaches and planned activities, and provide a framework for the Theory of Change; (ii) agree on a broad framework for M&E and KM and on priority actions to implement it; and (iii) identify quantitative and qualitative indicators on a participatory basis, building on the logical framework and on the set of IFAD's Results and Impact Management System (RIMS). The consultant will produce a detailed M&E/KM manual, together with an implementation plan, including capacity development arrangements. S/he will also provide orientations to design a management information system (MIS) to be set up by a service provider and to be made accessible to project stakeholders, and establish link with SIMES and COSOP reporting at portfolio level. The implementation plan will be updated every year.

173. **Indicators.** Output and outcome indicators will be developed with RER stakeholders. They will be SMART (specific, measurable, achievable, relevant, time-bound), easy to collect and disaggregated by categories of enterprises and target groups. They will include relevant RIMS indicators as well as COSOP indicators.

174. ***Result and Impact Management System*** **(RIMS).** RER will integrate RIMS indicators into project M&E and link them to the Annual Work Plan and Budget (AWPB) and report annually on the RIMS indicators to IFAD. RIMS indicators are distributed in three levels.

- **First Level RIMS indicators** measure the outputs of the project including financial and physical progress. The results are generally quantitative and are measured annually.
- **Second Level RIMS indicators** measure the outcomes of the project analyzing behavioural changes generated by the project. The results are a mixture of qualitative and quantitative data. Compared to the first level indicators, second level indicators take longer time to show results and are measured both annually as well as specifically during Interim Reviews and project completion.
- **Third Level RIMS indicators**[47] measure the project impact on the livelihood of the beneficiaries during baseline, mid-term and completion surveys.
- RIMS indicators are incorporated in the logical framework ($-_{RIMS}$), and will be refined during the project start-up phase. Detailed http://www.ifad.org/operations/rims/ guideline is given in the RIMS handbook available at http://www.ifad.org/operations/rims/.

175. ***COSOP Indicators*****.** PROVATi³ will identify COSOP related indicators in its log-frame. In addition to the RIMS indicators, the project will report on the COSOP indicators to IFAD country office (CO) in Bangladesh on annual basis. The results will be consolidated and analysed at the CO level to produce COSOP monitoring and evaluation note. For this purpose, the project will use SIMES for data storage and analysis. The COSOP monitoring note will be used for tracking and improving the capacity of the project in achieving the strategic objectives mentioned in the COSOP.

176. **Baseline, mid-term and completion surveys**. A set of baseline studies measuring the status of main indicators (including RIMS) will be carried out at project onset. The idea will be to trace the theory of intended change along the supposed impact channels, and will include increased resilience of infrastructure following design up-grades, improved access

[47] Thirds Level RIMS is not mandatory anymore. Yet the project will design impact level indicators to measure achievements. These will be discussed at start-up when ME system and approach is finalised.

to accurate and early flood information, improved skills through vocational training and subsequent employment, improved income from LCS employment and sub-sequent investment in IGA, etc. The scope of the surveys and implementation modalities will be defined by the PMU, IFAD country team, and M&E and KM Specialist. Follow-up surveys will be carried out twice: before the mid-term review (MTR) so that the MTR process may be benefitted by the results and again at project end to compare the impact generated by project interventions with the baseline study. The RIMS surveys will be complemented by the Women's Empowerment in Agriculture Index (WEAI) to measure impacts of women's participation in the project. This will be done through an additional set of questions during the RIMS surveys. Data will be collected against both qualitative and quantitative indicators disaggregated by sex, caste/ethnic groups and target groups, along adequate forms (to be proposed by the consultant) and the following levels: district, regional, PMU level and central/national level. All the stakeholders of PROVATi^3 will have an active and important role in identifying and reporting data, either formally (through contracts for service provision) or informally. M&E Officers will make sure that women are adequately represented in this process and that they are allowed to voice specific concerns. Based on these results, the project will prepare a Project Completion Report to be submitted to IFAD and the GOB within three months of project completion. (Details are provided on the Working Paper on M&E).

177. **Supervision and evaluation**: IFAD will carry out supervision missions. Besides annual supervision mission, an independent mid-term and final evaluation will also be conducted. As in the case of CCRIP and other projects, mission reports will be important sources of knowledge about the progress, quality, lessons and impact of the project. Self-evaluation is planned for some specific set of activities that have potential for scaling-up (LCS modalities, market maintenance/management, fine tuning and dissemination of location-specific people-centric flood warning system, incorporation of road design features, etc.). These aspects will be shared for wider uptake and use through the knowledge management stream (for details, please see Appendix 4)

178. **Knowledge Management** is an essential part in sharing good practices towards building resilience. As indicated earlier, CCRIP and HILIP-CALIP projects have been the trailblazers in delivering infrastructural resilience, while the latter has also been helping the vulnerable communities in Haor areas to find ways to overcome poverty by means of skills enhancement trainings and livelihoods resilience through adoption of IGAs. PROVATi^3 project will not only build on those good practices, it aims at sharing such good practices for others to learn from and help Bangladesh achieve a holistic resilience against climate induced vulnerabilities of poor and marginal people including women. Knowledge management, therefore, is considered as a small but key element towards sharing the good practices.

179. The primary entry points will be (i) the research outputs (under sub-component 1.1) which will identify areas in the north-central region that are vulnerable to climate induced floods and riverbank erosion, define hydrological realities in future scenario years and provide specific information regarding the impacts of climate change in target districts, Upazilas and Unions. While the information will be extremely useful in defining the areas where major investment for infrastructures should not be done (a safeguard measure against mal-adaptation), which will be useful for the project itself, the database will be useful for other actors such as Roads and Highways Department, the Facilities Department of the Ministry of Education and the Ministry of Primary and Mass Education. Moreover, the database will be shared with the newly built Climate Change Unit of LGED. The sharing will be done by means of handing over the database, sharing targeted publications and manuals, and by organizing workshops/technical dialogues with key stakeholders. Secondly, (ii) thematic studies under sub-component 2.4 will focus on implementation and policy relevant aspects each year. Findings will be made available in form of reports, but also other formats, such as policy briefs, , short clips or info-graphs and visuals/comics for distribution to a range of stakeholders will be considered. The M&E/KM Specialist will lead the development of the knowledge products in association with the KM focal person of the PAT hired through CPS. Cross-learning across projects and dissemination to

relevant target audience in Bangladesh will be the main focus. Selected findings should be considered for South-South-Triangular Cooperation (SSTC), for example with the Mekong Delta region, or other flood affected areas in Asia.

180. The newly adopted designs for resilient rural roads, markets and school-cum-shelters (under sub-component 1.2, 1.3 and 1.4) will be shared, again with key relevant stakeholders and also be internalized by arranging a targeted training course for about 60 engineers of LGED (sub-component 1.5). Since knowledge generation and delivery under the sub-components as above are embedded within the activities under relevant sub-components, no additional budget will be needed for knowledge management under three sub-components. Course modules will be developed and further shared with relevant institutions, in addition to keep such base resource/knowledge material at the Climate Change Unit of LGED. LGED will conduct the training courses, engage key national experts for the module development, etc.. On behalf of LGED, the M&E/KM Specialist will coordinate the activities in collaboration with technical experts from the TA team, BUET and/or LGED.

181. The sub-component 2.1 will require a significant effort in awareness raising, skill enhancement on IGA, regular mentoring on livelihoods, gender and rights related issues, climate risk awareness, etc. The activities will be administered by hired agencies, as indicated under sub-component 2.1, with no additional budget for the knowledge management for this sub-component. Similarly, the sub-component 2.2 will also deal with imparting vocational knowledge involving 30,000 youth, however it will be delivered by contracting out institutions and no additional budget will be required for the knowledge management part under this sub-component.

182. There will be massive requirement for raising awareness of primary stakeholders regarding the refinement of flood early warning in the target 174 Unions and delivery of locally-specific flood early warnings. The knowledge management element will be dealt under the sub-component 2.3, without having to rely on additional budget for knowledge management. Under this sub-component, DDM will generate early flood warning data, which will be disseminated in locally understandable languages through the involvement of local volunteers and also through the use of ICT (as cell-phone based text and infographic messages).

183. Sub-component 2.4 will need a significant effort in knowledge management. The ***manuals***[48] and ***study outputs*** delivered under the research programme will have to be translated into easily understandable languages so that the core messages are delivered to users and general mass. The technical users will be shared with ***technical papers***, while the policy makers will be appraised of through targeted events such as ***policy dialogues*** and workshops, and the participants are shared with targeted policy briefs. A total of 7 ***articles***, 5 ***policy briefs*** and 10 ***sharing events*** may be organized by the M&E/KM Specialist, in association with the M&E and KM Officers and in close collaboration with specialists from CPS/PAT.

184. In addition to the above, there will be regular knowledge management activities for the project as a whole. The ***M&E briefs with RIMS data*** will be synthesized for conducting the regular project management meetings and particularly, the meetings of the Project Steering Committee. There will be sharing of updated programme and financing data with every supervision mission, the Mid-term Evaluation and the Terminal Evaluation, where the teams engaged for such activities will be shared with adequate synthesis of data and facts well ahead of time. Again, the M&E/KM Specialist will bring out concise and informative reports using various databases. The PD and the PMU will provide guidance to deliver the KM activities.

[48] Manuals on rural road (all types as in Appendix-4), markets, and school-cum-shelter construction in a climate sensitive way, on various vocational training, on IGA support activities, etc.

D. Financial management, procurement and governance

185. The proposed financial management arrangements for the project incorporate a number of measures intended to reduce risks to acceptable levels, ensuring that: (i) the project funds and assets created are used for their intended purposes in an efficient and effective way; and (ii) reliable and timely financial reports are prepared and submitted to the Government and IFAD.

186. **Assessment of Financial Management.** The assessment for the project considered the Bangladesh Public Expenditure and Financial Accountability (PEFA) 2016, and the Transparency International Corruption Perceptions Index 2016. PFM remains weak in Bangladesh, and manual accounting is the prevalent practice across Bangladesh public institutions, impacting especially the FM capacity at district level. The inherent risk of the project is deemed to be High. Safeguard measures will therefore be put in place to reduce the risk during implementation.

187. PROVATi^3 gains on the experience of IFAD co-funded projects executed under LGED. The PMU will be in charge of the day to day financial management activities, including accounting, reporting, consolidating of financial information from the PIUs of the districts and coordinating audit processes. The disbursement of funds to contractors, suppliers, PIUs and implementing partners will be managed from the PMU. IFAD financial management procedures will be followed as articulated in the Project Implementation Manual (PIM).

188. **Organisation and staffing.** The PMU will be responsible for implementing all operational fiduciary functions across the project. The Finance Unit at the PMU will be composed of six full-time staff: three funded by GoB funds (one Accounts Officer and two Accounts Assistants) and three funded by IFAD's loan (one Finance Manager, one Accounts Officer and one Accounts Assistant).

189. Every Project Implementation Unit (PIU) located at the district level will be in charge of the fiduciary functions within its jurisdiction, and will be composed at least of two accountants: one funded by GoB funds and one funded by IFAD's loan. An additional Finance Assistant is can be funded by IFAD's loan in the case of larger districts.

190. The duties, responsibilities, lines of supervision, and limits of authority of finance staff will be defined in their ToRs and will be documented in the PROVATi^3 finance manual.

191. **Fiduciary functions.** The PMU's fiduciary functions include: preparation of the Annual Work Plan and Budget (AWPB) and the Procurement Plan (PP), submission of withdrawal applications to receive IFAD fund remittance and meet project expenditures; transfer and monitoring of funds to project implementing partners and PIUs; maintaining fixed asset, procurement and advances registers, preparation and submission of financial statements and reports and coordinating auditing processes. The PMU will strengthen the FM capacity at the district level through continuous training.

192. **Disbursement arrangements and flow of funds**. Funds for PROVATi^3 will flow to a Designated Account (DA) in the Central Bank of Bangladesh under SAFE arrangements. The DA will be operated by the PMU in accordance with imprest fund arrangements. The PMU will maintain a project account in local currency to implement project activities and to transfer funds to PIUs and implementing partners. The PIUs and implementing partners will also maintain operational accounts in local currency in commercial banks to receive funds from the DA in accordance with the AWPB, periodic fund requirements and MOUs. Disbursement procedures and other instructions will be detailed in the Letter to the Borrower (LTB), which will be issued when the financing becomes effective.

193. The PMU will be responsible for transferring project funds to the operating accounts at PIUs on the basis of three month estimated expenditure and approved work plans. These transfers will be treated as advances at the PMU, with monthly reporting on the use of funds. These accounts will appear as unreconciled items on the financial statements until they have been accounted for and liquidated.

194. A **start-up advance** is suggested once the financing agreement has become effective, to facilitate implementation readiness, pending satisfaction of the disbursement conditions specified in the Financing Agreement. The ceiling of the start-up will be agreed upon at negotiations based on a realistic plan.

195. Transfers to entities implementing PROVATi^3 activities, will be governed by legal agreements (MoUs or contracts). The Government counterpart funds will be provided in line with the GOB MOF and Treasury existing financial regulations and procedures. Any contribution received for the project from other donors will be under a Cooperating Inter-Agency Agreement with IFAD. Transfers to entities will be treated as advances, with monthly reporting on the use of funds, and these accounts will appear as unreconciled items on the financial statements until they have been accounted for and liquidated.

196. The disbursement of the grant from IFAD financing will flow to a second DA in the Central Bank of Bangladesh under SAFE arrangements. The DA will be operated by the PMU, and transfers through a project account in local currency will be made to implementing partners, such as the World Food Programme (WFP) for the maps and pilot activities, BUET for climate change risks assessment and DDM for community based flood preparedness system and other emerging technical studies and activities.

197. **Internal controls.** PROVATi^3 will be required to establish adequate internal controls and procedures in the PIM and in the Financial Manual to guarantee: (a) operations are being conducted effectively and efficiently; (b) financial and operational reporting is reliable; (c) applicable laws and regulations are being complied with, and (d) assets and records are safeguarded.

198. At a minimum, the procedures should include the following measures: (a) Reliable personnel with clear responsibilities and adequate segregation of duties; (b) Adequate financial records management system with complete audit trail; (c) Physical safeguard, including use of safe, locks, guards, limited access, and access by authorized persons to provide security for project assets; (d) Independent check, with procedures made subject to random independent reviews.

199. **Accounting.** The accounting policies and procedures of the project will be governed by the existing Government (GoB) system and the Bangladesh Government Accounting Standards under cash basis of accounting, which are in the process of being aligned to IPSAS. The PMU will maintain an adequate FM system across all levels of implementation, to provide accurate and timely financial information to IFAD and to the GoB.

200. PROVATi^3 will procure and adopt an accounting system package aligned to best practices during start-up. The accounting software will also be used by the PIUs of the districts. The project will guarantee the availability of resources to conduct periodic training on the use of the accounting software to strengthen the capacity at the district level.

201. As there has been positive results from the use on an accounting software by LGED which has been recalibrated to meet the accounting and reporting requirement for both government and IFAD, LGED should ensure consistency in using the same software for PROVATI which would provide LGED and the Project better value for money. This ensure the initial investment of LGED in acquiring and reconfiguration of the accounting software is not lost.

202. **Financial reporting.** The PMU will be responsible for consolidating the financial information from the districts to prepare semi-annual and annual (audited) Financial Reports (FRs) for all relevant parties. The FRs will be consistent with International Accounting Standards and the project's Finance Manual. Semi-annual Financial Reports with accurate and updated financial information will be prepared by PMU for submission to IFAD within 45 days from the end of each semester.

203. Financial Reports, prepared by component and by category of expenditure, will be produced directly from the accounting system of the project, and not from any other stand-alone manual

or electronic system. The PMU will need to have the capacity to record GoB contributions, as well as in-kind contributions of private companies and beneficiaries, if necessary.

204. **Internal Audit.** Internal auditing will be carried out by the Internal Audit Unit of LGED in accordance with an auditing plan and reports to be submitted to the relevant parties.

205. ***External audit*.** The Foreign Aided Projects Audit Directorate (FAPAD) of the Office of the Comptroller & Auditor General (OC&CAG) of Bangladesh will conduct an audit of the project's annual financial statements within six months of the end of the fiscal year. The audit will be carried out on a yearly basis and in compliance with INTOSAI standards and the IFAD Guidelines on Project Audits. Depending on the performance of the project and in addition to the FAPAD audit, the additional services of an external audit firm may be requested.

206. External auditors will be required to express their audit opinion in accordance with the IFAD Guidelines on Project Audits. In addition, a detailed management letter containing the assessment of the internal controls, audit findings, update on previous audit observations, compliance with IFAD Financing Agreement covenants and suggestions for improvement will be prepared and submitted together with the audit report.

207. **Procurement**: Appropriate procurement practices will be in place to ensure the principles of procurement and governance are observed which include appropriate risk mitigation measures as a safeguard in the Letter to the Borrower. Procurement undertaken by the Project will ensure the application of the GOB Public Procurement Act 2006 and Public Procurement Rules 2008, consistent with IFAD procurement guidelines as detailed under Appendix 8 of the PDR.

E. Supervision

208. The overall responsibility of project supervision will remain with the PMU. LGED is charged with detailed preparation of tender documents for roads, flood shelters, and market development (physical). After an independent evaluation of bidders and awarding of contracts, supervision staff is assigned to supervise the implementation of contractors. The staff in charge must be fully independent and be given adequate allowances to function independently. They should be provided with transport (motorbikes + fuel), a small digital camera, technical equipment, allowances to stay at sites, do routine supervision and make surprise visits. They should report their findings on contractors' performance and call on LGED to intervene as needed according to prevailing procedures. Similarly, LCS-cum-Livelihoods officers (deployed at Upazila level) will supervise quality and quantitative progress of all works contacted to LCS groups. In addition, all Upazila level LCS-cum-Livelihoods Officers, and Regional Engineer will supervise all vocational training courses run by training providers in respective Upazilas.

209. IFAD will conduct regularly supervision and review missions to verify the performance of the project and to monitor physical progress as well impact. It also provides detailed technical and management recommendations to PMU, which were found very useful and effective in all IFAD funded projects. The same mission will cover activities of LGED, DDM and IWFM.

F. Risk identification and mitigation

210. The following risks and corresponding mitigation measures are envisioned (see Table 7):

Table 7: Risks and mitigating measures

Logical framework	Risk	Probability of occurrence	Impact on project performance	Mitigating measures
Goal: Enhanced livelihoods for poor households and smallholders in selected Upazilas of Brahmaputra-Teesta flood plain area of North-central districts of Bangladesh	Natural disasters (i.e. floods & erosion) destroy project investments; CC exacerbates such disasters	Medium-high	High	Undertake climate adaptation measures and post-disaster rehabilitation; Accelerate construction works after disasters. Appropriate site planning based on assessment (sub-com 1.1);
	Real price of rice and other essential commodities consumed by the poor increases relative to wage increases.	Medium	Medium	Various livelihoods are underway in the project areas; GoB normally undertakes rehabilitation works and short-term employment program for the poor after major disasters; PROVATi[3] will support diversification of livelihoods through IGA as well as off farm vocational works in specific sectors.
Outcome	Project roads and markets are damaged by floods in some Upazilas	Medium	Medium	Climate standards being introduced; strong supervision for road and market construction; hydrological issues properly considered in design, especially for construction sites located near rivers.
	Delay in development of flood zoning.	Medium	Low	Preparation for works done by IWFM/BUET before launching of the project.
Outputs	Price escalation reduces project output	Medium	Medium	Price & physical contingency will be included in total project costs. GoB rules for price escalations will be enforced.
	Limited availability of khas (public) land for market development	Low	Medium	Only markets with assured khas land will be accepted for development; proper agreement will be signed with MMCs prior to development.

IV. PROVATi[3] Project costs, financing, benefits and sustainability

A. Project costs

211. **Project costs and financing:** The design mission developed various activities under each of the three components along with quantity and unit cost for each individual project activities. For example, unit costs (Taka per km) for three different types of roads, costs for typical market development, cost for flood shelter etc. have been estimated using LGED current rate schedule. However, lump-sum amount of money have been allocated for DDM, IWFM/BUET and for Sub-component 2.1 capacity building of LCS, their livelihoods development and economic empowerment. Details costs are being developed for Sub-component 3.2 Local Flood Information System by DDM. Details costs need to be developed for Sub-component 2.1 so that NGO-MFIs can be recruited for providing specific services.

212. The estimates of the project costs by component and by financier are summarised in Table 8 below. Total project cost including price contingencies is BDT 7,570.6 million (USD 92.379 million), with implementation over a six year project period falling in seven fiscal years starting from the fiscal 2017/18. Of the total cost, USD 63.25 million would be funded by an IFAD loan, USD 1.25 million by IFAD grant and USD 27.880 million by GoB. No participation by beneficiaries has been estimated at this stage.

213. Three major costs allocations are as follows:[49] (a) Component 1: USD 74.87 million (81.0%); (b) Component 2: USD 12.41 million (13.6%); and (c) Component 3 – Project Management: USD 5.09 million (5.5%). The project management are relatively high because the project is spread over a large geographical area. But costs can be further streamlined. As expected, within Component 1, allocation for road construction is the highest – USD 54.74 million (59.3% of total project cost). See Appendix 9 for detail cost tables and Working Paper 6 for all Tables of Project Costs.

B. Project financing

214. Key assumptions used in the estimates are: (i) all project interventions are funded by IFAD at 70% of the costs and 30% by GOB; (ii) exchange rate at BDT 82[50] per USD starting from 2nd quarter of 2018; (iii) no physical contingencies included but price contingencies at 5.5% overall, 5% for salaries, civil works, equipment, machinery etc.; (iv) all unit costs included taxes that are-at 10% overall, but on civil works at 6%, TA at 15% etc.; (v) IFAD grant fund support to CPS, BUET, DDM, WFP, LGED Climate change wing, etc.; and (vi) some estimates such as Component-1.1, 1.5 and Component 2.4 are based on lump sum provisions. An attempt has been made to maintain an overall 70-30 split but these would be further refined. See Appendix 9 on further details of project cost and financing.

[49] Final costing of activities/investments will be under-taken during preparation of DPP, planned in early Oct 2017. These cost reflect August 2017 estimates. LGED was under-going revision of unit costs for construction that will affect costs and targets accordingly.

[50] At present the BDT is trading at 80.72 per USD; and according to Trading Economics global macro models and analysts' expectations, it is estimated to trade at 83.92 in 12 months' time.

Table 8: Project cost by financier

Bangladesh
PROVATi Final Design
Components by Financiers
(US$ '000)

	IFAD		GoB		IFAD Grant		Total		For.	Local (Excl.	Duties &
	Amount	%	Amount	%	Amount	%	Amount	%	Exch.	Taxes)	Taxes
A. Climate Resilient Infrastructure and Community Shelters											
1. Climate change risks assessment for building climate resilient infrastructure	-	-	-	-	252	100.0	252	0.3	-	252	-
2. Climate resilient rural roads	38 321	70.0	16 423	30.0	-	-	54 745	59.3	-	51 478	3 267
3. Climate resilient rural market development	11 699	70.0	5 014	30.0	-	-	16 712	18.1	-	14 464	2 248
4. Climate resilient community shelter cum school	2 155	70.0	924	30.0	-	-	3 079	3.3	-	2 894	185
5. Training on climate resilient infrastructure design	58	70.0	25	30.0	-	-	83	0.1	-	75	8
Subtotal Climate Resilient Infrastructure and Community Shelters	52 233	69.8	22 386	29.9	252	0.3	74 871	81.0	-	69 163	5 708
B. Resilient Communities through Employment and Early Flood Warning											
1. Capacity building of LCS members and Livelihoods Improvement	2 137	70.0	916	30.0	-	-	3 052	3.3	-	2 747	305
2. Vocational training for off-farm employment	3 944	70.0	1 690	30.0	-	-	5 635	6.1	-	5 071	563
3. Research and development of flood information and dissemination system	1 706	64.8	731	27.8	197	7.5	2 634	2.9	-	2 390	244
4. Practical policy reviews	203	18.6	87	8.0	801	73.5	1 090	1.2	-	1 061	29
Subtotal Resilient Communities through Employment and Early Flood Warning	7 990	64.4	3 424	27.6	998	8.0	12 412	13.4	-	11 270	1 141
C. Project Management & technical support											
1. Project Management	3 025	59.4	2 071	40.6	-	-	5 096	5.5	-	4 663	433
Total PROJECT COSTS	63 248	68.5	27 880	30.2	1 250	1.4	92 379	100.0	-	85 097	7 282

* Costs as in DPP, Oct 26 2018

C. Summary benefits and economic analysis

215. **Outreach and beneficiaries and benefits**: Table 8 summarises various beneficiaries. The project covers some 303,000 households from 90 Unions falling under 25 Upazilas of Kurigram, Gaibandha, Jamalpur, Rangpur, Nilpharmari and Lalmonirhat districts of Bangladesh (but excluding those households that would have benefited from local advance warning of floods). These beneficiaries will include households that benefiting from improvement of at least 330 km of rural roads, improvement of 135 small, medium and large markets, and from participation in LCS employment and IGA activities and vocational training leading to decent employments of youth. Women are especially targeted under the PROVATi[3] project through construction of special marketing sections in select markets, as well as specific targets for training in component 2. Economic and financial analysis of the programme is summarised in Appendix-10 and details are provided in WP-10. Table 9 below gives an estimate of the cumulative number of beneficiaries by year.

Table 9: Number of Benefited Households, cumulative

Subproject households a/	Project year						
	1 year	2 year	3 year	4 year	5 year	6 Year	7 Year
Road improvement benefits: farm hh	0	0	5,270	14,195	26,010	36,465	39,610
Road improvement benefits: non-farm hh	0	0	3,534	9,519	17,442	24,453	26,562
Market improvement benefits	0	20,000	70,700	161,600	232,300	303,000	303,000
(Vocational training, Notional) 1/	0	5,000	10,000	17,500	25,000	30,000	30,000
(LCS economic progress, Notional) 1/	0	2,125	4,250	5,100	8,500	8,500	8,500
Total outreach	0	2,125	70,700	161,600	232,300	303,000	303,000

1/ Other notional benefits, such as benefits of early local flood warning systems are yet to be quantified

216. Immediate incomes. Some of the LCS members would be able to invest a portion of their wages in sustainable income generating activities but these have not been quantified. Similarly benefits accruing to local flood warning systems have also not been quantified. Road and market improvement will also trigger increased traffic volumes[51]. These benefits are expressed as increased production and households' sale. At full development annual benefits would be about BDT 1,060 million. **Other notional benefits**: The households are also benefited from a number of other interventions provided by the project. These include vocational training on non-farm employment to some 30,000 households, LCS economic self-reliance benefits (through IGA) to 15,000 households, 15 flood-shelters, etc. For want of detailed information with regard to their economic benefits, no assessments were made. At notional level a sum of BDT 100/households covering 303,000 households has been included under overall project benefits. Similarly no tangible benefits accruing to households benefited by local flood warning system has been estimated, which may be a potential source of significant underestimation of benefit streams due to lack of incorporation of costs saved due to safeguarding productive assets.

217. The project is expected to generate substantial net incremental benefits for the poor, farmers and rural entrepreneurs (shop keepers, traders, transport owners): a) increased sales (through increased volume and value of the agricultural production traded); (ii) increased number of traders on the market; iii) reduced transportation costs for commodities as well passengers; iv) increased volume of traffic generated by a new road (and the number of additional journeys per vehicle) as well as by the travel time and the vehicle operating costs savings; v) Farmers living within the market catchment area and the road catchment area will be able to increase the volume of their agricultural production sold due to the increased traffic and will be able to fetch

[51] A GTZ study (AADT) carried out in Bangladesh indicated that traffic volumes increased by 57% on regular days and 140% during *haat* days, good number of road side shops emerged, revenue collection increased by 100%, incomes of the poor increased by 47%, transport costs reduced by over 60% and volume of goods increased by 24%. Source: GTZ RIIP for Poverty Reduction www.adbi.org

higher selling price due to larger number of buyers coming to the market and hence higher demand for the agricultural production; and vi) Some LCS members will be able to invest a portion of wage and profit received after the completion of the construction works (about 10% of the construction cost) in sustainable income generating activities.

218. **Financial analysis and household incomes**: Financial analysis was carried out for 5 activity models and summary results are presented in Table-1 in Appendix-10: (i) household production model comprising 85 households shows an NPV of BDT 1.4 million and 1.56 BCR; (ii) household incremental model shows an NPV of BDT 0.146 million; (iii) the non-farm household models comprising 57 households show an NPV of BDT 1.57 million; (iv) a large market model shows an NPV of BDT 74.89 million and (v) that of a small market shows BDT 31.72 million. Average accrual of household incomes at full development stage is estimated at BDT 3,500 per annum.

219. **Economic analysis**: Following key assumptions were used in the economic and financial analysis of the Programme- (i) the benefits have been estimated over a 20 year timeframe using a discount rate of 7.5%; (ii) the benefits that have been included in computing the economic and financial analysis include only those benefits which could be realistically quantified; (iii) applying a SCF of 0.85 both for output and input prices, (iv) accounting only the incremental net benefits and (v) all other interventions yielding substantial environmental benefits have not been quantified and hence have not been accounted for in the EFA. Current calculations show that the PROVATi^3 project as a whole yields an Economic Rate of Return (IRR) of 17%, a benefit-cost ratio of 1.54 and the Net Present Value of BDT 2,634 million at a discount rate of 7.5% as detailed in Appendix-10.[52]

220. **Sensitivity analysis** shows that the PROVATi^3 benefits are very robust and the investment in the project is sound under varying adverse conditions including the simultaneous increases in costs and decreases in benefits. A switching value[53] analysis demonstrates that the costs would have to increase by 54% or benefits would have to decrease by 35% for the NPV to be zero.

221. **Environmentally-related aspects** of the project are its integrated resources management including a focus on community-based PLF development and the encouragement of alternative income generating opportunities for the poor. All these interventions yield substantial environmental benefits that have not been quantified in the economic analysis.

[52] See Working Paper #5 for full details of EFA.
[53] *Switching values* are yet another measure of sensitivity analysis They demonstrate by how much a variable would have to fall (if it is a benefit) or rise (if it is a cost) to make it not worth undertaking an option.

D. Sustainability

222. The PROVATi[3] project promises to contribute to various sustainable development goals (SDG), although the coverage appears low compared to the overall SDG needs of the country. The following table (Table-10) provides an overview of the project's likely contributions to achieving the SDGs in Morocco. If one considers that targeting SDGs to be a criterion for approval, the project does have some potential to contribute.

Table 10: SDGs being served by the PROVATi[3] project

Sustainable development goals	
Project directly contributing to SDGs	***Project indirectly contributing to SDGs***
SDG-13: **Urgent action to combat climate change and its impacts** – by providing flood early warning, creating flood shelters in chars	**SDG-1: No poverty** - by contributing to the economic empowerment of poor farmers, reducing their economic vulnerability by provisioning early flood warning
SDG-9: Resilient and sustainable infrastructure – by building climate smart (resilient) infrastructure in floodplains, particularly in charlands	**SDG-2: Zero hunger** - by contributing to improvement of food security of smallholders
SDG-8: Sustained, inclusive and sustainable economic growth – by creating greater opportunities for the poor farmers, by provisioning IGA support to LCS members, and by vocational skills enhancement of youth	**SDG-3: Promote well-being for all** – by making a small contribution to charland poor inhabitants who would be able to safeguard their lives and livelihoods, including productive assets due to flood shelters
SDG-5: Gender equality - provisioning of IGA support and mentoring to female and male LCS members will have profound beneficial impacts to achieve gender equality	**SDG-9: Sustainable, safe & resilient settlements** – by investing into rural roads and markets which in turn will lead to overall improvement of rural settlements

223. The PROVATi[3] project with its diverse activities will have varied definitions, meaning and measures of sustainability. A number of additional types of sustainability are seen in the project: a) sustainable management and use of infrastructure built by the project such as roads, markets and shelters; b) sustainable and mainstream use of system and services such as flood information service by DDM; and c) sustainable reduction of poverty of beneficiaries such as employment through vocational training and LCS members graduating to sustainable livelihoods. Overall, the project activities and investments from other sources should enhance resilience and reduce overall poverty situation.

224. **Sustainable village roads**. Since the road designs have considered impact of flood and climate change, inundation of roads during monsoon season is no expected. To reduce incidences of creation of potholes the project would give emphasis on good quality construction, and independent monitoring using instruments. The main contributions of the project will be mandatory application of vetiver grass to protect slopes of village roads and year-round preventive maintenance. However, beyond the project period the responsibility of road maintenance rests with LGED, which receives an annual budget to maintain roads constructed under various projects.

225. **Sustainability of market management**. Several aspects of sustainable market management are as follows: a) Use of sheds for the purpose they are built is an important aspect of sustainable market management. Sheds may not be used by sellers if they are not located where customers usually congregate. Therefore, selection of location of sheds are critical, which will be reflected in the master plan; b) Cleanliness and proper repair and maintenance of markets depends on the capacity and responsiveness of MMCs and trader associations. There will be several training and motivation meetings with MMCs and traders association to keep the market area, drainage system and garbage pit clean; c) Wherever possible garbage will be converted into compost; d) Upazila administration will be sensitized to properly auction the

markets every year on time; e) MMC will be trained to actively pursue repair and maintenance of markets by using 25% of lease value.

226. **Sustainable use of shelter-cum-school.** It is expected that school committee and teaching staff will manage the school well. But keeping building premise and toilet clean with access to water and use of the facility during floods will be challenging. The committee and teaching staff will be trained on management of the shelter and a protocol will be developed who and how the shelter will be used during floods.

227. **Economic and social empowerment of LCS**. The measure of sustainable poverty reduction of these extremely poor people will be sustainable adoption of farm/non-farm income generating activities that would provide diversified year-round income to the families towards resilience to shocks.

228. **Self and wage employment of trainees**. The main measures of sustainability of vocational training program are a) employment (self or wage employment) and b) amount annual income after training. It will be a resounding success if all (majority) trainees get employed within a few months of training. Successful implementation of this activity may have a big demonstration effect on young adults enrolling into vocational courses instead of general education.

229. **Sustainability of benefits**. The benefits to the households in the catchment areas in the form of access to health services and schools, access to better agricultural inputs and processed goods, increase in mobility and so forth are expected to be sustainable. As seen in MIDPCR, CCRIP and HILIP project areas, roads and improved markets leads to increase in sales by traders in the markets, new shops and houses in their vicinity and additional investments in production. The number of motorized traffic is also expected to increase and continue. The increase in prices of agricultural commodities due to an increased number of buyers is expected to continue once supply chains are established. Prices could decrease due a natural disaster but would recover quickly. Similar to other IFAD-funded projects, additional investments in high value agriculture such as livestock are expected to increase and continue when good inputs such as animal health care are available in a reliable fashion. These aspects of impact are expected to be further strengthened due to the implementation of other development project in the area.

230. **Exit Strategy**. The exit strategy is built in the design: a) roads will be handed over to LGED/GOB and markets will be taken over by UNO but will be managed by MMCs; b) LCS members are expected to undertake sustainable IGAs and access financial services from NGO-MFIs; and trained young adults are expected get employed; and c) local flood forecasting system will be managed by DDM as its own permanent service.

Appendix 1: Country and rural context background

Poverty and Economic Growth

1. **Introduction:** The Climate Resilient Community Development (PROVATI3) project is one of the two IFAD projects designed in 2017. It will be led by LGED with other implementing partners namely the Department of Disaster Management (DDM) and the Institute of Water and Flood Management (IWFM). It will be implemented in 25 Upazilas of 6 north-central districts, which are poor and vulnerable to natural disasters and suffer from low level of past development activities. Preparedness against and mitigation of adverse impacts of climate change is the central theme and design consideration of project. The project will be scaling up successful elements of on-going CCRIP and HILIP project. The project will contribute to bringing the level of development north-central part to that of Eastern part of the country. That means PROVATI3 will be implemented in wider country development context.

2. **Population and poverty:** Poverty is a pervasive problem in rural Bangladesh because of limited land and other natural resources, low agricultural productivity, limited non-farm economic opportunities, high population density, and overall governance factors. Bangladesh has the third highest number of poor people in the world. With a population of over 160 million[54] living in an area of 147,570 square kilometres (or 1,084 persons per square kilometre), Bangladesh is one of the most densely populated countries in the world. About 80% of the population lives in rural areas and is mainly engaged in agriculture and related non-farm activities. More than two thirds of the rural population is landless or functionally landless (owning less than 0.2 hectares of land).

3. The country consists of eight administrative divisions where Rangpur division, which is the main site of the proposed project is the poorest. According 2010 data, nationally 31.5% and 17.6% people live below upper poverty line and lower (or extreme) poverty line respectively[55]. But Rangpur Division is the worst in the country where the corresponding figures are 42.3% and 27.7% respectively. The Bangladesh Bureau of Statistics (BBS) quarterly data (April-June 2016) shows nationally 23.2% and 12.9% of population live below upper and extreme poverty line respectively[56]. Rangpur division, Kurigram district, the main project district with nine Upazilas is the poorest district of Bangladesh where 67.3% of the population live below poverty. Similarly, the whole Kurigram district, and part of Gaibandha and Jamalpur districts where extreme poverty is also the highest, more that 35% of population live below extreme poverty line. Kurigram and Rangpur districts are known for high incidence of poverty and seasonal extreme poverty. Although up to date data is not available field observations indicate similar relative positions of the project districts compared to national indicators.Malnutrition is acute in different parts of the country among children of bottom 10-15% of households. Such areas are haor, river char, coastal areas, and urban slums. The selection of vulnerable Upazilas and Unions in flood affected six districts will indirectly address such food insecurity problems.

4. **Climate change and Poverty:** Bangladesh would be one of the worst affected countries to temperature rise and climate change. Bangladesh is one of the most disasters prone of the least developed countries. Two-thirds of the country is less than 5 meters above sea level, making it one of the most flood prone countries in the world. Severe flooding during a monsoon causes significant damage to crops and property, with severe adverse impacts on rural livelihoods. Climate change seems likely to increase the destruction by monsoon floods, while the frequency of cyclones may increase. Between 1970 and 1998, 171 large-scale water-related hazards such as cyclones, storm-surges, droughts, floods, and river erosion killed an

[54] Bureau of Statistics (BBS). Population Census Report (*2010)*
[55] IFAD/BBS/WFP/World Bank: Poverty Maps of Bangladesh 2010.
[56] BBS/World Bank: National Poverty Level of Bangladesh: Based on Quarterly Estimates

estimated half million people and affected more than 400 million. The poor are hit hardest because they live at greater density in the most poorly constructed housing in settlements on lands prone to hazards. The project areas are most vulnerable to natural disasters.

5. Two areas within Bangladesh stand out as being particularly at risk to climate change. The coastal belt of the Jamuna-Padma-Meghna delta is among the world's largest and most populated river deltas. Although continued supplies of river sedimentation may limit land loss resulting from sea level rise, drainage problems will increase where protection schemes exist. Salinity levels are likely to rise in delta rivers in the dry season, mainly due to increased upstream abstraction of water. The second vulnerable area, the Brahmaputra-Teesta river basin, is the site of the PROVATI3 project.

6. **Economic growth and inflation:** Bangladesh had continued economic gains over the past decade with steady annual economic growth of 5% to 6%, relatively low inflation and fairly stable domestic debt, interest rates and exchange rates. However, growth has not reached the rate of 7.5% that is needed for Bangladesh to graduate to middle-income status within the next 10 years[57]. But the last 4 years, according to GOB estimates, the country grew between 6.5% to 7.0%. The government plan is to sustain such growth. The country is now considered at the lower end of middle-income country status. Bangladesh economy grew by 7.1 percent in FY2015-16, exceeding the 7.0 percent growth target. This strong growth was mainly supported by industry and services sectors. Annual average CPI inflation continued to decline to 5.9 percent in June 2016, below the target of 6.2 percent. The declining trend in average CPI inflation is mainly driven by favourable food inflation[58].

7. **Macro-economic management:** Bangladesh achieves Ba3 (Moody's) and BB-(Standard and Poor's) with stable outlook for the 6th consecutive years. Stable real GDP growth and strong external balances have helped Bangladesh to achieve BB- rating with stable outlook from Fitch Ratings for the fourth time[59].

8. Export grew by 8.9 percent, while import by 5.5 percent in FY16. Remittances, however, ended up with a negative growth of 3.0 percent during the same period. The current account surplus of USD 3.7 billion led to an overall balance of USD 5.0 billion, building net foreign assets[60].

9. Overall, the main two sectors, industry and services has shown impressive growth. Industry accounts for 31.5 percent of GDP and grew by 11.1 percent in FY16, up from 9.7 percent in FY15, driven by manufacturing sector (contributed 7.8 percentage points to the growth of industry sector), particularly large and medium enterprises. The services sector, the largest sector of the economy (53.1 percent of GDP), grew by 6.3 percent in FY16, compared to 5.8 percent in FY15. The growth of two major services components-wholesale and retail trade, repair of motor vehicles, motorcycles, and personal and household goods; and transport, storage and communication largely contributed (1.7 and 1.3 percentage points respectively) to the overall service sector growth. Moreover, public administration and defence; and education sub-sectors grew markedly by 11.4 and 11.7 percent, respectively. In addition, health and social works; hotel and restaurants; and real estate, renting and other business activities subsectors grew faster in FY16[61].

10. Foreign exchange reserves reached USD 30.2 billion at the end of FY16, around 8 months of prospective import. Bangladesh Bank tried to smooth out any large fluctuations in the exchange rate and nominal Taka-USD exchange rate remained broadly stable.

[57] Bangladesh: Strategy for Sustained Growth, World Bank 2007 projected that a rate of growth of GDP of 7.5% would result in the country joining the ranks of middle income countries within a decade (by 2016).
[58] Bangladesh Bank (Central Bank of Bank). Annual Report 2015-16.
[59] Source: Bangladesh Bank. www.bb.org.bd.
[60] Bangladesh Bank (Central Bank of Bank). Annual Report 2015-16.
[61] Bangladesh Bank (Central Bank of Bank). Annual Report 2015-16.

Agricultural sector

11. **Long-term growth scenario:** Since PROVATI3 project aims to directly contributing to agricultural sector and assisting farming families, it is important to have correct perspective of agricultural sector. Agricultural production has increased substantially in Bangladesh over the past 20 years. Expansion of farm output has come from a transformation of rice production from extensive low input subsistence systems to highly intensive high input systems using modern rice varieties, a large increase in fertiliser use, and a substantial increase in irrigation during the dry winter. The country is now more or less self-sufficient in rice in a normal year. There is, however, no room for complacency as Bangladesh has to import rice following bad floods or droughts at critical crop growth periods, and with continued population growth and loss of land to urbanisation (about 1% of land per year), there is an ever increasing need to produce more rice every year.

12. Agriculture accounts for 15.4 % of GDP and grew by 2.8 % in FY16, down from 3.3 % in FY15 and 4.4 % in FY14, due mainly to weaker growth in crops and horticulture sub-sector.

13. **Diversity and Subsidies**: In the light of the soaring food prices seen globally in 2008, the Government became concerned that imports may no longer be available at affordable prices; a new policy of self-sufficiency is being purposed by the present government. Although there is some scope to increase production, the yield gap between research and farmers' output for the major rice crops has narrowed. Agricultural land is decreasing due to increasing population and urbanization, within agriculture land is being diverted away from staple cereal crops to uses such as horticulture, fish ponds, and to grow maize to feed poultry. To increase production while keeping prices as low as possible, the government has also expanded a programme of subsidies for inputs (fertilizer and fuel). These subsidies account for over three-quarters of government expenditure for agriculture. But subsidies in urea fertilizer have been reduced by increasing price from Taka 12 per Kg to Taka 20 per Kg. This may also reduce wasteful use of urea.

14. **Profitability:** Within agricultural commodities fruits/vegetables and fisheries are more profitable than rice that is encouraging farmers moving away from rice production. Consultations with farmers reveal that increasingly they are looking more profitable commodities compared to rice. The price of has remained steady, sometimes low at the time of harvest, whereas cost of inputs and labour has gone up by making rice production less profitable. The project such as PROVATI3 may contribute to reducing cost of production.

15. Land holdings are becoming increasingly fragmented as farms are divided between sons on inheritance, and land (especially that of the larger land owners) is sold off or rented out as people move into non-farm occupations. Agriculture is increasingly in the hands of marginal and functionally landless farmers[62], many of whom produce primarily for subsistence. Although staple food production has kept pace with rising population, with rising incomes there is increasing demand for better quality foods – fruit, vegetables, meat, milk, eggs and fish. Diversification into these higher value products puts further pressure on land for paddy and on the national goal referring to the self-sufficiency in rice. Agriculture also has to take the brunt of damage from natural disasters and climate change.

16. **GoB Development plan:** The broad directions for development over a longer time-span are set out in the Perspective Plan for Bangladesh 2010-2021. Amongst other things, this plan would like to see genuine devolution of power to the local government level, and also says that in the process of socio-economic development of the country, agriculture will still continue to play a vital role in the long run in terms of food security, generation of income and employment for the

[62] In 1960, 84% of land was operated by the 48% of farmers who had medium and large size holdings (over 2.5 acres of land. By 2005, only 12% of farmers still operated over 2.5 acres, and 60% of all land was in the hands of the 88% farmers with less than this amount of land (BBS, Agricultural Census 1960, Agricultural Sample Survey 2005)

multitudes living in the countryside and for eradicating poverty. More elaborate plans are available at the 6th five-year plan, which clearly identifies rural and agricultural development as the priorities for the government. Rural infrastructure development and broadening access to financial service are important elements in the plan.

Donor programmes

17. **The World Bank:** The World Bank Group's **Country Partnership Framework (CPF) for 2016-2020** supports Bangladesh to achieve its vision of reaching middle-income status by its 50th birthday in 2021. From 2016 to 2020, the World Bank Group's technical and financial assistance to Bangladesh will focus on (i) accelerating growth by helping to remove bottlenecks to growth and shift more financing to increase electricity supply and improve transport connectivity; (ii) foster social inclusion by building on Bangladesh's impressive gains in human and social development; and (iii) strengthen climate and environmental management with the aim to enhance Bangladesh's resilience to natural disasters, improving water and natural resource management and modernizing agriculture. The framework is anchored in the government's seventh Five Year Plan, and aligned with the World Bank Group's Systematic Country Diagnostic (SCD) for Bangladesh. IDA's portfolio in Bangladesh as of April 10, 2017 stands at $10.1 billion in 41projects[63]. The most relevant project of the World Bank to the PROVATi[3] project is Bangladesh Weather and Climate Services Regional Project.

18. **ADB:** ADB will adopt a broad-based approach in order to respond flexibly to the needs and demand of Bangladesh over the country partnership strategy (CPS) period, 2016-2020. ADB assistance is aligned with the Bangladesh government's Vision 2021 and its Seventh Five-Year Plan, which lays out a roadmap for higher, sustainable and inclusive growth. The CPS 2016-2020 will help ease infrastructure constraints, boost human capital, promote economic corridor development, improve rural livelihoods, and provide climate- and disaster-resilient infrastructure and services. ADB will increase public- and private-sector lending to Bangladesh to $8.0 billion for 2016 through 2020 to help the country build the infrastructure and skills needed for a strong, diversified economy and to strengthen trade links within the region[64].

19. **USAID:** Through the U.S. Government's Feed the Future initiative, USAID programs improve food security, economic growth and nutrition to address hunger and end poverty in Bangladesh. Its present focuses in south-western parts of the country in the form of agricultural value chain development. It does not have any project in the PROVATi[3] areas.

20. **EU:** The 2014-20 indicative programme (€690 million) focuses on 3 sectors: a) governance, b0 food & nutrition security, and c) education & skills. From 2016, EU aid will align with a) Bangladesh's 7th Five Year Plan 2016-20, and b) the EU+ joint programming process, together with interested EU+ countries. In 2014-20 Bangladesh will also receive an estimated €104 million under the Asia Multiannual Indicative Programme that includes i**nfrastructure development** including climate change mitigation and adaptation initiatives, sustainable energy and financing for small firm.

[63] Source. www.worldbank.org/en/country/bangladesh/overview#2
[64] https://www.adb.org/countries/bangladesh/strategy

Appendix 2: Poverty, targeting and gender

Poverty and its drivers

1. **Introduction**. The overriding goal of the government and IFAD is to reduce vulnerability and poverty of the poor and small producers in a sustainable manner. This goal has been clearly articulated in the 7th Five Year Plan of the GoB, as well as in IFAD corporate strategic objectives and Country Strategy Opportunity Paper (COSOP 2012-2018) for Bangladesh.[65]

2. Poverty and drivers in project area. The overall population of the area is about 2.59 million, and the proportion of women headed households is around 10%. In Bangladesh, there are two types of poverty lines: upper and lower poverty lines. According to both, Rangpur division (the main proposed project site) is the worst in the country. The map below shows the proportion of the population living below the lower poverty line, and it can be seen that the whole of Kurigram and parts of Jamalpur and Gaibhandha districts have over 35% of people living below the lower poverty line – compared with the national average of 17.6 %.

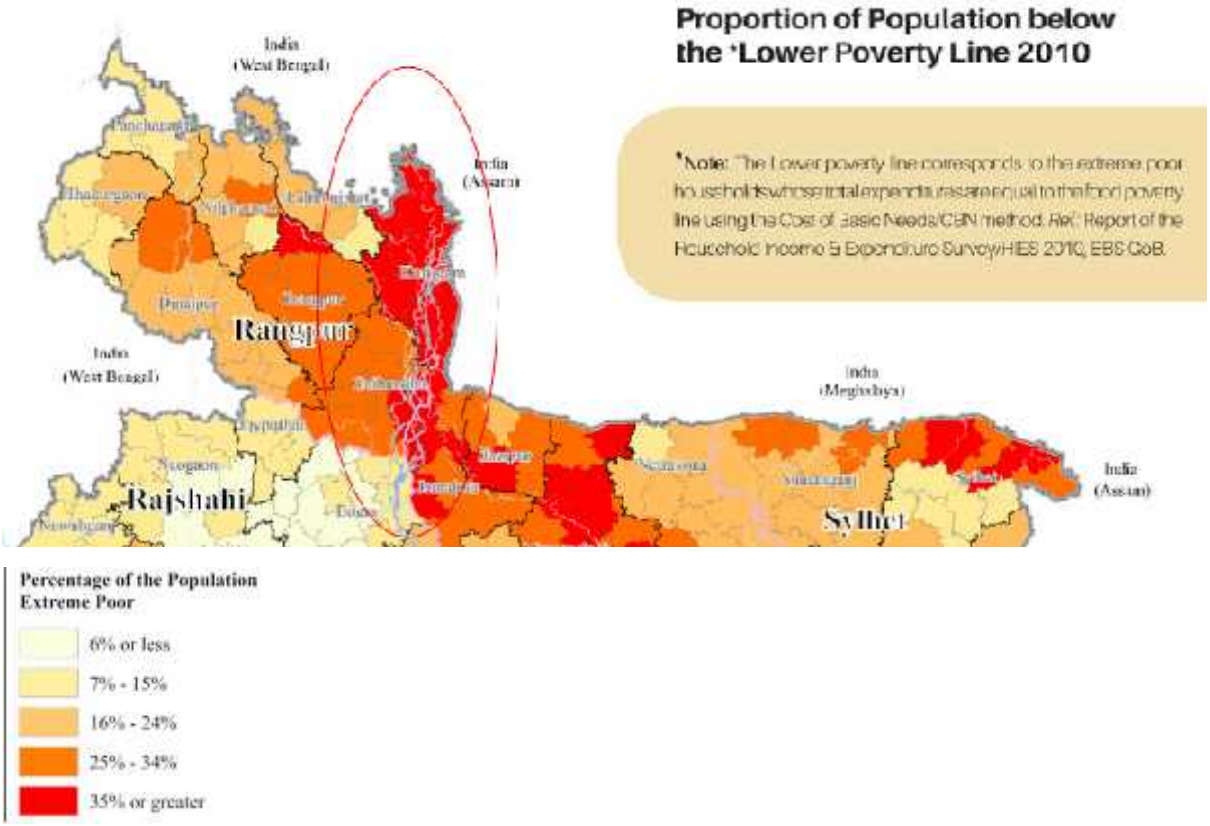


Figure-A2.1: Target districts showing the proportion of population below the lower poverty line in 2010

Source: Poverty Maps of Bangladesh 2010 (BBS, World Bank, WFP. undated)

The same source confirms that Rangpur division also has some of the lowest agriculture wage rates in the country. Many of those living under the poverty line are jobless, with no/minimal

[65] See Bangladesh Climate Change Strategy and Action Plan. GoB. MoEF. 2009 and IFAD 2012-2018 COSOP Strategic Objective 1 (poor people in vulnerable areas are enabled to adapt better their livelihoods to climate change).

assets or land and in Rangpur, over a third of households were receiving some form of social safety net funding (BBS, 2010).

3. **Poverty drivers** include a complex and interrelated set of factors including the following:

- Lack of government investment in roads and markets, resulting isolation from market and labour opportunities, social services and high costs/ poor profits from economic activities
- Climate change, which is rendering increasingly unpredictable and destructive the normal flooding patterns that sustain agriculture so that losses associated with such floods, erosion and rains are also combining with a lack of water during dry seasons, and people being cut off for periods of time – Rangpur division, where the project is concentrated, has the highest rice production loss in the country due to excessive rains and floods[66]
- Lack of off-farm opportunities as seasonal and longer-term household buffers to shocks (WFP, 2016)
- Weak local institutional capacities (e.g. lack of knowledge, resources and accountability for their rights and responsibilities)
- Under-employment of youth and women due the above and social barriers including gender norms, unavailability of demand-led skills development with accessible eligibility criteria, delivery modalities and venues (in Kurigram, for example, less than 1% of the population had attended any form of vocational training (BBS, 2010), Rangpur district has the lowest rate of men employed in business and of skilled workers, but the highest rate of unskilled male workers. For women the story is similar.
- Lack of longer term strategic capacity development to capitalize on GoB and donor initiatives to provide assets and income opportunities, so that those targeted do not slip back into poverty
- Malnutrition, which appears as both a result and a driver of poverty e.g. health related expenses were cited as major expenses by households.

21. **Poverty and food insecurity**. These are interlinked. About 20% of the country's 160 million people cannot afford an adequate diet. The poor do not have the purchasing power to secure their access to food, even when it is available in local markets. Chronically underfed and highly vulnerable, this segment of the population remains largely without assets (other than its own labor and that provided by poverty alleviation programme) to cushion lean season hunger or illness, flooding, and other calamities. The poor are highly vulnerable to shocks such as natural disasters or crop failures that cause sudden losses of real income and, therefore, transitory food insecurity. Sudden increases in food prices, such as the surge in 2007–08 and again in 2010–11 also result in transitory food insecurity, particularly for low-income households, by reducing their real income. Family coping strategies such as the consumption of less food, the withdrawal of children from schools, and the distress sale of productive assets often aggravate the risks of destitution (IFPRI, 2013).

22. **Malnutrition**. The following box taken from the USAID Bangladesh Nutrition Profile (2016) sets out the national situation.[67]

[66] Table: 4.2.2, Yearbook of Agricultural Statistics-2015. BBS. 2016.
[67] Available at https://www.usaid.gov/sites/default/files/documents/1864/USAID-Bangladesh-Profile.pdf

Box A2-1: Nutrition situation in Bangladesh

1. Despite significant economic progress and poverty reduction, a quarter of Bangladesh's population remains food insecure, and the Bangladesh Development and Health Survey of 2011 found **moderate to severe food insecurity among 10.1% of ever-married women**. Loss of arable land, rising sea levels, frequent flooding and extreme weather patterns, due in part to climate change, compound the threats to food security. Undernutrition is exacerbated by **low dietary diversity**, with 70% of the diet comprised of cereals, and **inadequate protein and micronutrient** intake. **Poor sanitation and hygiene**, which result in diarrhea and other infectious diseases, also contribute to undernutrition in children.

2. Gender inequality in decision-making related to household production and consumption also factors into the subsequent poor nutritional status of women and young children. **Stunting** affects almost half of children under 5, which means that 7 million children are unable to develop to their full physical and mental potential. Sixteen percent of children under 5 are acutely malnourished; and a **quarter of women of reproductive age are undernourished**. Although the exclusive breastfeeding rate in infancy has increased over the past five years, only 21 percent of children between 6-23 months old are receiving a minimum acceptable diet.

Source: Bangladesh Nutrition Profile. USAID. 2016. Note: Boldface is not in original publication.

IFPRI has also confirmed that rice forms the overwhelming share of most Bangladeshi's diets but that women's dietary diversity nationally has increased.

23. **Nutrition in project areas.** The maps below show that the project areas in particular have some of the highest stunting and wasting rates in the country.

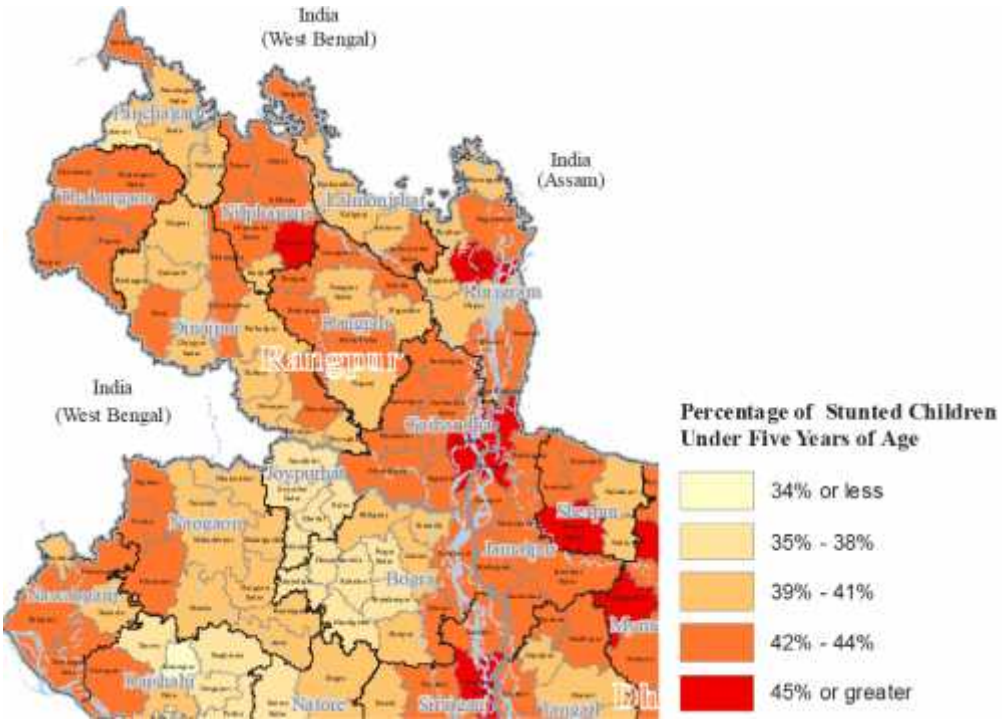


Figure-A2.2: Percentage of Stunted Children Under Five Years of Age, 2012

Source: WFP. Undernutrition Maps of Bangladesh 2012.

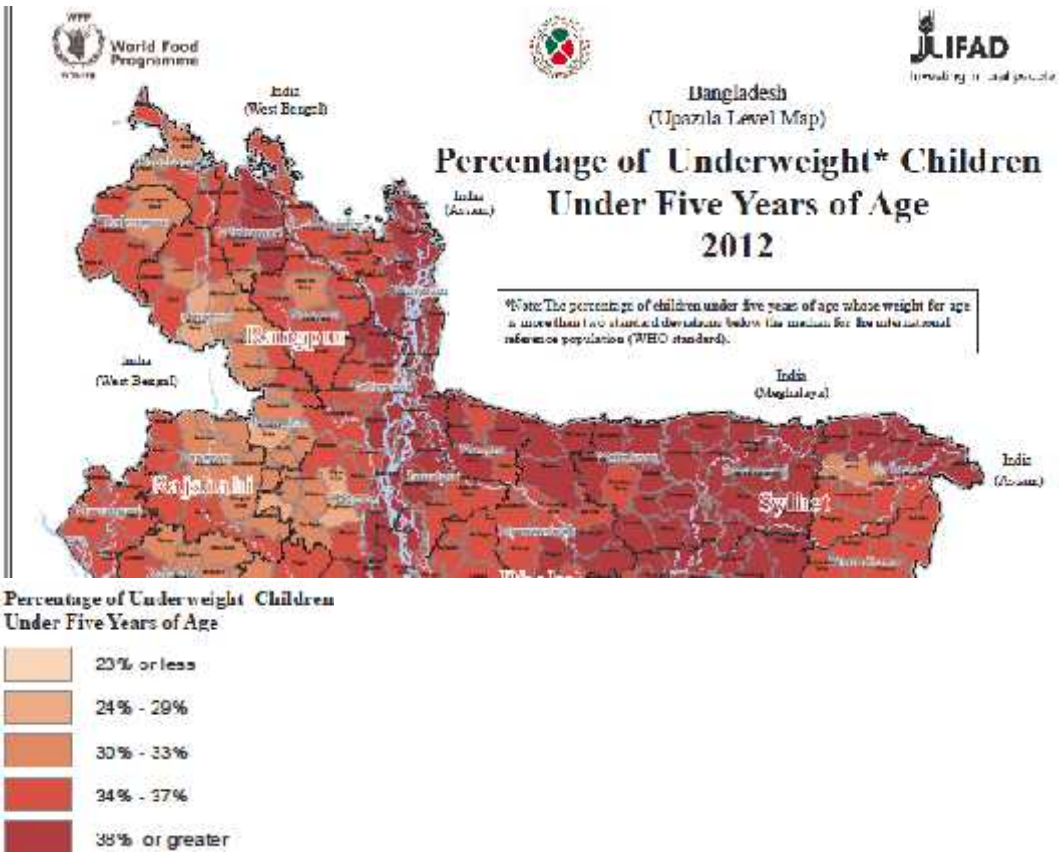


Figure-A2.3: Percentage of Underweight* Children Under Five Years of Age 2012

Source: WFP. Undernutrition Maps of Bangladesh

24. During climate related and other shocks, children's nutrition is often protected at the detriment of the mother. Coping strategies, such as eating fewer meals per day, eating less at each meal, skipping meals, eating less preferred foods, and decreasing dietary diversity were consistently listed as post-disaster coping strategies in the project areas (WFP, 2016).

25. As well as food-based causes of malnutrition, non-food based issues include:

- In Bangladesh, the use of unsafe water for bathing and washing is a major cause of diarrhoea and other infections that lead to undernutrition, as is the use of open space as toilet.
- A mother completing secondary school is associated with having significant protective effect against her child being stunted, and this is also significantly correlated with increased dietary diversity
- In Bangladesh, the use of unsafe water for bathing and washing is a major cause of diarrhoea and other infections that lead to undernutrition, as is the use of open space as toilet (WFP, 2012).
- Underage marriage – most women met during the March 2017 mission were married between 12 and 16 years of age and had had their first child "immediately".

26. While not a nutrition focussed project, the table below shows how the project will nevertheless contribute to nutrition co-benefits and the IFAD Nutrition Action Plan (2016). In addition, the project will contribute through the provision of clean, safe and hygienic food marketing through improved road distribution and reduced opportunities for food loss, as well as the provision of clean water and sanitation in markets.

Table-A2.1: Project contribution to IFAD's Nutrition Action Plan

IFAD's Nutrition Action Plan Strategic Objectives			
Nutrition sensitive projects shape agriculture and food systems to contribute to nutritious diets	Projects promote behavior change communications, and related nutrition education activities, to improve food choices and nutrition enhancing preparation and post-harvest practices	Projects promote equality and empowerment of women in ways that improve nutrition	Policy engagement, advocacy, and partnerships, and research and knowledge management, contribute to a more supportive nutrition governance, an enabling environment, and projects that improve nutrition, at global and country levels.
Project contribution to strategic objectives			
Increased availability of meat and food crops in markets Increased income to buy food that cannot be produced	Nutrition education for LCS members (70% women) including: improved nutritional decisions during lean periods and shocks, safe drinking water, sanitation/hygiene and nutrition, especially that of infants; pregnant/and pregnant and lactating mothers will be targeted with specific training; social issues impacting on nutrition outcomes e.g. underage marriage and conception, importance of education will also be covered; how to invest income received through wages/ IGAs for nutrition outcomes, importance of consumption as well as sales of fish, crops and livestock/ poultry. The project will seek practical ways to address LCS women's extra calorie needs e.g. with adequate rest breaks and facilities, provision of drinking water and possibly nutritious snacks, improved mechanization and work practices based on women's own suggestions to reduce drudgery and physical burdens.		MTR and final evaluation will contribute evidence on malnutrition impacts for potential sub-national policy uptake.

Targeting

27. **Target groups**. The project will focus on five target groups: (i) landless ultrapoor labourers, especially women (ii) sharecroppers/ small farmers with access to land (iii) micro-entrepreneurs, especially youth including women (iv) formal and informal local institutions with a role in project actions e.g. market management committees and traders' associations, Union Parishad Committees and early warning groups and (v) LGED and DDM. The matrix of target group characteristics is shown below. It draws on a recent baseline by the World Food Programme (WFP) in northwest Bangladesh (WFP, 2016) and field observations from the March 2017 mission. Note that the IFAD target group (ii) combines the WFP "labourer/ sharecropper" and "small farmer" profiles.

Table-A2.2: Matrix of Target group characteristics

IFAD target group	**Human assets (HH size, literacy/numeracy, skills)**	**Financial assets (main income/ expenditure sources, savings, debt)**	**Physical assets (land, livestock, productive)**	**Social**
TG1: landless ultrapoor labourers, especially women	HH size: 5 Minimal schooling (though children mostly in school). Mostly not literate/ poor numeracy. Poor financial management Undeveloped business skills Unskilled labour	Depend on wage labour including cash for work schemes Seasonal migration seen as expandable livelihoods strategy. Minimal/ no remittances. No savings, most are in debt to manage HH expenses, dowry and medical fees; credit agencies as receive regular cash wages and easy to convince/ exploit.	No land No livestock Mobile Fishing net	Not members of groups except LCS and similar
TG2: sharecroppers/ small farmers with access to land	HH size: 5 Minimal schooling (though children mostly in school). Some are	Depend on wage labour, agriculture for consumption/ sale (livestock, crops)	Own: 5-90 decimals (approx.0.02 to 0.36 ha) Cultivate: 30- 100	Some are members of informal market trader

	literate/ numerate. Basic financial management Basic business skills Unskilled labour	No incentives to produce more without better market/ road access	decimals (approx. 0.12 – 0.4 ha) 0-4 cows owned/ shared, 0-2 goats 1-4 each of fruit trees e.g. banana, jackfruit Mobile Fishing boat	associations, most affiliated to micro-credit organizations
TG3: micro-entrepreneurs, especially youth including women	HH size: 5 Minimal schooling (though children mostly in school). Some are literate/ numerate. Basic financial management Basic business skills Unskilled/ semi-skilled	Already engaged in/ aspiring to micro-enterprises e.g. transport for hire, sanitary ware production stimulated by WASH / similar campaigns, tea and food shops, tailoring, cosmetics.	Similar to TG2	Similar to TG2
TG4: local formal and informal local institutions with a role in project actions e.g. market management committees and traders' associations, Union Parishad Committees and early warning groups.	Formal MMCs: mostly ex-officio members including Union Parishad female and other representatives. Generally unaware of rights/ responsibilities and often not functioning effectively. Informal trader associations: in effective manage market cleaning functions, fee based. Not recognized by GoB so cannot access training etc. Union Parishad Committees: variable effectiveness and voice/ relationship with Upazilla management.	MMCs: often cannot access expected funds released from Upazilla level to carry out functions. Informal trader associations: run on voluntary contributions to keep clean / small repairs etc but insufficient to upgrade/ for major repairs/ protect from floods. Union Parishad Committees: often financial matters not shared with constituents, UPs prepare their annual budgets and amounts vary. Often unaware of rights/ responsibilities and struggle to deliver adequate services.	Not focus of research	n/a
TG5: LGED and DDM.	LGED: need upgrading in terms of designing climate-resilient and gender-sensitive infrastructure, including low-cost options for erosion-prone areasDDM: Under component 3 new ways of distributing early warning will be developed, including gender sensitive strategies for accessing information	LGED has significant budget DDM is government financed	LGED has extensive facilities DDM has training facilities in Dhaka and can coordinate in the field	n/a n/a

28. **Target population**:. First, since roads and markets will be used by all, the population irrespective of income level and profession will be an overall target group of the project. Second, the area is dominated by agricultural labour, marginal and small farmers, petty traders and transport workers, micro-entrepreneurs, landless people and poor women who will constitute the biggest users and beneficiaries of the project. Third, the area faces seasonal unemployment (September to November) when a lot of poor and marginalized people migrate to cities who may continue stay in the area if economic development is stirred due to investment in infrastructure. The project will indirectly benefit this category of population. Fourth, the economy and livelihoods in the selected Upazillas is predominantly dependent on agriculture and agricultural labour. Agricultural input sellers, extension workers, small traders, shop-owners etc. are also beneficiaries of the project. Fifth, the young adults from poor and near poor families and LCS groups will be particularly targeted for off-farm employment through

vocational training. And finally, the local flood forecasting system will be targeting all population of 19 Upazillas of three districts, especially those living in 69 char unions (of these three districts).

29. **Poverty targeting strategy.** The project targeting strategy focuses on vulnerable poverty pockets, especially women and youth, where infrastructure with capacity development support will improve and make more resilient poor rural peoples' livelihoods as well as incentivize increased agricultural production/ boost profits for smallholders. Infrastructure and cash for work investments are important building blocks for sustainable livelihoods, but poor people need additional capacities to benefit from the resulting development; the project will therefore blend geographical and social targeting approaches and provide "software" as well as infrastructure "hardware" to empower the ultrapoor, especially women, and micro-entrepreneurs, especially youth, to benefit from diversified off-farm livelihoods opportunities arising from being better connected, whilst connecting smallholders with markets despite climate threats. This will be done by addressing some key barriers – for LCS (target group 1) households, this is start-up capital and the lack of entrepreneurial and financial management skills of LCS members. For young people, a lack of vocational skills means that they are held back from the potential off-farm diversified livelihoods options that better infrastructure can bring. Without these skills, experience of the EU for example is that LCS members may not have the capacities to develop and invest in a longer-term livelihoods strategy and that income resulting from the project may be spent on other expenses. Without these skills, the young depend on vulnerable farming activities, agricultural labour for poor wages and migration. Whilst better connectivity and markets will help smallholders within the zone of influence of the infrastructure reduce loss and improve profits, the project will also focus on supporting off-farm livelihoods options to build resilience of those without the option of expanding farm-based ones.

30. The project focuses on increasing communities' resilience through three components that have three mutually reinforcing pathways to lift target population out of poverty and improve resilience of livelihoods. The first component improves design of infrastructure, rehabilitates and upgrades existing infrastructure to create connectivity that in turn reduces production costs, creates access to services and markets. The second component strengthens skills and creates off-farm employment to increase and diversify poor people's incomes (especially through off-farm activities). The third component makes improved knowledge on the potential impact of floods, river erosion and land accretion accessible to the local population and technical staff, thereby increasing preparedness, and reducing loss.

31. **Ending extreme poverty means targeting beyond the ultra-poor.** The background paper on ending extreme poverty for the Seventh Five Year Plan for Bangladesh highlights that a holistic approach takes account of the "snakes and ladders" poverty dynamics, where efforts to climb up the income ladder receive setbacks from various shocks (e.g. health, disasters) – but the point is that non-poor and moderate poor as well as the poorest are also vulnerable, though not to the same extent. This means that a simultaneous intervention designed to prevent slippages due to shocks that affect all groups is required for the eradication of extreme poverty as expected by Sustainable Development Goal number 1. This is consistent with IFAD's Targeting Policy, which also "recognize(s) that relative wealth or poverty can change rapidly due to external shocks and that this vulnerability needs to be addressed". The infrastructure and capacity development focus of this project therefore aim at catalyzing economic activity in broad geographical areas and micro-entrepreneurs, whilst focussing special efforts on developing the skills of the poorest/ most vulnerable to take advantage of new infrastructure-related opportunities.

32. In terms of geographical targeting, the project is in one of the poorest and climate vulnerable areas in northwest Bangladesh. The project will start with selecting markets in marginal areas, that can be connected with higher order roads. Once a market is selected, adjunct roads are assessed and priority is given to roads of high importance in terms of connecting to higher

order roads, growth centers or water-ways. Roads connecting other villages might also be considered for either pavement/upgrading or simpler earth-work/back-filling and maintenance.

33. The project will ensure that wherever minority groups and indigenous people are concerned with infrastructure development, the project team will seek their Free, Prior and Informed Consent[68]. Specific consultation processes might be required during the consultations process for market development and master planning.

34. **Targeting principles**. In addition to the IFAD Target Policy, six supporting targeting principles were agreed at designed phase: (i) direct targeting of ultrapoor and self-targeting of people with potential for off-farm economic activity (ii) not all actions target all target groups (iii) geographical targeting to focus on vulnerable poverty pockets (iv) pilot innovative low-cost solutions to connect hard-to-reach poor even in erosion-prone areas (v) participatory approach to ensure investments meet the needs of target groups (vi) actions will be sequenced to best support targeting outcomes. An innovation of this project will be to strive for sustainable livelihoods in the face of climate change even for the hard-to-reach ultrapoor.

35. **Target group benefits from project**. The project covers some 303,000 households from 90 Unions falling under 25 Upazilas of Kurigram, Gaibandha, Jamalpur, Rangpur, Nilpharmari and Lalmonirhat districts of Bangladesh. These households are targeted for livelihoods enhancement and social development.

36. The project's entry point is the development of climate resilient infrastructure in the most remote, vulnerable and poor Unions of the project area (i.e. markets and connecting roads). Infrastructure investments will benefit from improvements in technical specifications with input from leading national experts/institutions (BUET), and participatory development of site-specific master-plans. Ultra-poor women and men working on the construction and maintenance of this infrastructure (Labour Contracting Societies – LCS), will benefit from capacity building and at least 65% LCS households will be engaged in at least one income generating activity by the end of the project. Road connectivity and increased investment in market infrastructure will increase economic activities within the project Unions, reduce input prices and increase sales volume, contribution to agricultural and non-agricultural growth of the local economy. Skills training to mainly younger members of poor and economically active poor households, especially but not limited to the area of construction, will result in increased employment and diversified income sources for participating households, thereby reducing their vulnerability and increasing resilience. Provision and improvement of monsoon flood information to villages, will reduce losses during annual floods. Capacity building for market management committees and trader associations will ensure the proper operation and maintenance of infrastructure.

37. A summary matrix on expected project benefits to target groups as stated in the Targeting Checklist is given below – this should be seen together with the project gender strategy below, which sets out actions to ensure project benefits to women as well as men.

[68] How to seek free, prior and informed consent (FPIC) in IFAD investment projects https://www.ifad.org/documents/10180/beec86e1-270d-45a1-8786-4b749c9db733

Table-A2.3: Matrix of expected project benefits for target groups ("beneficiaries")

Beneficiary type	Beneficiaries (#)		Nature of benefits
I. Overall beneficiaries			
1	Households and population in 90 project Unions (#)	Project Target: 637,000 HHs, and overall population 2.59 million	Improved transport and access to markets, educational institutions, health services; improved livelihoods opportunities due to increased investments.
II. Direct beneficiaries			
1	LCS members for construction of markets and maintenance of project roads (at least 50% are poor women) (#)	15,000	Assured employment as day labour; profit from LCS contracts; skill development training; investments in income generating activities.
2	Permanent shop owners and temporary traders (large and small markets) (#)	10,000	Increased sales due to increased number of buyers and future investments; increased profits.
3	HHs from market and road catchment area (#)	303,000	Improved access to buyers, better price, improved access to good quality inputs and support services.
4	LCS members in capacity building, livelihood development and economic & social empowerment program (#)	15,000	Training and advice on business management, household approach financial literacy and social issues.
5	Participants in skill development and vocational training	30,000	Self and wage employment and increased income
6	Households covered under local flood information system (174 Unions of Kurigram, Gaibhandha and Jamalpur districts) area (#)	488,370	Early flood information; reduction of loss of assets; better planning for relocation during extreme flood conditions; better farming decision making.
7	LGED engineers	60	Capacity development in climate resilient infrastructure design

Gender equality and women's empowerment

Brief situation analysis

38. Gender aspects of the project. About 10% households are headed by women in the project area. Most of such households are extremely poor. Limited access to land and other productive assets, limited income generating activities other than agricultural labour, and very limited access to government services made such families very vulnerable and force them remain poor for indefinite period of time. Poor women however engage in post-harvest activities – winnowing, drying and storing paddy/wheat/maize. Other economic activities that women are engaged in are kitchen gardening, looking after livestock, etc.. But many family do not raise livestock due lack of space and as many of them live on *khas* land, embankment etc.

39. The PROVATi[3] prepared a gender action plan. The project activities will directly create employment opportunities for the poor women: a) LCS construction contracts will create wage employment and generate profit after completion of the contracts (performance based contracts); b) LCS crews will receive guaranteed employment with monthly salary for road maintenance works (fixed-pay contract); and c) a portion of LCS members and or their family members will have the opportunity for receiving project-funded vocation training (subsidies

training). At least 70% of LCS members and 30% of vocational trainees will be female. The flood information to be generated under Component 3 will be disseminated through village-based groups with majority women members.[69]

40. **Gender and infrastructure in Bangladesh**. Increasing attention at the policy level has been paid to the gender dimensions of infrastructure development, maintenance and usage, with national and LGED policy recognizing opportunities for women's employment, and increasing their voice in ensuring that infrastructure meets their practical gender needs related to biological differences with men, as well as strategic interests such as increased mobility or economic market opportunities. These policies broadly reflect international guidelines and conventions from e.g. UNFCCC, UNISDR as well as gender/ infrastructure guidelines of the Asian Development and World Banks. Recognizing these, the GoB and donors such as ADB, DANIDA, DFID and the EC as well as IFAD have supported "Labour Contracting Societies" as a pro-poor cash for work scheme targeting ultrapoor women in particular. Various models exist, even between IFAD projects, with difference in contract duration, proportion of women employed, additional support and training provided - usually in IGAs. LGED informal feedback on mission was that whilst managing LCS can be more effort, that their work is usually of good quality, and the design mission identified opportunities to step still further occupational safety aspects.

The box below sets out some key issues from a climate change perspective.

Box: Infrastructure in Climate Change and Gender Action Plan for Bangladesh

Current research suggests that there is gender-differentiated access to use of and control over infrastructure facilities and services by men and women, which are linked to inequalities in social structure and within the household, property rights and culture and tradition. Yet, in reality, infrastructure projects do not consider the different needs of women and men, and are often gender insensitive, because it is incorrectly assumed that women and men will automatically benefit equally from new infrastructure. In most cases the effects of social and economic impacts, whether positive or negative, are not considered.

Gender mainstreaming should, therefore, not only be regarded as a factor requiring attention in infrastructure projects, but rather must be considered as a critical factor in ensuring the project's success and sustainability. For example, in Bangladesh in general, women are not involved in the design of cyclone shelters, transport networks, or even in the design of their own shelters. This is notwithstanding the fact that flood and cyclone shelters are gender sensitive as these facilities provide private spaces for women. In instances where women do not have access to safe and private toilet facilities in such shelters, they experience considerable challenges in maintaining personal hygiene. Appropriate infrastructure design in terms of providing separate toilets in market areas, and meeting rooms for women in the local government buildings also supports women's mobility.

Employment opportunities in the construction and maintenance of infrastructure could create new opportunities for women in the building sector, and can lead to a greater role in ongoing infrastructure management through their participation in local government committees that are responsible for such planning and maintenance. Given women's limited access to income opportunities and household resources, they may also have different views on priorities for infrastructure or specific design elements.

[69] A pilot project of similar nature showed that women disseminate flood information more efficiently and use such information more effectively. See Appendix 2 for further details on target population, gender issues and gender action plan and for poverty and gender checklists.

Source: Gender and Infrastructure section, Climate Change and Gender Action Plan for Bangladesh (MoEF, 2013).

41. The design mission included interviews with women and men, in separate groups as well as within household settings. In response to questions about what difference roads would make to their lives, women and men cited time savings, reduced expenses and market opportunities as benefits. Women tended to cite smaller time savings compared to men, likely due to their more limited mobility at present. There were regional variations but women reported an expected 4-5 hours saved a week from easier school journeys, less time to market/ medical facilities/ place of work, and men reported around 6-8. This is an important expected benefit also in the light of climate change, which tends to further exacerbate women's already disproportionately heavy time and work burden.

42. **Project implications**. This project seeks to build on these experiences and go further – within the framework of Agenda 2030 and the SDGs, it will seek not only to provide employment opportunities but also support LCS members to "graduate" permanently out poverty in line with national development goals. This involves a focus on ensuring adequate earnings as well as support to make the most of these earnings so that members do not fall back into poverty and debt immediately after the contract. Time savings and occupational safety is also key. See Appendix 4 for more details.

43. Moreover, in the ongoing CCRIP project the approach for the construction WMSs contributed to to empowerment. Namely, before the construction of a WMS, the project verified if land was available and whether women entrepreneurs are present in the region. Subsequently, the final shop traders were selected and formed an LCS to construct the section. The rationale behind this is that they can use their profit share to invest in their own practice. Moreover, this avoids local elites or husbands of entrepreneurs to take over the shops.

44. **Gender and skills development.** The context analysis in the National Strategy for promotion of Gender Equality in Techical and Vocational Education ("TVET", see below for more on the policy) highlights that:

- There is a lack of reliable data, but that women on average comprise around 24 percent of participants in TVET, and that women instructors also made up around 20 percent of the total.
- Occupational segregation, especially in rural areas, limits women such traditional areas as sewing, food preparation, and gender stereotypes need to be changed
- Most women are engaged in the informal sector with hazardous/ exploitative agreements and no/ minimal skills development opportunities, hence reinforcing informal apprenticeships with theory and occupational sensitization of employers/apprentice recommended
- Social barriers e.g. limited mobility limiting women's choice of occupation also exist, requiring communications efforts to ensure women can effectively participate
- The Grade 8 education level requirement for entry into current vocational training is a significant barrier to women in especially rural Bangladesh, and the GoB has considered removing it
- Gender pay gaps exist and should be eliminated.

45. **Project implications.** The project will take into account these barriers and resulting priority actions in the policy in order to inform the LCS "empowerment" approach and meet a target of at least 33 percent women overall and 15 percent in construction related areas; relevant actions include subsidized courses for women, inclusion of informal sectors and incentives to employers to employ females. In addition good practices will be built upon e.g. the Ministry of

Industry "Bangladesh Industrial Technical Assistance Centre (BITAC) which created employment for 145,000 women out of 342,000.

46. **Gender and early warning systems in Bangladesh**. The national Climate Change and Gender Action Plan (ccGAP) for Bangladesh (see below) highlights that women do not always receive information directly, or in ways that are accessible to them, and they are not normally consulted on early warning design or involved in dissemination of warnings. Inclusive and gender sensitive early warnings and infrastructure breach is one of the action areas of the ccGAP.

47. **Project implications**. The project will contribute to the ccGAP objectives and actions set out below, in line with international standards and guidelines e.g. Sendai Framework for Disaster Risk Reduction 2015-2030, UNISDR so as to ensure an inclusive and gender responsive system and communications.

48. **Lessons learned**. A recent evaluation of IFAD's portfolio with a gender perspective (IFAD. IOE. 2017) offers important lessons including:

- provision of general infrastructure has helped to improve women's lives in many cases, but needs to be combined with other practices to make an effective contribution to gender equality and women's empowerment
- Functional skills training is widely reported as useful but some evaluations raised concerns that the types of training provided tended to confirm gender stereotypes and were not sufficiently oriented to women's strategic needs
- Working with men is important to bring about changes.

49. The project will make serious efforts to integrate this learning through an LCS "empowerment" strategy that also offers life and business skills training as well as functional literacy, and also skills development training for women in the construction related sectors and beyond.

Policy

50. The national **Climate Change and Gender Action Plan (ccGAP) for Bangladesh (MoEF, 2013)** is a key document for the project. It is based on the national action plan and one of the four priorities is infrastructure. Within this area the focus is on increasing women's participation in climate change related infrastructure development and management, monitoring, maintenance and secure and uninterrupted mobility of women in the transport sector. The LGED is identified as having a leading role to play.

51. The project will contribute directly to the following ccGAP objectives and actions, and integrate them into the project Gender Action Plan and project log-frame as appropriate.

52. The project will also contribute to the ccGAP's objective concerning a more **gender sensitive enabling environment** by promoting local guidelines that incorporate women's participation in bidding documents and contractors' contracts (including occupational safety, wage parity) as well as **gender sensitive infrastructure** that meets the needs of females as well as males. Gender sensitive guidelines developed for other IFAD investments in Bangladesh will be adapted and scaled out.

53. The **LGED also has a gender strategy (LGED, 2014),** which undertakes to make infrastructure women friendly and create employment opportunities. LGED projects are to have gender action plans and gender sensitive implementation guidelines, which are to be reviewed by the LGED Gender and Development Forum. Other key provisions include:

- All data to be sex disaggregated
- Infrastructure to be women friendly with exclusive facilities for women
- Women to participate in LGED activities including equal pay
- Gender sensitive training content and organization
- Gender-sensitive budget with adequate provision for planned activities including evaluations.

54. The **National Strategy for promotion of Gender Equality in Techical and Vocational Education and Training** (TVET) (GoB, 2012) sets out 6 strategic objectives to increase women's access in skills development, and the project's Component 2 will contribute in the following ways:

- Strategic Objective 1: 40% female enrollment in TVET by 2020 (skills development for LCS alumni and for at least 33% women in skills development)
- Strategic Objective 2: transforming mindsets and attitude to eliminate negative perceptions of women in training and employment, especially "non-traditional skills" (even in the construction related focus areas of project skills development, a target of 15% women's participation will be set and active steps to support will be undertaken and similarly for LCS members, empowerment pathways can include non-traditional options)
- Strategic Objective 3: establish gender responsive environment with appropriate support systems (the project will ensure a gender responsive approach to attracting women applicants, including fully subsidized courses for LCS members)
- Strategic Objective 4: Create and strengthen linkages between demand and supply of skills, and accommodate skills training for informal workers (market linkages will benefit at least 33% women in component 2 skills development, as well as direct targeting of LCS women; and skills will include those for informal workers e.g. cooking and domestic workers)
- Strategic Objective 5: Strengthen TVET institutional competence in gender at all levels (sensitization of prospective trainers via briefings in component 2, project lessons learned about women's participation will be shared with national TVET and skills bodies)
- Strategic Objective 6: establish adequate data management systems system to capture sex disaggregated data in TVET (project will have data disaggregated by sex and age group).

55. **Institutions** The main institutions from a gender perspective are set out in the following table, together with the expected nature of engagement in the project.

Table-A2.3: Expected role of gender related institutions

Institution	Role	Expected engagement in project
LGED Gender and Development Forum	The main executive body at LGED responsible for the Gender Policy (see above). It has been receiving technical support from the ADB.	Oversight of project gender strategy implementation, including inputs to 6-monthly progress reports, support to project gender and social inclusion specialist through training and other development opportunities, engagement with policy research and specifically to ensure that gender aspects are appropriate addressed and that gender specific learning from the project is shared at the LGED Gender and Development Forum and informs relevant LGED guidelines. Also to facilitate joint learning between IFAD financed projects.
Upazilla officials responsible for gender and women's empowerment	At the Upazilla level, representatives from most GoB branches are in place, including the Ministry for Women and Children Affairs (MoWCA).	Engage in project capacity development in order to advocate for women's equal benefits.

Union Parishads	GoB local government; women representatives are also in place.	Capacity development in order to advocate for women's equal benefits, especially representing women's interests in union level infrastructure design at participatory workshops, LCS women's welfare and engagement in project LCS empowerment efforts, skills development and early warning dissemination to women and children.
MMCs and trader associations in markets	MMCs are officially recognized by GoB but often do not function effectively; trader associations are informal associations that effectively have to take on the task of cleaning and basic management of markets. MMCs have few women members, usually the female representative from the Union Parishad. Most do not meet the GoB directive to ensure minimum 30% women members. Women's participation in trader associations is also limited.	MMCs: engage in project capacity development in order to advocate for women's equal benefits, specifically (i) ensure that women comprise 30% of MMCs as per GoB directive (ii) ensure that women traders' and buyers' interests are effectively voiced and acted upon in the project interventions as well as more broadly within the MMC mandate. Trader associations: engage in project capacity development in order to advocate for women's equal benefits: encouraging women traders' participation, women's market sections effectively maintained and promoted, safety through lighting etc, separate and adequate sanitary and hygiene facilities including breastfeeding room/ toilets.
Community groups responsible for early warning information dissemination	Both GoB, especially the local DDM and also informal volunteer groups.	Engagement in participatory EWS design, training and implementation so that all community members receive timely and relevant information to effectively safeguard assets and lives.

56. **Gender Action Plan.** This action plan builds on the CCRIP in Bangladesh as well as lessons learned from field visits, the LGED and others working on related issues as set out in Annex 2 and Working Paper of the PDR. It is validated by the LGED's Gender Forum and will be revised at mid-term if needed. It incorporates youth dimensions. In line with national development policies and IFAD's Gender Equality and Women's Empowerment Policy, the goal is to empower women and men to ensure equal access to project benefits. Its objectives, aligned with the national ccGAP, LGED and IFAD Gender Policies, are:

(i) Economic empowerment through sustainable livelihoods for women and youth
(ii) Voice in project design/ implementation as well as wider community/ household decisions and uptake in sub-national policy and planning processes.
(iii) Reduced workload in terms of time, drudgery and improved wellbeing including health, nutrition and safety.

57. The project components have been designed to ensure engagement and benefits for women as well as a reduce gender gaps in access to sustainable livelihoods opportunities. The project will adopt the following 8-point approach, adapted from CCRIP and in line with ADB experience in effective GAP implementation[70]/ suggested entry points[71]:

(i) Create scope for women's participation in project planning, implementation, monitoring and evaluation
(ii) Generate employment in line with national social protection policy for women by involving them in different construction, maintenance and vegetation plantation activities

[70] ADB. 2009. Institutionalizing Gender Equality: The Experience of the Bangladesh Resident Mission. Footnote 12, p. 10.
[71] ADB. 2010. Country Gender Assessment (Bangladesh). Table on "Entry Points: Strengthening the Incorporation of Gender Equality in ADB-Supported Agriculture and Rural Development Initiatives".

(iii) Ensure the needs of women and youth users of infrastructure are reflected in design/ construction/ maintenance
(iv) Facilitate linkages of rural women target groups with market opportunities to support their "empowerment" out of poverty
(v) Facilitate links with development programs aiming at women to increase their empowerment options
(vi) Promote and build capacity of formal and informal local institutions, specifically MMCs, trader associations, Union Parishads (UP) in particular with women members and local Ministry for Women and Children Affairs (MoWCA), LGED Gender Forum, so that they can play an effective role assigned to them by the project and according to various government circulars
(vii) Create enabling working environment with safety and security in the implementation of all possible project activities– this includes adequate budget allocation
(viii) Gender-sensitive EFA, log-frame, M&E, human/ budget allocation reflected in COSTAB.

58. Overall responsibility for impact rests with the Project Director, with overall responsibility for implementation with the Gender and Social Inclusion Specialist, and where all project staff are responsible for implementation in their respective areas. The table below sets out activities, target groups and targets for each component/ outcome. Progress will be monitored every 6 months on each action.

Table-A2.4: Project Gender Action Plan activities and responsibilities

OUTPUTS	Activities, target groups and targets	Responsibilities, timeline
OUTCOME 1: INFRASTRUCTURE AND RELATED CAPACITY DEVELOPMENT		
Employment (construction and maintenance) • Ensure timing of contracts allows maximum employment opportunities for greatest number of LCS members to make "empowerment" feasible. • Employ 70% women to construct markets, and ensure LCS for roads/ shelters have 70% women members. • 30% women participate in all consultation and monitoring bodies. • Enforce equal wages to men and women for work of equal value including in non-LCS contracted work: survey in year 2. • Further step up occupational health and safety measures including but not limited to: reflective overalls, rest areas and access to toilets, transport costs reflected in increased salary, enforced breaks, flexible working days to enable rest/ participation in training/ other tasks, drinking water, explore lunch/ nutritious snack provision to prevent nutrition erosion, health insurance/ sensitization as to its use, avoiding head-load by introducing safer practices and wheelbarrows in markets, protective boots, gloves, goggles, access to toilets, in markets have fire extinguishers and training, ventilated helmets. • 4 days training for all LCS members covering social issues as well as construction/ maintenance techniques. • Train LGED engineers in design and construction of gender and climate sensitive infrastructure. *Users (general)* • Ensure that infrastructure design reflects practical needs and strategic priorities of women by ensuring their interests are effectively represented at project participatory opportunities. • Ensure appropriate facilities including separate water and toilet facilities/ entrances for women/men, breastfeeding rooms and in shelters, child delivery facilities. • Ensure safety through adequate lighting and other practical measures identified by women as identified on design mission March 2017. • Potential for women traders in or benefitting from markets as one of the selection criteria. • Agree before construction with MMCs (i) 15% prime space for poor women vendors in markets OR at least 15 Women's Market Sections, depending on the outcome of selection/ verification process (ii) fulfillment of GoB guidelines on gender balance in MMCs. • Sensitize MMCs to obligations in respect of GoB guidelines on gender balance. • Form/ orient Shelter Management Committee (30% women). • Sensitize local Disaster Preparedness Committee and UP Committee members on gender dimensions. • Analyze, collate evidence and develop guidelines for gender and climate sensitive road, markets and shelter *cum* schools. • Assess sex-disaggregated time savings from road/ market infrastructure in EFA.	PMU, field office, during planning and implementation PMU, field office, during planning and implementation

OUTCOME 2: LCS EMPOWERMENT / SKILLS AND MARKET LINKAGES FOR OFF-FARM DIVERSIFIED EMPLOYMENT	
• Pilot approach to empowerment that empowers all HH members to achieve their development goals. • Ensure empowerment / empowerment approach responds to LCS member's practical needs and strategic gender interests by integrating learning from related initiatives and participatory assessment in selected project areas. • Off-farm employment and skills development to target at least 15% women in construction related industries and 33% women as a whole by supporting selected other skills responding to women's priorities and opportunities. Gender stereotypes will be tackled by encouraging women's participation in non-traditional options whilst respecting their priorities. • Youth (18 to 25 years) to form at least 40% of skills development/ market linkages.	PMU, field office, / sub-contracted NGO. PMU, field office, during project planning and implementation.
OUTCOME 3: CLIMATE CHANGE AND FLOOD EARLY WARNING SYSTEM	
• Climate change assessment to include relevant gender dimensions and have input from project GESI expert. • EWS, especially effective communication to reflect needs of women, men, children, elderly etc and international guidance on gender aspects.	PMU, field office during project planning and implementation.
M&E	
• Gender and youth dimensions addressed in baseline, MTR and terminal evaluation, with a focus on impact assessment. • 6-monthly progress reports produced and shared with PMU/ LGED Gender Forum so as to identify issues and take timely corrective action. • Logframe includes indicators adopted from BCCSAP (2009) and ccGAP (2013), CIP in environment, forestry and climate change (approval expected late 2017), as well as LGED Gender Policy (2014). • EFA to reflect time savings disaggregated by sex.	PMU, field office during project planning and implementation.
PROJECT MANAGEMENT AND INSTITUTIONALIZATION OF LEARNING	
• Employ gender and social inclusion (GESI) specialist, responsible for providing inputs for mainstreaming and social safeguards including empowerment/empowerment, via technical advice, oversight and contributions to project implementation including M&E, as well as produce 6-monthly progress reports based on data from M&E specialist. The profile will be that of an analytical but hands-on development practitioner with field experience rather than academic expert or central administrator. The post may be split into two part-time positions to accommodate all required skill–sets. • Gender and social inclusion in everyone's TORs including contractors'. • Inception workshop to highlight GAP and collective responsibility rather than that of only GESI specialist. • Orient field staff to supervise implementation of gender-sensitive infrastructure provisions. • Project Implementation manual to include (i) section on gender and social inclusion, including why these aspects are not only basic human rights but also why mobilizing everyone's potential is important for development (ii) gender action plan (GAP) and (iii) implementation guidelines for the GAP. • Regular, at least 6-monthly meeting through GESI specialist with LGED Gender Forum to ensure joint learning. • Regular, at least 6-monthly meeting through GESI specialist with LGED-IFAD Gender Focal Points to ensure joint learning. • Practical policy actions to include research/ uptake of LCS empowerment including gender and social inclusion aspects.	PMU, project planning and implementation. PMU, project implementation.

Youth

59. **Brief situation analysis**. A young population is often considered a demographic dividend for developing countries, and given that skilled labour shortages have been felt even in a densely populated country like Bangladesh, attention to helping young people access skills training and employment is important. Barriers, including incomplete secondary education, and lack of linkages with markets and employers, are present and especially in rural areas. According to the 2011 Census the unemployment was 6.8 percent for males and 8.5 percent for females, less than in 2000 and 2006. But the situation is complex; the figures hide the fact many young people report themselves "employed" for little/ no remuneration on family farms and therefore still not effectively able to fulfil their potential in helping to increase/ diversify household expenses. Only 17 per cent of youths found paid employment whereas almost 40 per cent of young people were unpaid family workers in 2010. (Bangladesh Bureau of Statistics, 2010) Most young people work in the informal economy, especially in agriculture, forestry and fisheries sectors (51.5 per cent), which are linked with lower wages, poor working conditions

and limited career prospects.[72]. In project areas as in many contexts, it is important to address youth unemployment for young people with some education as well as none, in order to reduce the number of those not in the labour market and migrating permanently.

60. **Policy**. Bangladesh has a Youth Policy (2003), but an update is underway. The new policy promises to be more gender sensitive and have a focus on marginalized youth. The United Nations System-Wide Action Plan on Youth overall goal for the area of employment and entrepreneurship are "ensure greater opportunities for youth to secure decent work and income over the life-cycle, contributing to a virtuous circle of poverty reduction, sustainable development and social inclusion", and the ILO [73] indicates that in Bangladesh strengthening the capacity of the social partners and promoting tripartite solutions for youth employment at the local level and entrepreneurship skills development programmes to promote youth entrepreneurship as two priorities, both of which are addressed by the project.

61. **Lessons learned**. According to IFAD, regardless of the context or situation, the pillars of capacity building are: (i) technical/vocational skills development (ii) financial assistance and (iii) business development services for start-up, consolidation and growth. Each and every situation is specific, requiring designers to make trade-offs, as in the examples below.

Box: Key considerations[74] in capacity building for youth

Accessibility of diverse types of training

Training is not gender/age neutral, nor is it affordable to everyone. A project's offer of training modalities has significant repercussions on the inclusion of vulnerable categories. While long-cycle training at a centre (12 months, often several years) can be expected to produce a high degree of proficiency, it is also the most costly to projects and to families. This modality is *de facto* less accessible to: (i) young women and girls; (ii) young people from poor families; and (iii) 'older youth' and adults with obligations towards family and community. Short-cycle training at a centre is accessible to most people, including young women with someone at home (e.g. a co-wife or a daughter) to take over domestic and child-care responsibilities. It is also popular among young people because they need not wait several years before starting to earn their own living. Finally, short-cycle training at a local venue is virtually the only way for rural girls and most nursing/lactating mothers to gain access to training.

High-end vs. adequate expertise

The level of expertise required by prospective clients varies according to the level of their own development. The mix of training opportunities offered by a project must be based on realistic assumptions and forecasts in terms of local demand for goods and services. A project that focuses exclusively on high-end proficiency levels will not have achieved its objective of placing those skills at the service of local producers and consumers if the latter cannot afford them and/or if the graduates migrate to find higher wages. The latest generation of IFAD's pro-youth projects is enhancing effectiveness and long-term sustainability by focusing on upgrading the skills and equipment of existing service providers who already have some factors of production (workplace, equipment) and responsibilities towards family and community. The level of expertise acquired by attending a series of skills-upgrading courses will meet most if not all requirements of local producers and consumers, and graduates are less likely to leave after completing training.

62. The project will build on these experiences and those of other actors in Bangladesh, including the ADB and World Bank and the International Labour Organization (ILO).

[72] Table 5.6. Sector of employment by youth among youth labour force.
[73] ILO. 2013. Youth Employment Policy Brief: Bangladesh.
[74] IFAD. 2014. Lessons learned: Supporting rural young people in IFAD projects.

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Shiree Programme http://www.shiree.org

Appendix 3: Country performance and lessons learned

IFAD Portfolio and Institutional Mechanism

1. **IFAD Portfolio:** The recently closed and on-going IFAD projects belong to COSOP 2006 and COSOP 2012. The PROVATI3 and SACP projects will be the last two projects under COSOP 2012-18. The main project under these two COSOP cycles primarily focus on a number of activities: financial services (microfinance), rural infrastructure, value chain development, and agriculture including irrigation and natural resources management.

2. These two COSOP cycles have completed or on-going 11 projects, two co-funded with the Asian Development Bank and the World Bank. Of the 11 projects, four projects have been implemented by PKSF: MFTSP, MFMSF, FEDEC and on-going PACE. On the other hand, LGED have managed or are managing four projects: SCBRMP, HILIP/CALIP, MIDPCR and CCRIP (parallel finance with ADB). Besides, IFAD co-finances PSSWRM project implemented by LGED but led by ADB. With the World Bank (led by World Bank) IFAD co-financed NATP I which was implemented by a HORTEX Foundation (IFAD component). IFAD is currently co-financing NATP II, which is also led by the Bank. One very important project funded by IFAD is CDSPIV, which is implemented by six GOB institutions, and TA team and NGO managed livelihoods and social services component are funded by the Dutch Govt.

3. A brief description of projects according to thematic areas will be very useful, especially infrastructure type projects will provide useful insights and lessons for PROVATI3 project. The project under IFAD Bangladesh portfolio focus broadly in three intervention areas:

   - **Microfinance services and value chain development through PKSF**: Although a number of value chain development initiatives are grouped with rural infrastructure projects the following four projects –MFTSP, MFMSF, FEDEC and PACE - exclusively provided microfinance services, and starting with small business development service component under MFTSP, a large- scale value chain development component has been incorporated under PACE. All four projects have been implemented by PKSF and its partner NGO-MFIs. Three projects are already completed: MFTSP in 2011, MFMSFP in 2012 and FEDEC in 2014. Accumulated experience of these projects have been incorporated in the PACE project, which focuses on loan for microenterprises, farm and non-farm value chain development, and innovation of financial products. In addition to rural infrastructure MIDPCR had a small agribusiness development and financial services component in collaboration with two PKSF partner NGO-MFIs. The project provided cost for beneficiary training and some overhead costs for the NGO-MFIs (not credit fund) and NGO-MFIs provided financial services from their own resources. It has also managed a small value chain development program through an international NGO (INGO). The SCBRMP project started with self-help group method of microfinance and established linkage with a state-owned but later dropped due to poor performance. A small agriculture activity under SCBMP has been covered into more like value chain project under HILIP/CALIP, which promotes farm and non-farm businesses in haor area. NATP I attempted to develop agricultural value chains in selected Upazilas in the country.

   - **Rural infrastructure projects**: Construction of rural infrastructure, especially village roads and village markets, small embankment and irrigation infrastructure has been the main area of investment of IFAD for agricultural and rural development for more than a decade. The trend still continued with the design of PROVATI3. The starting of such projects can be traced back to SCRMP in Sunamganj with construction of village road and submergible roads. SCBRM built rural roads (all weather, and submergible roads) using LCS in one of the environmentally fragile zone of Bangladesh. The success of that project has led to design of a much larger project on-going HILIP project that covers 30 Upazilas in five districts. Another pioneering project with special focus of road and market development was MIDPCR, which built village roads and developed village markets in the southern coastal districts. The success of MIDPCR has led to designing of the on-going

CCRIP project. The CCRIP (parallel funded with ADB) includes Union and village roads and markets development, small embankment and irrigation infrastructure. The Participatory Small-scale Water Development Project Phase III (SW-III) co-funded with the Asian Development Bank (ADB) where LGED builds minor irrigation structure (closed and open irrigation channels, sluice gates and minor embankments) to boost agricultural production. Another major infrastructure focused projects CDSP-IV, which is a replication of CDSP project – focuses on are development, developing newly formed stable char hundreds of thousands of people settled but lack basic infrastructure and services. Although the lead agency for CDSP-IV is BWDB but it has significant LGED component to build roads, markets, cyclone shelters etc. similar to MIDPCR. Project management experience and successful elements of three projects – MIDPCR, CDSPIV and CCRIP – will be up-scaled and replicated in the PROVATI3 project.

- **Agriculture and natural resources management**: The SCBRMP project promoted high-value crops in haor areas, which has been taken over by HILIP. Besides, SCBRMP introduced farming of broiler chicken, homestead gardening, plantation of *Hijal and koras in the haor* to reduce adverse impact of wave action. One important activity under SCBRMP, which has been expanded under HILIP, is management of beel (small water bodies within haor basin) by the poor people that increases access of the poor people to natural resources. The MIDPCR project had an agricultural development component implemented by DAE of Ministry of Agriculture (MOA). DAE, DLS and DoF also implemented the National Agricultural Technology Development Project (NATP I), co-financed with the World Bank. CDSP_IV project promotes agriculture within polders constructed under the project. Three projects under by PKSF had directly financed farmers, and trained farmers on agricultural production technologies and promoted many agricultural commodities with impressive success.

4. Two important institutions LGED and PKSF implement bulk of IFAD projects with huge success. LGED has a proven capacity to implement large and complex projects which link livelihoods development with rural infrastructure. LGED's use of Labour Contracting Societies (LCS) has channelled a share of construction work to the poorest women. PKSF has built a huge reputation in the management of micro-finance and has a network of more than 250 microfinance institutions (MFI) as its partner organisations. By this, PKSF plays a key role in the microfinance sector in Bangladesh. It has now broadened its activities beyond microfinance by venturing into value chain projects, vocational training and the promotion of employment for the poor. BWDB has vital expertise in water engineering but faces institutional constraints in efficiently managing projects. Institutions that make up the Ministry of Agriculture, DAE and the National Agricultural Research System (NARS) have a great outreach and well established roles in leading this key sector.

Past results, impact and performance

5. Data from project surveys provide evidence of the impact of projects in terms of better livelihoods, increased income and improved food security. Table-A3.1 below summarises some of the improvements in food security reported in these surveys, while Table-A3.2 presents data on the change in child malnutrition.

Table-A3.1: Changes in food security

Project	Indicator	Change	Notes
Aquaculture Development Project	Per cent of households reporting improvement	14% (control group 1%)	Final impact survey 2006
Smallholder Agricultural Improvement Project	Decline in average length of period of food shortage	44% (control group 29%)	Final impact survey, 2009
Micro Finance and Technical Support Project	Per cent of households reporting improvement	8.5%	Impact over a 4 year period 2004-08

Micro Finance for Marginal and Small Farmers Project	Per cent of households reporting improvement	8%	Mid-term impact survey 2004-08
Sunamganj Community Based Resource Management Project	Per cent of households reporting improvement	Members of BUG* 15% Members of CO** 17%	BUG over 2 years CO over 6 years

*BUG: Beel (water body) User Group; ** CO: community organisations; Source: COSOP 2013-18

Table-A3.2: Sunamganj - child malnutrition indicators

Percentage of children	**2006**	**2010**
Chronic malnutrition (height-for-age < -2SD)	56.7	47.9
Acute malnutrition (weight-for-height < -2SD)	15.3	15.4
Underweight (weight-for-age < -2SD)	58.6	54.6

Source: RIMS anchor indicator surveys, SCBRMP, Mitra Associates as quoted in COSOP 2013-18

6. Three projects through PKSF have greatly expanded microfinance services to the poor, landless, marginal and small farmers, and micro-entrepreneurs. Agricultural technologies promoted by PKSF and other projects have made good impacts in boosting production and reducing cost of production. Value chain development activities, although small in terms of resources compared to respective project resources, showed evidence for growth in sales and profitability and opportunities for expansion.

Lessons learned

7. The present and recently completed projects show most relevant lessons for designing new projects in terms of project activities, process of implementation and institutional choices. The COSOP completion review 2006-2011, PCRs, and many supervision reports suggest the following as perhaps the most critical lessons by sector:

- **Agricultural development** remains critical to ensure food security and employment, whilst the support to enter the non-farm sector for employment is increasingly important for poverty reduction. IFAD funded projects show that the combination of agricultural development with access to financial services and adequate extension services augment the scale of impact and sustainability of a new technology. Extension services need to be specialised and could be delivered by both DAE and the private sector. A value-chain approach can ensure the input supply and diversification alongside the promotion of technology to assist farmers and micro-entrepreneurs to enhance profits, generate business and employment.
- **Microfinance** including microcredit remains critical although the financial services have expanded greatly in the country but the emphasis needs to be on developing demand driven services and customizing the service as much as practicable. The Self Help Group approach to micro-credit does not deliver the benefits in terms of poverty reduction, and is un-sustainable than the more usual Bangladesh microfinance model. Seasonal loans for agriculture meets well farmers' demand. Increasingly larger loans are needed for agriculture and microenterprises, and MFIs are better equipped to provide such loans. Savings and insurance products including livestock insurance remain important to cope with financial and natural shocks. A number of pilot projects in livestock insurance and savings products show great opportunities for further expansion.
- **Value Chain Development:** A number of IFAD projects (FEDEC, MFMSFP, MIDPCR, MFTSP and PACE) have had success in using a value chain approach to developing enterprise and livelihoods. These activities include dairy farming, poultry such as backyard chickens, ducks, crab production and crops such as maize and horticulture particularly, tomatoes, brinjal, gourds and other vegetables, soybeans, mustard, oilseed crops, etc. The strategy of linking producers to service providers and markets has resulted in adoption

of new technologies, increased yields, higher producer prices and significantly higher profits. The on-going PACE project has adopted much broader approach to value chain development. It has been found that a combination of financial services and non-financial services through value chain approach produces much better results than non-financial services alone.

- **Small-scale infrastructure,** especially rural markets and roads showed impressive impact on the local economy and employment. The trade volume increased substantially within a short period of time, while cost of transport halved and local wages doubled with the increased demand for labour. Prices increased as demand increased due to more buyers arriving from far away. The village roads built in Sunamganj have boosted the local economy and improved livelihoods. A study carried out by SCBRMP found a major switch to the use of light motorized vehicles, increased cropping intensity and area under crops, especially high value crops grown for the market, and sales of crops. Similar results have been found in MIDPCR areas. The cost of transporting crops and fertilizer had halved, and more labour was being hired for both farm and non-farm businesses. Survey respondents reported increased employment opportunities, increased wages, higher income, better access to education and health services, and greater mobility of women. Land values near the road had more than doubled.
- **Rural Markets:** Rural markets have been successfully developed in relatively remote coastal areas by the Market Infrastructure Development Project in Charland Regions (MIDPCR). Even before the link roads are complete, benefits from market development include: (i) an increase in the number of buyers and sellers (including women) by at least 25-50 percent; (ii) an increase in the number of wholesalers coming to the market leading to greater competition (iii) a greater choice, variety and quality of goods; (iv) a good environment not only for selling and buying but also for community members to meet; (v) decrease in losses of perishable produce as goods are sold more rapidly; (vi) decrease in cost and time spent on transport; and (vii) increase in value of land and construction of other facilities (such as shops) in the area around the market. A survey recorded an increase in average sales per trader of 32% (from Tk11,755 to Tk15,475 per week). Based on this data and the increase in numbers of traders, the overall increase in volume of trade was reported to be 75%. The on-going CCRIP project and HILIP has shown similar preliminary results.
- **Type of construction:** The IFAD project in the Haor Basin, the Sunamganj Community Based Resource Management Project (SCBRMP) has pioneered the construction of village (community) roads using reinforced concrete (RCC). Unlike conventional bitumen road pavements, concrete roads are submersible and can withstand flooding. Not only does this make them suitable for the flooding conditions of Sunamganj, but embankments do not need to be built to keep roads above flood levels. Such embankments can obstruct the flow of water and cause additional environmental problems as they block the free flow of water and can cause water logging. This reduces the cost and because of the more labour intensive nature of using this technology it creates additional employment for women and enables them to adopt a more flexible work schedule. This RCC road has been constructed in CCRIP and HILIP areas to ensure maintenance free village roads.
- **Labour Contracting Society:** The use of Labour Contracting Societies as a principal mechanism for constructing RCC village roads, village markets and other small schemes has been an effective way of targeting the poorest women. A baseline survey for MIDPCR showed that 68% of the women members were the principal bread-winners for their families with two-thirds of respondent households. Households of women involved in the LCS generally did not even own land for a homestead and all had incomes that would place them in the poorest 10% category. Almost all of these households suffered from some period of food shortages, with 41% per cent experienced these shortages all year round. A follow-up survey of MIDPCR LCS found that, on average, women had earned Tk7,469 in wages and had received Tk9,569 in profit share. Wages and profit money have been divided between productive enterprises (34% in total, with 19% being used to buy cattle), 28% was used for household investments (leasing-in land 9%, land purchase 5% and house building 6%), and 38% for consumption (29% for food). The number of cattle

owned by sample households increased by 169% and goats by 140%. This shows that benefits from LCS have been partly used to support families (the percentage of children going to school increased from 74% to 86%) and partly for purchase of assets. Women also reported improved confidence and a better standing in their families and in the wider community. The experience of SCBRMP and MIDPCR has been replicated in HILIP and CCRIP. Hundred percent of village markets under CCRIP are being constructed by LCS groups. It has been found that construction by LCS are better than regular contractors.

- **Natural resources management and community fishery** is a successful poverty reduction approach. Secured long term leases for community fisheries can move fishing households from poverty all the way to prosperity, as shown in SCBRM project. Despite support from MoL, the transfer of water bodies to community management is a difficult and lengthy process, and may require some support by international agencies. Regular leadership elections via a secret ballot help ensuring that leadership in fishery groups remains accountable to members.
- **Women's empowerment.** The use of LCS instead of a commercial contractor for construction of markets and roads creates employment, enhances skills and cash in the hand of the poorest women and boosts their self-esteem. Technical and skills training in agricultural/livestock production has had limited impact on women as markets for agriculture/livestock are mostly managed by men. Decision making power remains a key issue for women's empowerment leading to gender equality. Although women benefit from membership of micro-finance groups, the realized gains are limited as men still dominate most major decisions. Despite higher involvement of women in economic activities, decision-making and workload distribution are still unequal at all levels.
- **Project management issues:** It is important that right institutions and right mix of activities are chosen to implement projects to ensure smooth implementation and impacts. LGED's core competence is implementation of infrastructure project, and it has skilfully implemented SCBRMP, MIDPCR and CCRIP infrastructure component whereas it struggled to deal with MFIs and managing value chain activities. In addition, combining infrastructure with financial services and value chain development is also packaging wildly diverse activities under one project although there may be demand for these activities. Whereas it has been found perfectly alright to deliver financial services combined with value chain activities under PKSF both in terms of match between activities as well as implementation capacity where PKSF and its partner organizations are competent to manage financial service programs. Therefore, it is only prudent to separate financial services and value chain development from infrastructure and give LGED to manage infrastructure project only such as CCRIP.

Appendix 4: Detailed PROVATi[3] Project description[75]

1. **PROVATi[3] Project Area**: The project will be implemented in six districts (Gaibandha, Kurigram, Rangpur, Nilphamari, Lalmonirhat, and Jamalpur) with main focus in the worst poverty stricken districts – Jamalpur, Kurigram and Gaibandha - of Bangladesh. Major parts of these districts are flood prone due to convergences of the Brahmaputra (the Jamuna river) and Teesta rivers. Within the six districts the project will implement development activities in 25 poorer and vulnerable Upazilas. The project infrastructure will be primarily built in 90 unions, which are mostly char and low-lying, and worst poverty stricken areas within the 25 Upazilas. However, for local flood forecasting (see Project Components below) 19 Upazilas (174 unions) of Kurigram, Gaibandha and Jamalpur districts, which are affected by monsoon floods of the Brahmaputra river, have been selected.

2. The project has further narrowed down geographical locations by selecting char and infrastructure poor unions for constructing roads, markets and flood shelters. Of the total 231 Unions in 25 project Upazilas, 90 Unions are char unions, which will receive first priority for selection of markets, connecting roads and flood shelters. However, other unions may get selected to as market connecting roads may cross other unions. But the project have diverse activities: LCS economic emancipation through adoption of IGAs, vocational training and local flood forecasting and dissemination. In case of LCS, poor women and men from 90 Unions will receive priority for selection, while the process of selection will be open, participatory and completely transparent. On the other hand, young participants within the age bracket of 18-35 years for vocational training will be from whole project Upazilas. Similarly, all 174 unions of 19 Upazilas of Kurigram, Gaibandha and Jamalpur districts will be under flood forecasting system.

3. Table A4.1 provides a preliminary list of target districts and Upazilas, finalized during two successive design missions following site visits:

Table A4.1: List of districts and project Upazilas

	District	Project Upazilas (#)	Names of PROVATi[3] Project Upazilas
1	Jamalpur	5	Madarganj, Melandaha, Islampur, Dewanganj, and Bakshiganj
2	Gaibandha	5	Shaghata, Fulchari, Gaibandha Sadar, Sadullahpur, and Sundarganj
3	Kurigram	9	Char Rajibpur, Chilmari, Raumari, Ulipur, Rajarhat, Kurigram Sadar, Phulbari, Nageshwari, and Bhurungamari
4	Rangpur	2	Gangachara and Kaunia
5	Nilphamari	2	Dimla and Jaldhaka
6	Lalmonirhat	2	Hatibandha and Patgram
	Total: 6	**25**	

4. **Target groups and benefits**: The nature of the project, primarily construction of roads and markets, eventually determines the target population of the project. First, since roads and markets will be used by all, the population irrespective of income level and profession will be target group of the project. Second, within the general population the area is dominated by agricultural labour, marginal and small farmers, petty traders and transport workers, micro-entrepreneurs, landless people, poor women and local youth - who will constitute the biggest users and beneficiaries of the project. Third, the area face seasonal unemployment (September to November) when a lot of poor and marginalized people migrate to cities who may continue to stay in the area if economic development is stirred due to investment in infrastructure. The project will indirectly benefit this category of population, particularly of women who fall easy victims of social vices in absence of

[75] Further information on the technical features of the infrastructure design and cost estimates are available on IFAD xDesk under “supporting documentation for Appenix 4” Link.

their dominant male counterparts due to prolonged out-migration[76]. Fourth, the economy and livelihoods in the selected Upazilas is predominantly dependent on agriculture (rice, livestock, vegetables, fruits, fish, maize, pulses, oil seeds, and spices) and agricultural labor. As seen in other projects, the number of agricultural input sellers, extension workers, small traders, shop-owners etc. increase in large numbers in the developed markets who are also indirect beneficiaries of the project. Fifth, the young adults from poor and near poor households and LCS groups, majority of whom are local poor women, will be particularly targeted for off-farm employment through IGA-related and vocational training. And finally, the local flood forecasting system will be targeting all population of 174 unions of 19 Upazilas involving the three districts, especially those living in 69 char unions (of these three districts).

5. The overall population of 90 project Unions is 2.6 million (637,000 HHs). The project covers some 303,000 households (approximately 45% of the total population) from 90 Unions within the 25 target Upazilas. Target beneficiaries include the poor women and men, marginal and small farmers, traders and shop owners in the markets, micro-entrepreneurs and other local private and government institutions. The infrastructure and flood information system will benefit overall population of the project areas. The direct beneficiaries will include households that profit from at least 330 km of improved rural roads, households benefitting from 135 improved small and large markets, and households benefitting from Labour Contracting Society (LCS) economic advancement through IGA and skills enhancement of youth through vocational training.

6. **Gender dimension of the project.** The design mission followed a gender sensitive design of the project. It has prepared a gender action plan. About 10% households are headed by women in the project area. Most of such households are extremely poor, having been affected by multiple episodes of floods and riverbank erosion. Limited access to land and other productive assets, limited income generating activities other than agricultural labor, and very limited access to government services made such families very vulnerable and force them remain poor for indefinite period of time. Poor women however engage in post-harvest activities – winnowing, drying and storing paddy/wheat/maize. Other economic activities that women are engaged in include kitchen gardening, looking after poultry & livestock, etc. But many families do not raise livestock due lack of investment and space, as many of them live on *khas* land, embankment etc.

7. The PROVATi[3] project activities will directly create employment opportunities for the poor women: a) LCS construction contracts will create wage employment and generate profit after completion of the contracts (performance based contracts); b) LCS crews will receive guaranteed employment with monthly salary for road maintenance works (fixed-pay contract); and c) a portion of LCS members and or their family members will have the opportunity for receiving project-funded vocation training (subsidised training). At least 70% of LCS members and 30% of vocational trainees will be young female. The flood information to be generated under Component 2 will be disseminated through village-based volunteer groups, where a significant proportion of them will be women members.

8. ***Immediate benefits*** from the project are (i) overall reduction in transportation costs and time towards produce marketing due to smooth roads, (ii) increased access to market through improved connectivity triggering enhanced production, (iii) enhanced skills of youth due to market-oriented vocational training, (iv) marginal shifts in cropping patterns and intensity in response to market signal; (v) sustained employment generation for poor/ultra-poor through the use of Labour Contracting Societies and continued IGA support of LCS members; (vi) increase access to and quality of information on flood preparedness; and (vii) capacity building on and integration of flood-proof infrastructure design criteria in development works in relevant national institutions.

9. The project is expected to generate substantial net incremental benefits for the poor, farmers and rural entrepreneurs (shop keepers, traders, transport owners): a) increased sales (through increased volume and value of the agricultural production traded); (ii) increased number of traders

[76] Please see Etzold et al., 2015.

on the market; iii) reduced transportation costs for commodities as well passengers; iv) increased volume of traffic generated by a new road (and the number of additional journeys per vehicle) as well as by the travel time and the vehicle operating costs savings; v) increased volume of agricultural production sold by the farmers living within the market catchment area and the road catchment area, benefitting from increased traffic, higher selling price due to the presence of larger number of buyers coming to the market, and higher demand for the agricultural production; vi) economic emancipation of households which will benefit from vocational skills-training (VST) of youths; and vii) benefits accrued by some LCS members through investing a portion of wage and start-up capital received after the completion of the construction works (generally about 10% of the construction cost) in sustainable income generating activities (IGA).

10. The **goal** of the project is to facilitate 'sustainable livelihoods for poor households and smallholders in selected Upazilas of the Brahmaputra-Teesta flood plain area of six North-central districts of Bangladesh'. The **development objective** is to 'enhance resilience of population of 25 selected flood-prone Upazilas *through resilient infrastructure development, climate adaptation research and dissemination, promotion of selected construction technologies and improved economic opportunities*.

11. **Structure of the project:** The project is structured in two technical components and one management and coordination component, as follows: (1) Climate Resilient Infrastructure and Community Shelters; (2) Resilient communities through employment and early flood warning; and (3) Project Management, M&E and KM. Table-A4.1 (see below) presents an overview of main project activities and physical targets.

Table-A4.11: Summary of Project Targets

Description	Infrastructure type or activity	Quantity
Component 1:	Climate change induced flood and erosion vulnerability research	3
	Union Road (BC) (km)	55
	Village Road (BC, RCC, HBB) (km)	275
	Maintenance of earthen road in project area (Km)	500
	Rehabilitation of existing paved roads in project area (km)	250
	Flood shelters (#)	15
	Large markets - Type I (#)	20
	Small markets - Type II (#)	100
	Small markets - Type III (#)	15
	Women market sections (#)	35
	Persons trained on climate resilient engineering design (#)	60
Component 2:	LCS income generation (# Indv)	15,000
	Participants trained in Vocation (# Indv)	30,000
	Unions to be covered under local flood forecasting and dissemination system in Kurigram, Gaibandha and Jamalpur districts (# Unions)	174
	Institutional level small policy initiatives	5
	Analytical studies on revision of existing design standards/practices	6

Selection of Upazilas and Unions. This was a very important exercise of the design. **See Working Paper 1: Upazila Selection Criteria And Rankin**g for full details of data used to rank and select 25 Upazilas from six districts. The basic geographic targeting for the project is itself a testimony to the fact that the PROVATi^3 project serves amongst the poorest districts of the country. The project later has made different stages of targeting. Firstly, there are two types of geographic targeting for component 1 and component 2: (1) The selection of project districts, Upazilas and unions has included the very poor and hazard-susceptible geographical areas (unions) that will ensure most of the project benefits reaching the poor and the vulnerable; (2) within these poor and vulnerable unions (90 are selected), the second selection focuses on rural markets and connecting roads within the least developed villages/unions, especially rural markets from char, low-lying and disaster prone (floods/erosion) and infrastructure poor villages. This targeting ensures highest value for money as it creates maximum impacts serving the least developed areas and their

vulnerable population. In addition, (3) targeting for component 3 selects worst flood affected Upazilas, potentially reaching their entire population. One important element in this project is to access to and management of flood shelters at times of weather events. Usually the poor people whose houses go underwater because they live in low-lying areas, mostly in chars, need shelters during floods. The locations of the proposed shelters will be in low-lying char areas with high chances of inundation (Geographic targeting).

Component 1: Climate Resilient Infrastructure and Community Shelters

12. The Outcome of Component-1 is climate resilient infrastructure and community shelters are built and used. It is divided into five sub-components, namely: (1) climate change/flood preparedness research for building climate resilient infrastructure; (2) climate resilient rural communication infrastructure; (3) Climate resilient rural market development; (4) climate resilient community shelter cum school; and (5) Training on climate/flood-proof resilient infrastructure design.

13. **Sub-component 1.1 Climate Change/flood Preparedness Research for Building Climate Resilient Infrastructure**. The outcome of this component is the assessment the flood risks and impacts of climate change to enhance the resilience of the rural infrastructures. Risks of floods and river bank erosion will be exacerbated by climate change impacts. An increase in global average temperature due to climate change is likely to intensify the global hydrological cycle, which in turn will impact regional water resources[77]. The objective of this component is to enhance the resilience of physical infrastructures against flood risks and impacts of climate change.

14. The sub-component will have three research activities, namely,

(a) *Assessment of climate change on Brahmaputra-Teesta river system.* This research will focus on impact of climate change on frequency and intensity of floods, quantity of water flow in rivers and potential impact of climate change on infrastructure. The results should indicate the necessary modifications in design on roads, culvert/bridge, markets, slope protection etc. The same results will also be incorporated in the training course outlined in subcomponent 1.5.

(b) *Assessment of erosion and accretion of land/char due to maundering of rivers.* This will be done by analysing past satellite images and GIS and other local information collected through site visits in erosion/accretion zones. The result will be one of the inputs for finally determining sites of sub-components 1.2, 1.3, and 1.4.

15. *(c) Determination of flood risk zones* applying satellite information, past flood history, potential impact of climate change, river flows etc of each project Upazila. The research results will be presented in user-friendly form and used to modify structural design of all infrastructure. Besides, the result will help strengthen community preparedness as well as making proper investment decisions. The findings will also be used as complementary information by Sub-component 2.4.

16. The results should indicate the necessary modifications in design on roads, culvert/bridge, markets, *ghats*, slope protection etc. and will lead to up-dates in design standards at LGED. This sub-component will be implemented by IWFM of BUET. The project will provide USD 0.25 million as grant fund to IWFM to conduct the researches. It is expected that selected faculty members and a number of graduate students will be conducting the research works. IWFM will submit three full research proposals including objective, methodology, potential results, timeline, dissemination plan, and detail costs along with its in-kind contribution during final design mission. An MOU will be signed between the project and IWFM/BUET to transfer funds and review progress of these research activities.

17. **Sub-component 1.2 Climate Resilient Rural Communication Infrastructure**: The 'outcome' of this component is 'Improved road connectivity for men and women living in project Upazilas to access markets and social services'. The activities will be to a) build union road, defined as roads connecting Upazila to Union Parishad headquarter, or connecting Union Parishad to Union

[77] Oki and Kanae 2006; Arnell 1999.

Parishad, as per classification of the government followed by LGED; b) build village roads that connect farms (villages) with the local markets; c) rehabilitate existing paved roads in the project unions by fixing potholes and broken sections; and d) maintain surfaces and slopes of earthen roads that connect the selected markets. The road connecting school-cum-flood shelter would also be improved. All these roads will accommodate adequate drainage infrastructure in the forms of small rural bridges and culverts with an aim to facilitate drainage of greater than usual discharge volumes under climate change and to allow fish passes in the floodplains towards improved aquatic biodiversity.

18. **Union and village roads construction.** The project will construct/improve Union and Village roads by paving different types of surfaces (BC, RCC, HBB) on existing earthen alignment. Essentially, the emphasis of the activities is given on the improvement of village roads as well as on the 'remote and isolated Char-land road. The strategy for selecting roads will be led by selection of markets (see Subcomponent 1.2). The roads that connect villages with markets and then markets to larger markets or to upper tier road such as Union Road or Upazila road will receive priority. Three different types of union and village roads are envisioned under the project as done in other similar projects: a) Bituminous roads (Unions roads will be BC type only; no union roads will be RCC or HBB roads); b) Reinforced Concrete Cement (RCC) roads where roller (road compacting machine) cannot be taken and in flood prone areas; c) HBB roads in selected locations. In addition, submersible roads at suitable locations will be designed, as deemed necessary.

19. The selection of roads type will depend on prevalent local situations. In some areas, HBB roads may be upgraded to bituminous or even RCC roads. In some remote areas it may be necessary to provide access through earthen roads. Usually village roads are 8' wide but it is proposed that PROVATi^3 project builds 10' wide village roads to allow two small vehicles to pass safely. But the width can only be expanded if public land is available on both sides along the existing alignment as no provision for land acquisition will be available under this project. The width, therefore, will be adjusted as per sites. The good practice of road construction and slope stabilizations developed under the CCRIP project will be adopted in this project with adjustments need for the flood prone area. See Appendix for technical design and specification of typical roads.

20. The project focuses on flood-proofing of road construction, with appropriately raised height and slope protection considering climate change. The project will undertake a research on impact of climate change on road and market design (see sub-component 1.1). As per GOB guidelines, the project will construct properly designed cross drainage structures (brides/culverts) so that no natural water flow is restricted. The protection of road/bridges should be of high priority using appropriate vegetative (bio-engineering) or structural methods. The important factors that should guide the selection of roads are: benefit to the highest number of households; connecting important markets that in turn connect larger markets and upper level roads; strengthening and raising of roads to withstand floods and strong current; incorporation of considerations regarding possible adverse impacts of climate changes etc.

21. In some locations, it has been observed that the whole area is very sandy and no clay is available in the immediate vicinity to protect road slopes. Appropriate provision must be kept in the design and cost to bring right kind of soil for construction of slopes. It will be a mandatory design feature that the project use vetiver in all roads for slope protection. It will be part of LCS's/contractor's job to plant vetiver and maintain for one year, as has been the practice in CCRIP. LCSs will be used for maintenance of vetiver. As a matter of principle, no natural rivulet/creek/khal will be obstructed while construction of roads. PROVATi3 project will ensure that adequate drainage infrastructures, in the forms of small rural bridge and culverts, will be constructed to facilitate climate induced greater discharge of runoff and fish passage in the floodplains. It is estimated that about 1700 meters of associated small bridge/culverts will be built under sub-component 1.1.

22. Since number of project unions are not same in all project Upazilas, it is expected that length and types of roads will vary by Upazila. The exact lengths and locations of roads (and markets) will be determined during final design mission.

23. **Rehabilitation of existing paved roads**. In all cases, the project built roads will connect to existing paved roads. Due to lack of timely maintenance works these roads have developed numerous potholes and large broken sections. A small amount of resources (from GOB part @Taka 0.6-1.5 million per km) will rehabilitate an estimated 250 km of such roads in project unions (some time beyond project unions to provide full connectivity).

24. **Maintenance of earthen roads by LCS crews.** The project will build only about 330 km of roads in 25 Upazilas (90 unions) that will fall short compared to the need of connecting all villages with selected markets. It has been found that each market is connected by 2-5 roads where the project may choose 1-2 such connecting roads for construction. One complementary activity of the project will be to select the remaining earthen roads to be maintained by LCS crews. The maintenance of these earthen roads would mean keeping the surfaces level, fix rain cuts, maintain slopes by planting vetiver grass etc. This will be year-long activity for two years, with the expectation that GOB will gradually pave these roads with own resources. An estimated 500 km of earthen roads will be maintained by LCS crews during the project period.

25. **Number and management of LCS crews for roads maintenance.** The project will build 330 km of roads. However, as indicated earlier, a total of 500 km of rural earthen roads will be maintained by about 1,000 LCS members (@two persons per km) (~1,000 persons). These LCS members will be recruited by the project. LCS will also be recruited to do post-construction slope/shoulder maintenance of newly built 330 km of project roads. But the experience (and practice) in CCRIP project shows that contractors take 2-3 years for completing construction works and maintain the roads for one year as part of performance guarantee. During this period LCS members will not have any role in maintenance of slopes/and shoulders of these project built roads. That would mean that there will be no LCS crews for project built roads during at least first three years of project. A total of about 760 LCS members will be recruited in the fourth to sixth years to maintain project built roads for about two consecutive years. In addition, another 1,000 LCS crews will be used for maintenance of earthen roads as mentioned above.

26. Usual selection criteria will be applied for selection of LCS crews. An open, participatory and transparent process will be adopted to ensure unbiased recruitment and to avoid elite capture. The road LCS members will be provided with appropriate training, protective gears and tools for the maintenance works. Besides, they will be trained on vetiver plantation and slope/shoulder maintenance for earthen as well as project built roads. Each LCS member (road maintenance crews) will be paid for a period of two years for fixed monthly salary, with a provision for forced savings so that after the tenure, each member can find a start-up capital towards adopting a suitable income generating activity. This part establishes synergies with sub-component 2.1, mentioned below.

27. **Village Feeder or Access Roads:** Transport Infrastructure is the component that includes the areas served (or service areas) by markets. From field surveys it is appeared that the number of feeder or access roads fall mostly in the range of 3-10 nos., these are roads serving a particular market. On average about 5 feeder roads provide the access to markets for the service areas. The status of the roads varies from poor – moderate – good. The types of roads are BC (Bituminous Concrete of flexible pavement), RCC (Reinforced Cement Concrete), CC (Cement Concrete), HBB (Herringbone Bricks), BFS (Brick Flat Soling), Block roads, Earthen Roads. Accordingly, the distance over which road improvement/rehabilitation/construction is needed also varies per service area of the market place. The project will not construct new roads. Thus, the embankment as road foundation is available and not included in the budget.

28. In case road improvement in the form of rehabilitation is required than roads will be built as BC, RCC, HBB or Block roads. This is the preference based on long-time experience in the concerned Upazilas. Brick based roads like CC, HBB or BFS are low cost temporary with poor riding qualities, are constructed as a precursor of quality pavement roads. The local population often favours BC roads, followed by RCC roads. It is proposed that HBB or BFS roads would be adopted as a temporary basis and only where road segment has erosion potential. In case access is difficult or

impossible for rollers than BC roads are no option. The same is true when inundation with or brackish water occurs. In these cases the preferred road is the RCC road.

29. **Overview of road types:** Theoretical overview of possible road types connecting one administrative level with the same or a lower level, those that actually occur, and the road types envisaged to be rehabilitated or built under PROVATi[3]. It concerns roads that are normally within LGED's mandate.

Table-A4.2: Overview of road types under PROVATi[3]

Level number	Administrative level	Possible road types - connecting one level with same or a lower level	Actual occurrence of road types	PROVATi[3] intervention Proposed road type
1	Upazila	BC	yes	no
		RCC	yes	no
		CC	no	no
		Block Road	no	no
		HBB	no	no
		BFS	no	no
		Earthen road	no	no
2	Union Parishad	BC	yes	yes
		RCC	yes	yes
		CC	no	no
		Block Road	no	yes (limited)
		HBB	yes	yes (limited)
		BFS	no	yes (limited)
		Earthen road	no	no
3	Village road	BC	yes	yes
		RCC	no	yes
		CC	yes	no
		Block Road	no	yes
		HBB	yes	yes (limited)
		BFS	yes	yes (limited)
		Earthen road	yes	no

Project roads

30. The project will limit its intervention in the rural road infrastructure to two levels: Union Roads and Village Roads. The road types for these two levels will be mainly BC, RCC, and for the erosion prone segments HBB/BFS/Block Roads. What type of road will be built depends on the economic data (importance of road from usability/accessibility and villages' remoteness, vulnerability and location in the service area of the particular market) and the relative cost. In addition accessibility for rollers may prohibit the use of BC roads at both levels and water inundation may make RCC the only feasible option. As per LGED's standard road geometric configurations, though the crest widths is different for Union Road (UR) and Village road (VR) the pavement width would be same that can be seen from the following Table-A4.3:

Table-A4.3: Width of various types of roads under PROVATi[3]

Administrative level	Union	Pavement Width, in m	Village	Pavement Width*, in m
Road Type	BC	3.00	BC	3.00
	RCC	3.00	RCC	3.00
	Block road	3.00	Block road	3.00

Note: * Modified as per DRAFT FINAL REPORT by BUET on Consultancy Services for Assessment of Road Design and Pavement Standards of LGED,
[Contract Package No: RD-S12] under Second Rural Transport Improvement Project (RTIP - II), Feb 2007.

Remark: At the Union level no Block roads will be built. Therefore, the following road types at the two administrative levels will be considered under PROVATI3:

Union Roads: BC, RCC
Village Roads: BC, RCC, Block Road

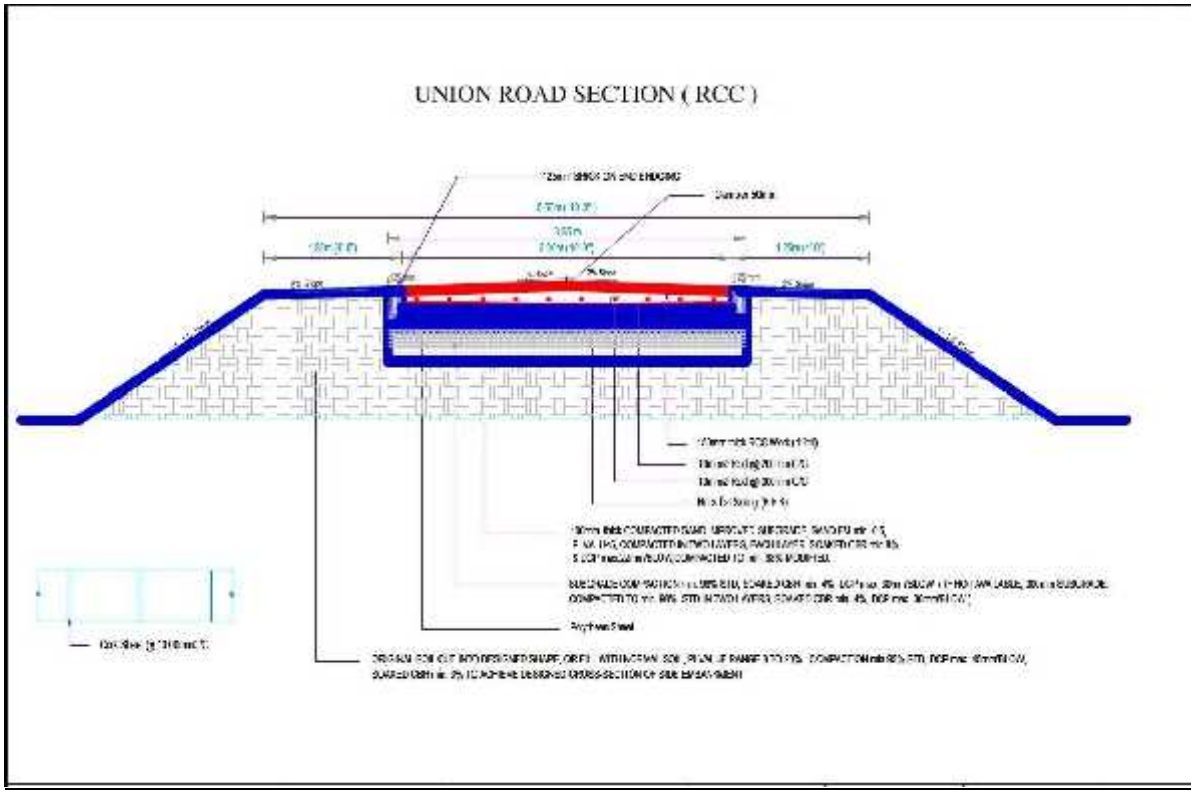
Union & Union vulnerable road segments: HBB/BFS/CC (temporary and easily maintainable by local people)

31. **Updated Designs and Specifications:** Both the structural and geometric design of rural roads is made following the LGED's in-house standards by JICA, 2005 and following road classification system (See Table A4.3) that is published by Bangladesh Planning Commission in 2003. The detail design development approach, selection of pavement type, design parameters, considerations, specifications, implementation and maintenance arrangements are presented in Working Paper 2. The design drawings are given for relevant road types that will be used under PROVATI3 project (example below, addition material in project life file/xDesk). In case occasionally a different road is needed, than the designs are available in LGED and these were found adequate. Based on these designs BOQs were made and costs calculated as given in project life file/xDesk. Table-A4. below shows one example.

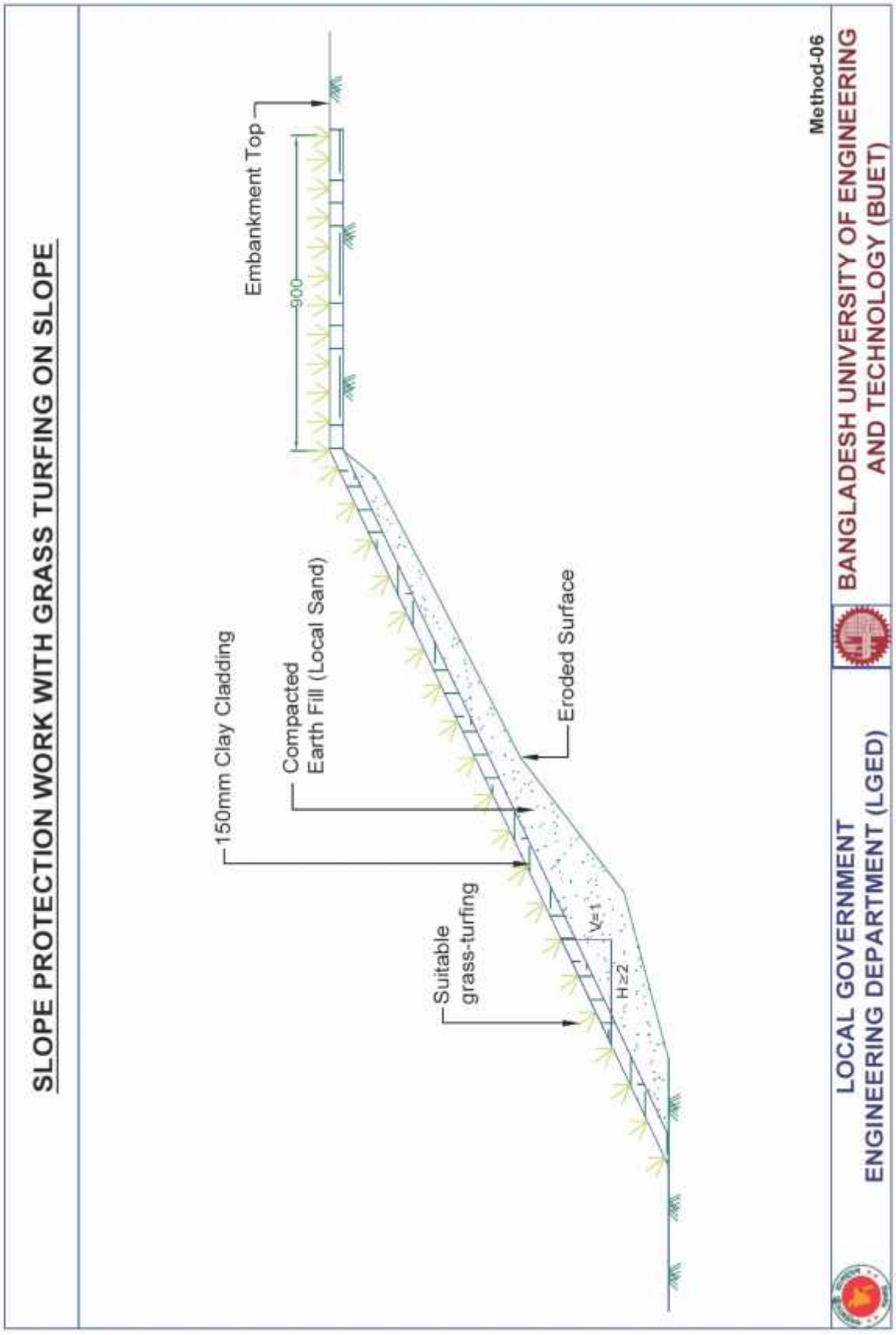
Table-A4.4: Example of Cost Estimate for Rangpur roads with earthwork[78]

Part	Scheme Code/ Scheme Name	Estimated
(1)	(18549-18-10031) Improvement of Union Road by BC pavement (Length 1Km, Carriage way 3m) Creast width 4.9m, 800mm height from HFL. Upazila: _ _ _ _ _ _ _ _ _, District: Rangpur.	7,817,759.73
(2)	(18549-18-10032) Improvement of Union Road by HBB (Length 1Km, Carriage way 3m) Creast width 4.9m, 800mm height from HFL. Upazila: _ _ _ _ _ _ _ _ _ _, District: Rangpur.	5,013,863.61
(3)	(18549-18-10033) Improvement of Union Road by RCC work (Length 1Km, Carriage way 3m) _ _ _ _, District: Rangpur.	11,085,663.26
(4)	(18549-18-10034) Improvement of Union Road by Earth Work Length 1Km, Creast width	1,930,239.28
(5)	(18549-18-10035) Improvement of Union Road by RCC work (Length 1Km, Carriage way 3	10,820,622.98
(6)	18549-18-10036) _ _ _ _ _ _ _, District: Rangpur. - Environmental (	
(7)	(18549-18-10037) Improvement of Union Road by BC pavement (Length 1Km, Carriage District: Rangpur. way 3m) Creast width 4.9m, 600mm height from HFL. Upazila: _ _ _ _ _	7,467,103.83
(8)	(18549-18-10038) Improvement of Union Road by HBB (Length 1Km, Carriage way 3m) Rangpur. Creast width 4.9m, 600mm height from HFL. Upazila: _ _ _ _ _ _ _ _ _,	4,663,207.71
(9)	(18549-18-10039) Improvement of Union Road by RCC work (Length 1Km, Carriage way _ _ _ _, District: Rangpur.	10,735,007.36
(10)	(18549-18-10040) Improvement of Union Road by Earth Work Length 1Km, Creast width 4.9m,	1,579,583.38
(11)	(18549-18-10041) Improvement of Union Road by RCC work (Length 1Km, Carriage way 3 m including Guid Wall) Creast width 4.9m, 600mm height from HFL. Upazila: _ _ _ _ _ _ _ _, District: Rangpur.	10,469,967.08
	Package Total :	72,083,018.19

Figure 8 Typical sections for project roads (Example union road)



[78] Further cost estimates and related discussion available in life file documents on road design and costing.


SLOPE PROTECTION WORK WITH GRASS TURFING ON SLOPE
Embankment Top
900
150mm Clay Cladding
Compacted
Earth Fill (Local Sand)
Eroded Surface
Suitable
grass-turfing
V=1
H≥2
Method-06
LOCAL GOVERNMENT
ENGINEERING DEPARTMENT (LGED)
BANGLADESH UNIVERSITY OF ENGINEERING
AND TECHNOLOGY (BUET)

Sub-component 1.3 Climate Resilient Rural Market Development.

32. The outcome of this component is 'Enhanced marketing of farm and non-farm produce in project markets'. The outputs of this component include: improved community (village) market facilities (multi-purpose shed, fish shed, open paved area, women section, toilet block, internal road and drainage) for remote living farmers and fishermen to bring their produce for sale to be transported to nearby markets, improved hygienic conditions, functioning MMCs, employment for poor women as LCS members; construction of dustbin and garbage pit for disposal of solid waste.

33. About 818 markets dot the project Upazilas. During the design mission, a total of 135 markets have been identified which needs significant development works for offering quality marketing services. In general, the village and remoter markets remain undeveloped. This project will not develop/construct new markets, but up-grade existing markets sites. It has been found in other projects that connecting roads and properly constructed market catalyse agricultural development, expand input market, and support pro-poor employment creation. Markets in rural areas are not only a place of selling and buying but also center of social services and dissemination of information. Often schools are located nearby and health services (drug stores, physicians) are only available in rural markets.

34. Though validation exercise has revealed that all the visited sites are not found to be suitable for investment in terms of availability of space and placing suitable layouts, most of the small *haat*/bazars (Type III) are observed to have less sustainable potential. It is also revealed that to some extent the prospect of smaller sized market (Hat/Bazar) is diminishing with time and is found to be being replaced by stationary shop based full-fledged market. Accordingly, it is recommended that the market development target should primarily be focused on type II particularly which has more potential to support farmers sustainability. Along with this, the advent of new rate of schedule prompted further scrutiny and revision of the list to be incorporated in the project DPP. Given the development budgetary allocation, the estimation exercise has revealed that the market development component will be comprised of 20 big (Type I), 100 medium (Type II) and 15 small (Type III) markets. An estimated 35 markets will include women sections.

35. **Market rehabilitation, typology and selection:** Villages markets found in the project unions are categorized as follows: a) Type I: Larger markets (current number of permanent shops are 100 or more) where traders from urban centers gather to buy in bulk; b) Type II: medium sized rural markets with several shops (less 100 shops) where small farmers from neighboring villages bring their produces including fishers who catch fish in the nearby rivers; and c) Type III: small markets where main development interventions will be development of internal roads, drainage system not sheds due to lack of public land. A total of 135 will be developed as per selection criteria set by the design mission.

36. The main activities for development of village markets will be a) market planning and preparation of master plan (design and participation/consultation); b) construction of markets; and c) capacity building of stakeholders managing market (before and after hand-over) (management and maintenance).

37. Since the number of project unions varies by Upazila, the actual number of market built per Upazila may vary by Upazila. For budget purpose, it is assumed that every Upazila will have equal number of markets but the recent validation exercise showed that the suitability varies sharply between Upazilas. Similarly, within the markets, the number & type of facilities and their sizes may vary based on the availability of land area along with some markets may need ground rising. As such, development cost for each market is expected to vary.

38. **Market planning process:** The primary selection criteria for markets (hat/bazar) is: a) availability of enough *khas* land for development and or community must provide land for development; b) market must be declared as 'market' by the local administration (i.e., UNO); c)

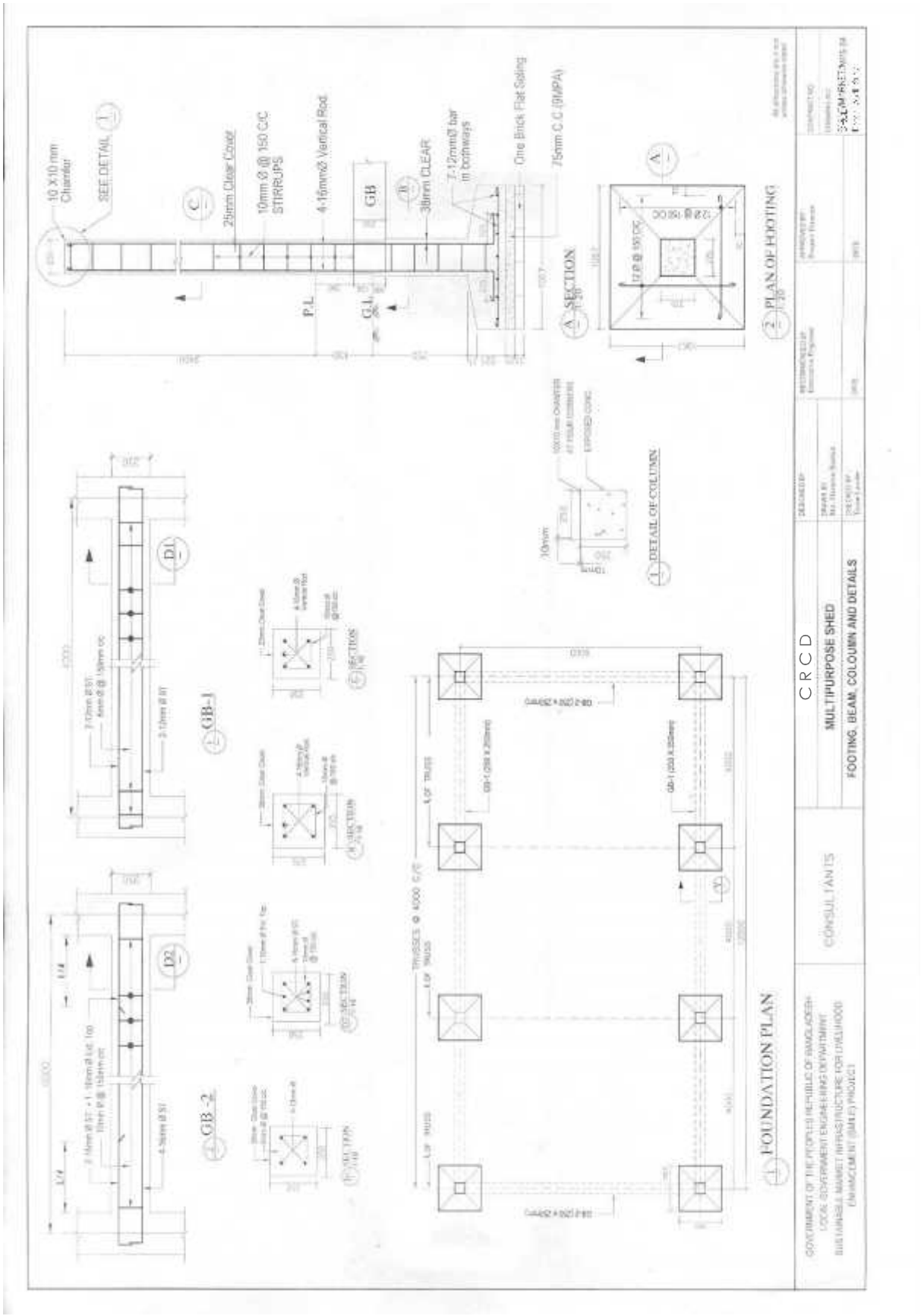
MMC and traders' association must assure support during development and assure proper cleaning and maintenance after development; and d) it must serve all neighboring villages. Before implementation the project will prepare a master plan for the market in consultation with local administration, MMC office bearers, traders, shop owners, local community to ensure its proper function, clean environment, proper disposal of garbage, and future scope for development.[79]

39. **Market construction:** Depending on the size, location and functions of rural markets, a combination of the following elements of structures will be provided: multi-purpose shed, fish shed, open paved area (no raised sale platform will be constructed as it reduces service area), women section, toilet block with access to water, internal road and drainage, and garbage pit. All markets will be appropriately raised to remain above flood level including the impact of climate change. In island char or low-lying chars, where the chance of river erosion will be high, all structures, especially market sheds will be pre-fabricated portable type that can be disassembled quickly. In principle, all markets will be constructed by using LCS members under 1-1.5 year contract. While attempts will be made by the project to involve LCS members in all activities that require little skill, in view of safeguarding them from potential exploitation by skilled personnel/technicians, the construction-related activities requiring specialized skills can be separately packaged for contracting out. For each market, such skill-based contractual packages will be developed by the PMU/LGED, ensuring LCS members' interests and income optimization. LCS groups will receive training on construction, management of group, record keeping, and social issues from the project.

40. ***Management of markets involving local institutions*:** It has been found that proper management of market after development is a big challenge. The project will develop a sustainable market management and O&M system in collaboration with Market Management Committee (MMC), traders associations, and local government to addresses this. MMCs will also be responsible for properly maintaining the markets after and receive 25% of the lease revenues for this purpose, as per GoB rules. This practice is expected to ensure sustainable operations of the markets. Besides, a mix of motivational meetings, awareness raising and trainings throughout the project period are planned. Incentive-based approaches will be piloted in few locations (approximately 10 markets). This will have potential to influence government policy and market management arrangements. One option will be to use the garbage, if enough perishable garbage is produced regularly in the market, to produce vermin-compost (organic) fertilizer by one or more persons/farmers living near the market. The project will identify and train such person in the vermi-compost production process. There are individual as well as commercial producers of vermin-compost in project unions.

[79] It should be noted that not all markets are facing management challenges. The CCRIP experiences indicated a range of performances with some markets well operated by trader associations and MMCs, while others lack these management successes (Working Paper 11). The second design mission will dedicate attention on the implementation arrangements most suitable for continuous support of O&M activities around the infrastructure investments.

Figure A4-2: Example of market design



41. **Performance based incentives**: In addition, the project will pilot performance incentives for market management. Box 1 below outlines the analysis and suggested steps.

Box 1: Guideline for Investment for Sustainable Operation and Maintenance of Rural Markets.

Introduction: LGED has been developing community markets to develop the marketing facilities of the markets in order to boost up rural economies so as to improve the livelihoods of the rural people. The Community markets are the common places for social, political and economic intensive communication among the rural population. Rural markets are in fact serves as powerhouse for enhancing rural economies. However, it is observed that those markets are not being maintained after construction and improvement. The stakeholders are more vigilant during construction and improvement phase but they are not that much active or interested on the proper operation and maintenance of the markets after completion of improvements. Because of the absence of regular and periodic maintenance , the market infrastructures are damaged well before the service life. Despite lot of capacity building efforts for operation and maintenance are given during construction phase for graduating the stakeholders , a little improvements were seen after handing over those markets after construction phase. Even the supervisory project staff do not catre for monitoring the operation and maintenance of the markets after ending of the construction phase. Considering the above problems, a different guidelines need to be adopted for ensuring operation and maintenance for sustaining the investments.

Present Scenario of Market Management and Maintenance of Rural Markets: Each of the Community market is managed by a Market Management Committee (MMC) as per national government guidelines. The MMC is comprising 11 members as follows;

Chairman of the respective Union Council	-Convenor
One elected Representative from permanent shop owners	-Member Secretary
Respective Ward UP Member	-Member
Respective female Ward UP Member (Reserved)	-Member
Union Land Officer/Assistant Land Officer	-Member
One elected/nominated woman shop-keeper	-Member
Community organizer of the Upazila, LGED	-Member
Two elected/nominated temporary traders	-Member
One elected/nominated local Van and Rickshaw pullers	-Member
One nominated person from Bus/Truck owners Association	-Member

As per Govt. policy, MMCs are mandated for development of planning, development ,operation and maintenance of the markets but in most rural markets, the MMCs have not yet been constituted or operational for the market management and maintenance. Due to absence of MMC or MMC's lacking managerial role, most markets have constituted Traders' Associations comprising members of permanent shop owners. Virtually, most markets are managed by these Traders Associations. The Traders Associations collect membership fee and use these funds for regular cleaning and security of the market. MMCs need to be constituted in all markets and their capacity needs to be improved for proper operation and maintenance. Further, the representation of Traders Association in the MMC needs to be included for co-ordination and co-operation between MMCs and Traders Associations. The CCRIP project had taken up the issue of expanding the membership size of the MMCs by including two more members from the Traders Associations to the Local Govt, Division but a final decision in this regard is yet to be taken.[80] The MMCs are to function as per the national government policy. Among other activities, MMC should meet once a month to discuss market management issues, and maintain the regulation books of their monthly meetings as well as the cash books for documentation of their incomes and expenditures. They should also maintain bank accounts and prepare the annual budget for market development. Besides, the MMCs function is to keep the markets clean, to ensure that temporary sellers sit on the designated market areas and not on roadsides, to ensure safety and security of buyers and sellers, especially women, to ensure that toll charts are hung visibly for fair dealings, to provide support to the labourer women, popularly called

[80] See Working Paper 11 with further details on CCRIPs approach to market management.

members of the Labour Contracting Society (LCS) during their infrastructure development works; and to regularly collect 15-25% of the lease value from the markets' leasing authority (Upazilla Nirbahi(Executive) Officer (UNO) of the national government.

As per prevailing rules, the markets are leased out to the competent bidders through the open bidding for the best offers, and 15-25% of the total lease money is given to the MMCs for market management as per submitted annual development and maintenance plan of MMCs. The MMCs effectively need to coordinate with the market leasing authority, the local administration of the national government to officially receive their 25% share of lease money. This fund is to be used for development and proper maintenance of the market sheds, drainage system, link roads and toilets. Unfortunately, leasing authority often do not allocate that amount to markets . Also, the MMCs often do know this system how to apply for this fund allocation.

The maintenance and management activities required for proper upkeep of the market require regular maintenance and management covering daily cleaning of the market sheds, market area and toilets, waste management, security of the market, clearing water-logging and maintaining night lights in the market. These activities are currently managed on an ad-hoc basis. Though regular cleaning is to be undertaken by the leaseholders but in most cases this is not being followed.

Problem identification: Though the importance of the market and with its connected roads are vital for the development of the rural economy, yet there is no an action plan for the regular maintenance and management of the markets. Periodic maintenance and management is required including pre-monsoon and post monsoon maintenance of buildings, roofs, market area, connecting pathways, entry to the road and drainage systems. Following are the list of problems, which needs attention:

- Most markets have not yet been constituted MMC or existing MMCs are not aware of their roles and responsibilities and lacking capacities.
- The MMCs are represented by mostly ex-officio members as such they are not responsive to their roles and responsibilities;
- Little representation of traders in the MMCs as such often decisions are not business friendly. Also there is a co-ordination problem between MMCs and Traders Association in managing markets;
- Often, lease are given with very low value compared to the turnover of business due to manipulation and in-transparent leasing procedure which, results inadequate allocation of maintenance fund for the market;
- The Upazilla Nirbahi (Executive) Officer (UNO), leasing authority often does not transfer 15-25% of the lease value to the markets annually for development, operation and maintenance. Consequently, in most cases, the MMCs do not claim their share of lease value to UNO due to ignorance of claim procedure;
- As part of responsibilities, often, the vendor (Lessee) is not responsive to regular cleaning of the market. Rather, he collects more toll than the toll charts approved by the Government;
- The MMCs are lacking capacities in planning operation and maintenance and generating resources for implementation;
- Regular cleaning and maintenance is cultural issue of the society. Because of cultural practice those cleaning and maintenance works are considered less priority works than development. It is a challenge to revert the cultural practice.

The Proposed Model: In order to ensure making MMC pro-active in their functions, it is planned to make investment on phases and conditional to the satisfactory performance of the MMC. After the first investment in the market for infrastructure development, the performance of the MMC with regard to their roles and responsibilities will be evaluated on the basis of certain indicators. Subsequent phases of the investment will be made on connecting roads where MMCs have performed satisfactorily. In view of that a number of trainings and workshops with regard to resource mobilization, planning, development, operation and maintenance etc. will be provided from the project to graduate the MMC members during construction phase of the markets. The activities of the MMC after handing over the markets will be assessed for further one year based on some indicators of e following questions.

- How often the MMC meet in a month?
- Whether the MMC have made plan for infrastructure planning, development , operation and maintenance for the market?
- Whether they are able to implement the above plan?
- Do they have prepared their annual budget?
- Whether they have secured budget to implement the plan?
- Do they maintains books of accounts?
- What are the steps taken by MMCs to ensure releasing 25% lease value?
- Whether the MMC is in a position to mobilize local funds?
- Do they have day to day cleaning plan? How does it function?
- Any actions taken by MMC to ensure electricity?
- What are the services lacking at the Market place and how do they have planned to ensure that.
- How often the wastes are cleaned? How MMC mange wastage?
- How do they allocate the spaces among the traders?
- Whether they allocate the spaces among the female traders as per gender action plan of the project or not?
- How is the general security arrangement in the market including the security of women buyers and sellers?
- How MMC keeps a good business environment?
- How they monitor the activities of Lessee?
- Is there any hanging toll chart at the Market place?
- Is there any sitting arrangement for the external traders?
- How often the toilets are cleaned and how is the operation arrangements of regular cleaning?
- *How is the women sanitation facility?*
- *How is the water supply situation?*
- Does MMC collect data on agricultural produce?
- Whether MMC could establish a platform in which more buyers and sellers can participate under a competitive environment?
- What are the problems the MMC have identified for the external traders, local traders and for the farmers? Etc.

Monitoring and Follow up: The monitoring will take place at the district level. At the district level, Field Monitoring Officers (FMOs) will be directly involved with the MMC. MMC will be trained and supported on how to develop action plan, keep record, maintenance, book keeping and assist MMC to collect information on products and price. The Project will develop self-monitoring format for MMC. Progress made by the MMC will be reviewed on monthly basis. Self-monitoring format will be developed for the MMC so that they can monitor themselves. The MMC will be informed of the performance of other markets including the available best practices and if necessary those best performing markets will be shown to the less performing MMCs. Workshops will be held at the districts and regional level to share the achievements of the MMCs. Besides, case studies will be prepared and analyzed and presented.

42. ***LCS for market development***. In principle, all markets will be constructed by using LCS members under 1-1.5 year contract. While attempts will be made by the project to involve LCS members in all activities that require little skill, in view of safeguarding them from potential exploitation by skilled personnel/technicians, the construction-related activities requiring specialized skills can be separately packaged for contracting out. For each market, such skill-based contractual packages will be developed by the PMU/LGED, ensuring LCS members' interests and income optimization. As practiced in CCRIP, there will be three separate contracts: a) for construction of internal roads, drainage, garbage pit, toilet blocks and paving open areas; b) for construction of sheds; and c) for construction of women sections, if women section is built in a specific market. Unlike in other projects, PROVATi^3 will provide training,

necessary protective gears and tools to LCS members for safe working environment and for efficient construction of markets.

43. **Training of LCS members.** All LCS groups will be trained by project engineer (LCS officer cum livelihoods officer) at the Upazila prior to giving contracts for market development.

Sub-component 1.4 Climate Resilient Community shelter cum school

44. The sub-component will be an important part of no-regret community preparedness for floods. Climate resilient community flood shelter cum school is perceived to offer a no-regret adaptation option towards addressing flood vulnerability of char-land people. The shelter is usually a two storied building with open ground floor. Under normal circumstances, the building will be used as informal or formal school, community education center for adult/children, and during floods will be used as a temporary shelter. Typical design is available with LGED. One important consideration will be that the ground as well as open premise will be above highest flood level, taking into consideration of climate change effect. The open premise in front the shelter will be used as a shelter for cattle and other protective assets during high floods.

45. A total of fifteen school-cum-shelters will be built as per LGED standard design, preferably in charlands where flood affected people often do not find places to relocate during an episode of high flood. The option denotes a no-regret option due to the fact that, even without climate change the investment will be worthwhile due to the ultimate use of the structures as schools. Each shelter must have paved access road, water supply and proper sanitary toilets. Preliminary investigation shows that shelter-cum-school will be needed in Sundarganj, Fulchuri, Shaghata, Nageshwari, Raumari, Rajibpur, Chilmari, Bhurungamari, Dimla, Jaldhaka, Patgram, Hatibandha, Dewanganj, Islampur, and Maderganj Upazilas. LGED will determine exact locations of flood shelters-cum-schools in collaboration with Ministry of Primary and Mass Education.

46. As in the case of rural markets, local LCS groups will be given the contract as per GOB procurement rule to build the facilities. While attempts will be made by the project to involve LCS members in all activities that require little skill, in view of safeguarding them from potential exploitation by skilled personnel/technicians, the construction-related activities requiring specialized skills can be separately packaged for contracting out. For each market, such skill-based contractual packages will be developed by the PMU/LGED, ensuring LCS members' interests and income optimization. Again, as in case of rural market construction, LCS groups will be provided with training on construction, management of group, record keeping, supervision services on quality construction, and social issues from the project.

47. **Management of shelter-cum-school.** A number of challenges have been observed during visits to several existing shelters: a) poor up-keep of the shelter premises and building; b) no-water supply to toilets; and c) 'un-managed' use of shelter during flood. Because of weaknesses in management in absence of a specific management body, the buildings have become inoperable. Once the school-cum-shelters are established under the PROVATi^3 project, the structures will be handed over the school management committees, to be maintained year round. The school management committees and teaching staff will be given the responsibility of day-to-day management of project built shelters. Prior agreement will be reached with the committees and communities (potential users of the shelter) regarding up-keep and management during floods, especially providing access to the most deserving families (worst flood affected families) to the shelter, keeping environment clean, ensuring adequate supply of water, and ensuring security. In relocation of productive assets during a high flood event, preferential access will be given to poor and ultra-poor households towards safeguarding their assets.

48. Details about Shelter design and costing are available in the PIM. Table and figure below give some indication. The general structural notes, basic design (front elevation and first floor plan)

and information regarding multi-purpose cyclone shelters under IFAD financed CCRIP project is placed below to guide the school-cum-shelter development process.

49. **Sub-component 1.5: Training on Climate/Flood-Proof Resilient Infrastructure Design and Construction (USD 83 thousand).** The said training is targeted for engineers of LGED who have been involved in design and construction of road, culvert/bridge, markets, flood shelters etc. The focus of the training will be to highlight additional issues and factors that will be needed to consider during design and construction of infrastructure in a flood prone and vulnerable area, which is constantly influenced by dynamic river systems. In addition, the impact of climate change needs to be considered in design and implementation. Overall, participants will be made aware of climate change issues and trends in the Brahmaputra-Teesta river basin encompassing part of India and Bangladesh. The training will enable the participants to understand the needs for application of design criteria to such infrastructure so that the investments may be made more resilient under climate change regime. The training is expected to focus on improvements in construction and maintenance of infrastructure in flood prone and climate vulnerable areas.

50. Such a course will be designed and offered by experts from LGED, Dept. of Civil Engineering of BUET, IWFM/BUET and by individual experts. The PMU will facilitate the development of course materials and organizing the training course (multiple batches).

GENERAL STRUCTURAL NOTES

1. FOUNDATION :

a) FOUNDATION PROVIDED FOR : 2 STORIED PRIMARY SCHOOL CUM CYCLONE SHELTER WITH FOUNDATION OF CAPACITY SHOWN IN DRAWING

b) ALL THE STRUCTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE RELEVANT ARCHITECHTURAL DRAWINGS

C) ANY LOOSE POCKET FOUND IN FOUNDATION SED IS TO BE FILLED UP WITH 95% COMPACTED SAND USING SAND OF FM-0.6(MIN)

d) DEPTH OF FOUNDATION AS PER DRAWING

2. CONCRETE :

a) TYPE-1: COMPRESSIVE STRENGTH MINIMUM fc = 3500 psi(24.13 Mpa) IN 1:1.5:3 FOR ALL R.C.C MEMBERS USING STONE CHIP AS COARSE AGGREGATE

b) MINIMUM CYLINDER STRENGTH : BASED ON CYLINDER TEST OF DIAMETER, D=6 inch (152.4mm) & HEIGHT, H=12 inch(304.5mm) FOR TYPE-1

i) 28 DAYS STRENGTH= 3500 psi (24.13 Mpa)

ii) 7 DAYS STRENGTH= 2500 psi (17.26 Mpa)

C) CURING OF R.C.C WORK :

i) CURING TIME MINIMUM 28 DAYS

ii) METHOD OF CURING :

- HORIZONTAL SURFACE - BY PONDING OF WATER
- OTHER SURFACES BY WRAPPING MOIST JUTE FESRIC

3. CONCRETE AGGREGATE :

a) CEMENT : PORTLAND CEMENT TO BE USED IN WORKS

b) FINE AGGREGATES: SAND OF F.M = 2.5(MINIMUM) TO BE USED AS FINE AGGREATE

c) COARSE AGGREGATES(SIC.A):
FOR TYPE-1 : USE 3/4" (20 mm) DOWN GRADED STONE CHIPS AS COARSE AGGREGATE IN ALL CONCRETE WORK BUT 3/8"(10 mm) DOWN GRADED STONE CHIPS TO BE USED IN PAVMENT, DROPE WALL, SUNSHADE, SHELF etc

d) WATER: POTABLE(DRINKABLE) WATER TO BE USED IN CONCRETE MIX

4. STEEL REINFORCEMENT :

a) REINFORCEMENTS FOR ALL R.C.C MEMBERS ARE 40(GRADE DEFORMED BARS

b) YIELD STRENGTH fy = 40,000 psi (275 Mpa)

c) AS PER ASTM SPECIFICATIONS: i) A615M, II)A616M, III)A617M & iv)A706M

d) ALL REINFORCING BARS DIA IN mm

5. CLEAR COVER :

UNLESS OTHERWISE INDICATED ON THE DRAWINGS THE MINIMUM CLEAR COVER OF REINFORCEMENTS SHALL BE THE FOLLOWING

a) TOP OF FLOOR SLAB =20 mm

b) BOTTOM OF FLOOR SLAB & STAIR =25 mm

c) FOR ALL SIDES OF FOOTING/GRAVE BEAM=75mm

d) ALL SIDES OF FLOOR BEAM =50 mm

e) ALL SIDES OF COLUMN

i) BELOW F.G.L =75mm

ii) ABOVE F.G.L =50mm

6. LAP LENGTH :

UNLESS OTHERWISE MENTIONED IN THE DRAWINGS LAP LENGTH OF BARS SHALL BE

BAR DIA	COMPRESSION BAR	TENSION BAR
10Ø	300 mm	300 mm
12Ø	375 mm	450mm
16Ø	450mm	600mm
20Ø	700 mm	900 mm
22Ø	850 mm	1100 mm
25Ø	1100 mm	1400 mm

AT LAP JOINT LENGTH OF HIGHER BAR TO BE USED

7. HOOKS OF REBAR :

a) FOR ALL RE-BAR : PROVIDE 90° STANDARD HOOKS (L-BENT)
IF SHOWN IN DRAWINGS

8. SPACER BARS :

TO SUPPORT SECOND LAYER BARS IN BEAM, USE 25mm Ø SPACER BARS @ 1000 mm C/C WHERE REQUIRED.

9. CHAIRS :

a) USE CHAIRS OF NECESSARY DIMENSION MADE OF 10mm Ø BARS TO SUPPORT TOP BARS @ 1000 mm C/C

b) CONCRETE BLOCK OF REQUIRED SIZE CAN BE USED TO SUPPORT TOP BARS IN SLAB AS REQUIRED

10. LAP LOCATION :

a) FOR BEAM BOTTOM BAR, LAP TO BE PROVIDED EXCEPT AT MIDDLE THIRD ZONE OF THE SPAN

b) FOR BEAM TOP BAR,LAP TO BE PROVIDED AT MIDDLE THIRD OF THE SPAN.

11. BINDER REINFORCEMENT FOR SLAB,WALL,DROP WALL ETC :

a) USE 10mm Ø @200 mm C/C AS BOTTOM BINDER WHERE REQUIRED

b) USE 10mm Ø @300 mm C/C AS TOP BINDER (EXCEPT CANTILEVER) WHERE NOT SHOWN IN THE DRAWING

c) USE 10mm Ø @200 mm C/C AS TOP BINDER FOR CANTILEVER WHERE NOT SHOWN IN THE DRAWING

12. TEST OF REBARS :

RANDOM SAMPLE TEST FROM ALL CONSIGNMENTS/STOCK AT SITE OF REBARS OF ALL SIZES TO BE PERFORMED AT BUET LABORATORY) AS SPECIFIED BY THE CLIENT/ PROJECT IN-CHARGE BEFORE USE OF THOSE IN THE WORK

13. ANY DETAILS NOT SHOWN IN THE DRAWING SHOULD BE DONE ACCORDING TO ACI 318-89 (REVISED 1992) AND ACI 318R-88 (REVISED 1992)

14. ALL BEAM AND SLAB REBARS SHOULD BE EXTENDED INTO THE SUPPORT UPTO DEVELOPMENT LENGTHAS SHOWN

15. SEISMIC RESISTANCE DETAILS FOR COLUMN AND BEAM TO BE FOLLOWED STRICTLY AS SPECIFIED IN THE DRAWING

16. SPECIAL :

SPECIFICATIONS/STRUCTURAL REQUIREMENTS NOT MENTIONED IN THE DRAWINGS OR IN THIS NOTE SHEET SHALL BE FOLLOWED BNBC'(93)

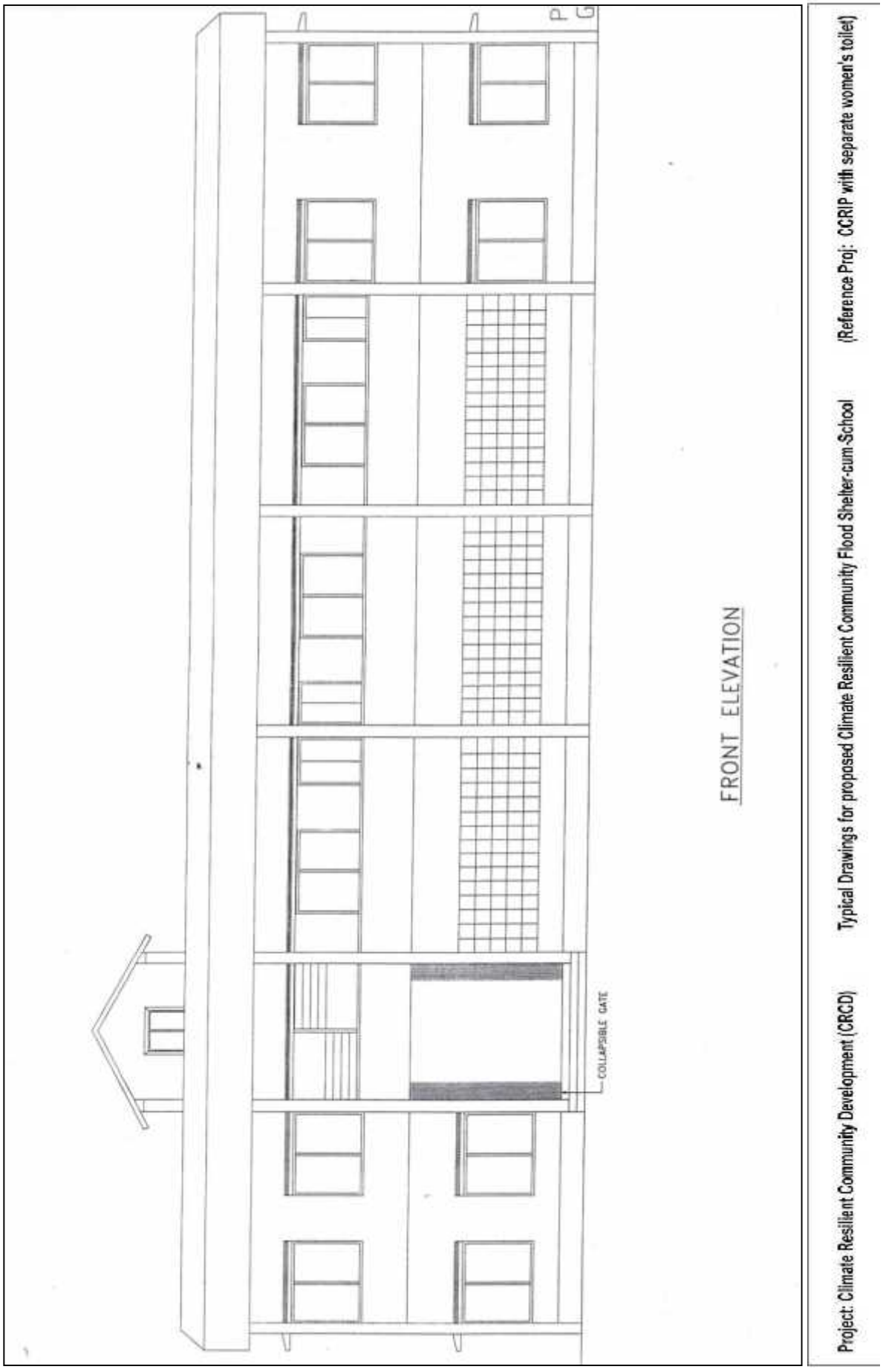
17. WIND AND SEISMIC CONSIDERATION:

a) WIND VELOCITY =260 Km / hour

b) WIND EXPOSURE TYPE - A& B

c) SEISMIC ZONE = AS PER BNBC - 93

d) LIVE LOAD = 4.78kN/Sqm(100 psf)


P.G
COLLAPSIBLE GATE
FRONT ELEVATION
Project: Climate Resilient Community Development (CRCD)
Typical Drawings for proposed Climate Resilient Community Flood Shelter-cum-School
(Reference Proj: CCRIP with separate women's toilet)

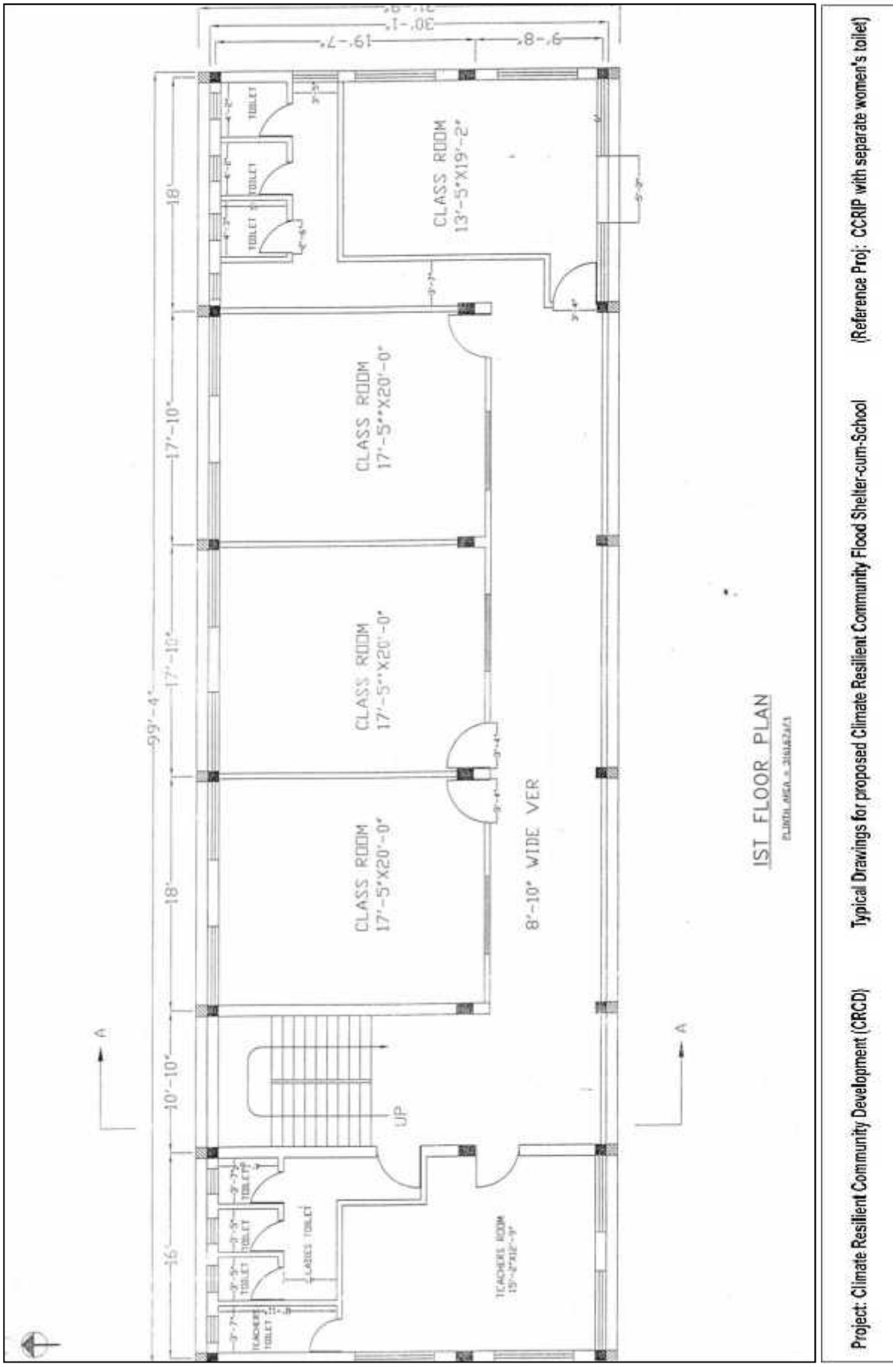

CLASS ROOM
13'-5"X19'-2"
CLASS ROOM
17'-5"X20'-0"
CLASS ROOM
17'-5"X20'-0"
CLASS ROOM
17'-5"X20'-0"
8'-10" WIDE VER
IST FLOOR PLAN
TOILET
TOILET
TOILET
UP
99'-4"
18'
17'-10"
17'-10"
18'
10'-10"
16'
Project: Climate Resilient Community Development (CRCD)
Typical Drawings for proposed Climate Resilient Community Flood Shelter-cum-School
(Reference Proj: CCRIP with separate women's toilet)

Figure 9 Cost estimate – climate resilient flood shelter cum-school

Package Summary

Package Code : Cyclone Shelter,(14-15) **District : RANGPUR**

Part No	Scheme Code/ Scheme Name		Estimated Amount
(1)	(18549-18-10086) S, District- Rangpur	Part - A : (Civil work) Construction of Multipurpose Cyclone Shelter cum Primary School at..... in .....under CRCDP Project, Upazila- Rangpur-	12,485,563.06
(2)	(18549-18-10087) Rangpur-S, District- Rangpur	Part - B : (Sanitary work) Construction of Multipurpose Cyclone Shelter cum Primary School at at..... in .....under CRCDP Project, Upazila-	385,958.10
(3)	(18549-18-10088) Upazila- Rangpur-S, District- Rangpur	Part-C : (Furniture Supply work) Construction of Multipurpose Cyclone Shelter cum Primary School at at..... in .....under CRCDP Project,	427,339.38
(4)	(18549-18-10089) Upazila- Rangpur-S, District- Rangpur	Part- D : (Deep Tube well work) Construction of Multipurpose Cyclone Shelter cum Primary School at at..... in .....under CRCDP Project,	62,391.37
(5)	(18549-18-10090) Upazila- Rangpur-S, District- Rangpur	Part- E : (Sub-Soil-investigation) Construction of Multipurpose Cyclone Shelter cum Primary School at at..... in .....under CRCDP Project,	80,000.00
(6)	(18549-18-10091) District- Rangpur.	Part- F : (Solar) Construction of Multipurpose Cyclone Shelter cum Primary School at at..... in .....under CRCDP Project, Upazila- Rangpur-S,	70,000.00
		Package Total :	13,511,251.91

ackage Code : Cyclone Shelter,(14-15) Print Date/Time: 10-Apr-2017 03:58 PM Page 1

Component 2: Resilient Communities Through Employment and Early Flood Warning

51. The outcome of this component is building resilience of communities through access to locally-relevant information and early warning on flood, economic self-reliance and policy support. It has four sub-components: (1) Capacity building of LCS members and livelihood development; (2) promotion of appropriate vocational skills for employment generation; (3) development of accurate local inundation and flood warning system and its seamless dissemination; and (4) practical policy actions.

Sub-component 2.1: Capacity building of LCS Members and livelihood development (3.052 million USD)

52. The objective of this sub-component is to empower about 15,000 men and women[81] from ultra-poor households (particularly female heads of households) engaged in LCSs to move out gradually and sustainably out of extreme poverty. The PROVATi[3] project will build capacity of LCS contracted for construction of rural roads, markets, and school-cum-shelters under sub-component 1.2, 1.3 and 1.4 and roads maintenance crews under sub-component 1.2. Under component 1 the LCS members will be supported to ensure that they make substantial profits to kick-start their economic empowerment, with protecting measures from cost escalations in procurement of materials and skilled labor for specific construction works. This will be achieved through two models of intervention 1) a pilot model based on the introduction of transformative and innovative methodologies[82] that will develop business skills, leadership, financial education, mindset and behavioural changes that also address structural causes of poverty and gender inequalities; 2) a replication of existing model in CCRIP with an integrated training on IGA and social issues for LCS members.[83]

53. The project will ensure a pro-poor, inclusive and gender-transformative resilience-building of households, groups and communities in the project area. To this end, CRCD/PROVATi³ will put in place specific measures and innovative methodologies to break circular poverty and inequalities. Two methodologies using Participatory Action Learning Systems will be introduced to ensure that participation of men, women and youth will empower them for sustainable changes and resilience. Selection process and criteria will be detailed for each target group with clear monitoring and evaluation mechanisms, namely use of the Women's Empowerment in Agriculture Index. Experience and knowledge sharing will be established with ongoing IFAD-funded projects, mainly the CCRIP, on proven targeting and gender-sensitive mechanisms.

1) The proposed replication model will benefit 8,000 workers from relatively less vulnerable areas and will follow the CCRIP model for capacity building of LCS. In addition to the training on construction/maintenance works, the LCSs receive short trainings on social issues (health, nutrition, gender) and a training on income generating activities within the contracting period. The trainings are delivered by LGED field supervisors or a livelihood officer where appropriate.

2) The proposed pilot model for LCS' socio-economic empowerment will benefit 7,000 workers living and selected from the most vulnerable contexts of the project area. It is suggested for a duration of 18 months with the following activities: (i) after selection of LCS members, a seven-day training including five days for a change catalyst training (business/leadership skills, gender, nutrition, climate, behaviour for change) and two days for the construction work. The change catalyst phase will be incremental for visioning the pathway out of poverty through the opportunity given by the LCS and ensuring gender issues related to

[81] The number of LCS members is linked with number of markets and length of roads built. The final target will depend on re-costing infrastructure work based on LGED revised schedule and will be included in the final PDR.
[82] Based on Participatory Action Learning System, mainly the Gender Action Learning System and the Financial Action Learning System, implemented in several IFAD-funded loans and grants in various contexts.
[83] See Working Paper 12 on some of the gender aspects of CCRIP's LCS model.

labour intensive work for women and men are transformed; (ii) after six months, a five-day training will develop skills and behaviour for livelihood development and market access that will involve all household members; (iii) after one year, a participatory gender review will be undertaken to assess if their participation in the LCS is translated into empowerment and resilience (iii) at end of contract, a five-day training on financial education, financial literacy and linkage with MFIs.

54. The two models will concur to an improved LCS modality that will provide sufficient evidence for policy-making and further up-scaling for LGED. The training models will have the following features:

a) Training approach and modalities: The project will provide on-site trainings to LCS members during and beyond the contract period to develop various skills that will support socioeconomic empowerment. The trainings aim to develop skills on: (i) awareness creation of available non-farm income generating opportunities and on-farm enterprises (awareness/information); (ii) identification of individual or group business ideas (business opportunities) (iii) basic training on how to plan, establish, manage and finance a business or an enterprises (business training). In addition to these technical trainings, sensitisation on safety and health related aspects, such as nutrition awareness and education, sanitation and hygiene will be provided (Livelihood & nutrition improvement).

b) Coaching model: Peer learning and peer coaching is embedded in the training methodology and will foster social empowerment and a social capital that will also support resilience and self-reliance. The coaching model will incorporate all key aspects of business management, such as analysis of markets opportunities, price setting and profitability and negotiating skills. The coaching will provide additional needs based skills such as basic financial management, cost benefit analysis; linkage with various technical and social services required to support implementation of the business plans, including extension services.

c) Innovative feature based on household approach for collective development plan: Since 70% LCS members will be women, the pilot model will apply holistic capacity building/training based on a household approach to impart business skills to all households members. It will permit joint learning, develop a shared household vision, agreed implementation plans and division of responsibilities in and operating the business/IGAs. The approaches will help to mitigate potential risks to economic and social empowerment associated with intra-household pressure and conflicting expenditure options. IFAD has successfully showcased in several countries that household methodologies, including the development of joint development plan (vision), is key in overcoming aspiration failures and breaking through mental models that hold poor back poverty. The project will pilot with an estimated 7,000 LCS members and their households with the household approach in Bangladesh. LCS members and their households are encouraged to develop a common vision and development plan, identify their respective constraints and discuss how to overcome them. In a context where female LCS members often face constraints from their husbands/families and mothers in law regarding their own business aspirations, this seems a potential game changer in poverty reduction. In fact, structural and root causes of poverty and inequalities are

discussed within the household according to their specific context and will foster a joint plan for change. Close monitoring will be applied through a participatory review exercise by beneficiaries themselves.

d) Fostering vocational training for off-farm employment: In unions where opportunities for skilled employment exist, particularly in construction industry some of the LCS members who are interested and capable will be linked to vocational training under sub-component 2.2. The service provider will identify specific vocational training placements including apprenticeship in the project areas and match them with potential LCS members. Women specific opportunities, such as handicraft - embroidery, low technology tailoring and jewelry making will be explored to ensure that women also take advantage of these additional livelihoods enhancing avenues.

e) Strengthening LCS financial resilience: Through in Bangladesh there are financial services in the rural areas the extreme poor have limited use of such services due to their low income levels and consumption based livelihoods. The experiences from previous/on-going IFAD projects in Bangladesh show that the LCS have spent substantial proportions of their earnings on immediate consumptions and have often succumbed to households pressure to use the earnings on immediate household consumption needs. The PROVATI3 project will strengthen financial resilience of the LCS through improved access to financial services, complemented with financial literacy. The project will link LCS members to microfinance institutions (MFIs) operating in the project area to facilitate saving of small portions of their contract earnings. The savings will help them build saving habit and become resilient to personal or household economic shocks/pressures during and after their contracts, thus reduce the probability of falling back to extreme poverty.

d) Replication and scaling up: The LCS process tracking will also include documentation of lessons (approaches, successes and challenges) towards economic and social empowerment throughout the change process to support learning, as part of project knowledge management; scaling up of good practices; and to establish/document evidences on which GOB/LGED can make informed policy decisions under sub-component 2.4 and 1.5.

Implementation modalities

55. The overall implementation of the Sub-component will fall under co-responsibility of the GESI Specialist and the Livelihood Specialist of the PMU. They will coordinate with LGED and NGOs as service providers. Institutional and implementation arrangements are detailed in Annex 5.

56. Service Provider(s) arrangement: The LGED will be responsible for LCS selection, contracting, training on construction related aspects and providing technical support and supervision during the contact period under Component 1. Other social mobilization and capacity-building related activities will be outsourced to a service provider (NGO-MFIs) through a competitive selection process. The service provider(s) will be hired competitively. Mandatory selection criteria will include: (i) at least seven years of experience and presence in the project areas; (ii) good relationships with local government bodies and be a partner organization of PKSF; (iii) track records of work with at least 1,500 LCS workers; (iv) demonstrated knowledge and skills for women's empowerment and household approaches; and (v) demonstrated capacity to replicate and scale up in other unions and upazillas with own resources. The LGED/PMU will recruit, supervise, monitor and evaluate performance of the service provider(s) to ensure delivery of quality services, accountability and timely reporting. The LGED will define feasible operational arrangement for engagement of service providers. The PMU/LGED will conduct a quick mapping at the project start up or earlier to identify appropriate arrangement for the outsourced project services, to be reviewed by IFAD.

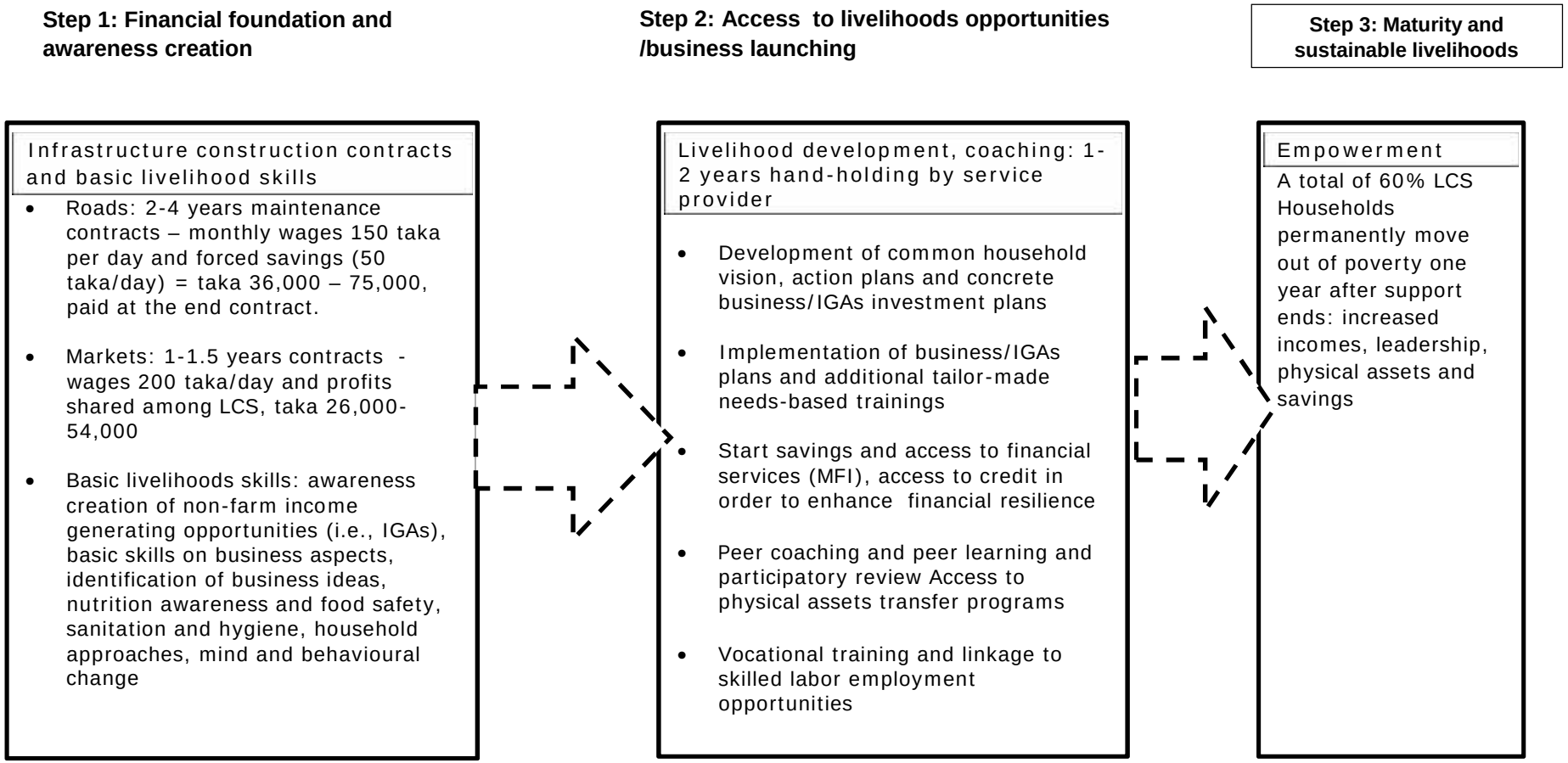
57. Management Challenge of Outsourcing of Services. The estimated 15,000 LCS will not be available at a time at the beginning of the project rather will be their recruitment will spread over 4-5 years period. The majority of them will be recruited to build markets at the rate of 50 persons per market. The project will build 6 markets per Upazila over a period of 5 years that

would mean one market per year and 2 markets in one particular year. That would mean in most of project years 50 LCS members will join each year in each Upazila. An estimated number of 1620 will be hired for road maintenance under a 2 year contract. Assuming one year of post-construction IGA training, coaching, mentoring etc. the selected NGO will deal with only 50 (in one year 100 persons) persons only, a rather small beneficiary base. Thus it will be important for the PMU to develop unit cost for each batch of LCS members and each type of services (training, coaching etc) for payment to NGO-MFIs to keep them as retainers.

58. Monitoring and measurement of effectiveness of the socioeconomic empowerment process: The LGED/PMU will monitor the empowerment progress as an integral part of project monitoring and evaluation activities, and partner with a national university to undertake rigorous impact assessment. The use of the WEAI will provide specific indicators and measurement on empowerment. Other indicators will include percentage increase in household incomes, physical assets and savings. The target is to permanently move out of poverty 75% of project supported LCS one year after the business coaching support ends. The service provider(s) in collaboration with regional livelihoods officer(s) will develop other quantitative and qualitative indicators and monitoring framework for tracking the overall LCS empowerment process, business/IGAs execution by individual households and/or cluster of households/enterprises. The PMU monitoring framework will also include a system for tracking overall implementation progress of empowerment interventions to ensure that constraints and challenges are addressed in timely manner; allow flexibility for adjustments and improvements as needed to strengthen achievement of higher empowerment rates.

59. For the university/research partner, the focus will be on generating robust evidence on cost-effectiveness, efficiency and sustainability of applied modules, through applied research. This will partly be done through randomise control trials , as well as surveys using average treatment effect assessments and similar quantitative measures. The LCS process tracking will also include documentation of lessons (approaches, successes and challenges) towards empowerment throughout the change process to support learning, as part of project knowledge management; scaling up of good practices; and to establish/document evidences on which GOB/LGED can make informed policy decisions under sub-component 2.4.

Figure-A4-2: Pathway for socioeconomic empowerment progress of LCS



Subcomponent 2.2: Skill Development of Youth for Employment

60. The project Upazilas are fully dependent on basic agriculture, which has strong seasonality leading to no or little work during monsoon (whole area goes under water) as well as in between two cropping seasons for the poor. Besides, natural disasters (severe monsoon floods, flash floods, river erosion, and occasional nor'westers) often damage the crops and other asset. Thus, creation of off-farm employment can address limitations of over-dependence on agriculture, seasonality of employment and high unemployment among youth.

61. ***Primary focus of vocational skills – construction*****:** Construction (concrete houses, shops/office buildings, roads/bridges and wooden/tin houses and ancillary activities) industry is expanding fast in all project Upazilas, even in villages, and reportedly, creating demand for products as well as services related to the industry such demand for masons, welders, plumbers, electrical technicians, carpenters (wooden home builders) and many other such works. That has led to shortage of skilled workers. One phenomenon is common in the char unions of the project Upazilas that people are forced to relocate their houses due to river erosion[84] and flooding in addition to normal relocation. That requires houses that can be assembled or dis-assembled quickly without damage. But such designs are not common in the area, because carpenters follow traditional system of house building.

62. Several skill-based occupations within the construction sector such as masonry, carpentry, plumbing, tiles fitting, rod binding, CI sheet/wood based rural housing, sanitary materials manufacturing, painting, piling, metal works, wood works (door, frame and window making) and electric works, architectural drafting, concrete block making, land surveying, construction estimators etc. are expanding fast. Besides, many micro-entrepreneurs pre-fabricate RCC pillars, RCC pipes, sanitary latrines, door/window and many other construction components who are also creating demand for skilled workers. Though the entry point for the project will be construction sector, the mentioned skills are equally required in non-housing construction sector providing access to a larger job-market for the skilled people. Therefore, the focus of skill development through vocational training will be in construction and related sectors. However, jobs in this sector may not be suitable for women. Therefore, a number of areas such as garments, embroidery, basic computer training and so forth where women traditionally have some advantages will be included. The training on carpentry/wooden house building will specifically include construction method on pre-fab wooden/tin house making that would be easy to assemble and dismantle. Similarly, training on masonry will include block brick making, an environment friendly product as opposed kiln-burned bricks.

63. ***Vocational skills beyond construction***: Though the primary focus is to promote vocational skills in construction sector, the project will also tap other job market opportunities mainly for two reasons. First, jobs in this sector may not be suitable for women. Therefore, a number of areas such as garments, embroidery, karchupi, block-batik, basic computer training and so forth where women traditionally have some advantages will be included. Second, the target areas provide ample opportunities for off-farm employment which are beyond construction related activities. For example, increase of cell phone usage has increased the demand for mobile repairing; increase in road infrastructure has resulted into higher usage of bicycles, motor cycles in the target areas and therefore, increased demand for the repairing of such vehicles; increased intensity and land coverage for agriculture has increased usage of diesel pumps/engines thereby need for repairers of such items. All these indicate the need of inclusion of non-construction related skills also in the overall portfolio of vocational skills promotion and the project will accordingly identify and select appropriate skills.

64. ***Job market absorption target – local versus outside*****:** One fundamental assumption of the project is such that improved infrastructure and markets under Component 1 is likely to create

[84] The design mission met a family that relocated their homes four times in last 20 years due to river erosion.

job opportunities in the local economy which will be tapped by the targeted youths under vocational skills program. However, absorption capacity and also growth of the local economies may not maintain the pace of new entrants in the job market as had been happening currently evidenced by large number of migrants to large urban cities and abroad. Therefore, the project will have a balanced vision where at least 50% of the targeted youth will find their jobs in the local economies while the rest may find elsewhere. It is identified that migrants keep sending money to their family members and thus contribute to the growth of local economies. Also, many migrants come back to their locality after gaining improved skills and exposure elsewhere and start business at local level; and thereby create employment opportunities for other locals.

65. **Target group and selection criteria:** The main target population for vocational training will be **unemployed young adults** (18-35 years of age who are willing to invest time for the training which may range from one to six months) from project Upazilas, preferably from vulnerable unions and from poorer families including LCS members or their family members. The training courses must be demand driven from two sides: a) demand from the market for recruitment of persons or self-employment who will receive training; and b) demand and strong willingness from the participants to invest time and make highest efforts to complete the courses. The criteria for selection will be as follows: a) unemployed young adults from poor/near-poor families who are willing to invest time and efforts to complete the courses. Persons who are already gainfully employed should be excluded as they may ask for income compensation; b) Willing to pay travel and other incidental expenses for attending the training courses; c) work as apprentice (paid/unpaid) after completion of training; and d) undertake profession related to their training. A total of 30,000 youths will be provided with vocational skills training for wage and self-employment of which at least 33% is young women.

66. **Training methodology. *Implementation approach*:** The PMU will implement this subcomponent through identifying and collaborating with appropriate training provider/s. In case of NGO/private/individual training providers, the project will follow competitive bidding process for provider selection while for government training providers it will sign MoUs. In both cases, the training providers will have the following broad responsibilities – a) selection of participants based on criteria described above and by engaging local Union Parishad, elite people, MMCs/trade associations among others; b) develop/customize training module as per need and guidance by the PMU; c) conduct skill training for the selected participants; d) ensure active participation of the trainees throughout the course; e) arrange apprenticeship/internship for each participant following the classroom training; f) maintain and supply trainee database (for tracking) to the PMU. On the other hand, the project's overall role will be monitoring and guidance. Specifically, it will a) identify most demanded skills; b) select appropriate training provider d) suggest the training provider to develop/customize training module if needed; e) assist the provider in getting acquainted with the target areas and people such as local Union Parishad, MMC etc; f) monitor and ensure that the participant selection process is adhered to selection criteria; g) assist the provider to find and connect with potential employers for apprenticeship (as part of placement effort employers may be invited to observe training courses) and h) monitor and measure the impact of skills training. It will be an important job of the PMU to constantly identify potential job markets and employers, assess their needed skills, and re-organize training courses accordingly.

67. For an efficient and effective implementation, the project will follow a two-phase implementation: a) Phase 1 (Inception Phase for 1-2 years) will have two major streams of activities – a) offer courses on few skills (maximum four) of high demand identified such as masonry, garments etc. in all Upazila with limited number of batches (four batches per Upazila; 25-30 participants per batch); and b) continuously explore markets to determine opportunities for trainings that lead to good employment. The second phase (Scale-up Phase) will capitalize on the learning of the first phase and scale up courses of high demand in all Upazilas.

68. **Training providers and mode of payment:** Four different types of training providers have been found: (i) government owned and operated training schools/centres; (ii) private training centres/apprenticeship; (iii) NGO-run training outfits; and (iv) individual trainers/coaches. The project will contract out all types of providers as per need of a particular training. If there is no existing training provider the project will organize own training courses by renting venues and hiring trainers if some trainings of higher demand are needed. It has been found that formal training courses by government and private institutions offer 3 to 6-month courses whereas informal training could vary from several days to weeks. As per mode of payment the project may sign MOU with government institutions, and sign contracts with private (institutions and persons) and NGOs to provide training. Appendix 4 provides further details on different types of potential providers.

69. As the project will engage different types of training providers (including large private sector), the concerned project personnel should have good understanding on job market, rural economies in the project area and how private sector works. The project may pay full or partial cost of training for the participants. The poor participants such as LCS members or their family members will qualify for fully project-paid training courses. Besides, if the trainees from the extremely poor families such as LCS members' families or families of similar income level, the project may consider payment of travel and accommodation expenses, in case of residential training courses. A detail policy will be developed for this purpose.

70. **Additional potential training providers:** The mission identified a few potential training providers under all four categories mentioned before during its field visit. Technical Training Centre (TTC), Department of Youth Development (DYD), Social Welfare Department, Ansar VDP, Department of Women Affairs etc. are few government owned and operated training facilities which provide different vocational skill training courses including those related to the construction sector. Some of these training institutes offer both residential and non-residential facilities while others only non-residential courses. Course fee ranges from Tk. 2,000 to Tk. 3,000 which reflects only the tuition fee and does not include accommodation and food costs. One limitation of such facilities is such that most of them operate training facilities up to district level. Private training centres formally operate for very specific skills such as computer courses and in small scale. The informal skill training or apprenticeship model (where a new entrant work under a specific skilled person for minimum one year and learn the skills gradually) is common in many considered skilled occupations. However, few large private sector associations such as Bangladesh Garments Manufacturers and Exporters Association (BGMEA), Bangladesh Knitwear Manufactures and Exporters Association (BKMEA), Real Estate and Housing Association of Bangladesh (REHAB) etc. provide respective skills trainings through collaboration with public agencies. For example, BGMEA is currently providing industry relevant high-demanded skills training such as sweater machine operation, sweater knitting etc by using DYD training facilities at both District and Upazila level to both male and female under World Bank and ADB supported projects. A few NGOs were identified which own training facilities and/or provide vocational skills training, however, mainly subject to development funding availability. RDRS is the most significant one among them having wider presence in the project area (up to Union level through their Federation approach). Individual trainers/coaches partly fall under the private sector provider category, however, depending the availability of the provider, the project may need to recruit such individuals from outside the region. For example, pre-fabricated improved houses are not common in the project area and hence, the project may need to recruit such experts/trainers from other region (Munshiganj and Gopalganj districts) to provide skills training.

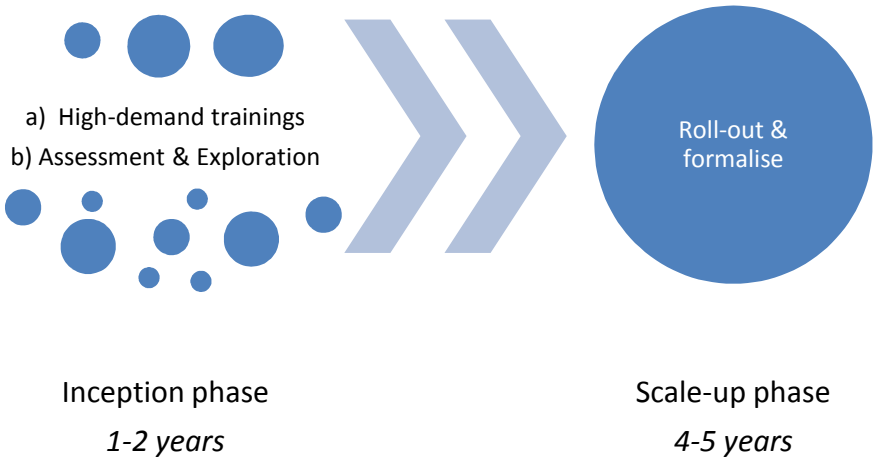
71. While few providers have presence in all project locations, some others do not and hence, the project may need to collaborate with different training providers in different districts/Upazilas as one provider may not provide the whole range of targeted skill training courses. Though from implementation and management viewpoint, the project could have been in a comfortable position to recruit the same or fewer providers to provide certain skill trainings, current situation

will require collaborating with a number of providers in different districts or for different sets of skills training. However, this will provide a cross-learning opportunity to improve the service provisions.

72. ***Challenges and mitigation strategies*:** The program may face a number of potential challenges during implementation and therefore, a few mitigation strategies have been planned. Participants from the poorest households may find it costly to sacrifice their opportunity cost to attend the training courses. Three-fold mitigation measures are planned – a) subsidize or the project will bear the entire training cost with subsistence allowance for this target group, b) extend the training services nearer to participants (Upazila and even Union level) so that they can still manage to partly continue their current jobs, and c) improve the course curriculum and shorten the course duration where possible. Another challenge is the promotion of new technologies such as improved housing techniques or concrete block promotion. The mitigation strategy for such new technologies would be to demonstrate them by project financing, use them within the project infrastructure development scopes and incentivize the users and the providers by offering subsidies.

73. **Access to finance through local partners**: Some trainees who may opt to be self-employed may need access to finance. PKSF has 11 partner organizations (NGO-MFIs)[85] offering financial services in the project Upazilas. These potential clients be linked with one or more such NGO-MFIs for credit.

Figure 10 Illustration of 2-phased approach of vocational training



74. **Effectiveness of training courses:** To make the courses effective the project will do the following: a) establish contact with potential employers to assess their skill need as well as demand for trained persons; b) after completion of formal trainees place the trainees as apprentices with potential employers (for example, masons with building and road contractors etc); and c) select only enthusiastic trainees who are willing to invest time and efforts to complete the courses. The information about the program will be disseminated through MMCs/trade associations, LCS groups, NGO-MFIs operating in the areas, training institutions, local government institutions, through other LGED/Govt projects, and general publicity etc.

75. For an efficient and effective implementation, the project will follow a two-phase implementation: a) Phase 1 (Inception Phase for 1-2 years) will have two major streams of activities – a) offer courses on 1-2 areas of high demand such as masonry and garments in all Upazila with limited

[85] Already these 11 NGO-MFIs are offering 225,000 clients in the 25 project Upazilas. Besides, large MFI such as the Grameen Bank, BRAC and ASA and local small MFIs have a larger branch network in the project Upazilas.

number of batches (selected at design stage); and b) continuously explore markets to determine opportunities for trainings that lead to good employment. The second phase (Scale-up Phase) will capitalize on the learning of the first phase and scale up courses of high demand in all Upazilas. In this Phase, the project will also collaborate with large industry players (and Associations) in selected sectors (such as RMG) to facilitate women-targeted skills development.

Sub-component 2.3 Development of accurate local flood warning and dissemination system [86]

76. Locally relevant and community-centric inundation and flood warning will be developed for improved preparedness and decision making. The objective is to develop *local* (village/union) flood information and dissemination system to provide advance local flood information to the communities. The present national flood warning by BWDB announces water level at a number of distant river locations, sometimes 20 to 30 kilometers away from flood vulnerable villages. Due to lack of local-relevance, the overall efficacy of the available flood forecasting diminishes. People often cannot relate to such warnings. People living far from the banks of major rivers, often do not find such warning meaningful to safeguard houses, livestock, crop and other productive assets. It is understood that, had there been a warning, disseminated through local people in locally-acceptable language, having references made with local benchmarks on inundation, the warnings could have been much more fruitful towards local decision-making and preparedness. PROVATi^3 project will take the main river-based flood warnings to reach out to the millions waiting for a locally-relevant accurate early warning on flood.

77. A small pilot project[87] has been implemented in four unions in two Upazilas by the Regional Integrated Multi-Hazard Early Warning System (RIMES)[88] in collaboration with respective communities. The process involves topographic survey of the sites (Upazilas), setting up water gauges (one per union), collecting water level data by local trained volunteers, use of water level data from various river locations (maintained by BWDB), and devising appropriate hydrological models for forecast inundation using these data. The community gets the flood level information through mobile voice message or text message. The system requires training community people how to interpret the message to use them for decision making.

78. The research-based fine tuning and development process for replication procedure involves six major activities: (i) topographic survey of the flood prone area; (ii) installation of the local level gauges; (iii) establishment of correlation between the forecast stations of BWDB in the surrounding rivers and local level gauges; (iv) devise appropriate 1D/2D hydrodynamic models to develop flood inundation maps for target area; (v) train communities on flood information interpretation and response; (vi) disseminate local level customized flood information through voice SMS, emails, local FM radios etc. As in the cases of early pilot experiences, the system will also require training of community people towards interpretation the early warning messages, before such messages are disseminated in the ‘last mile’.

79. The Department of Disaster Management (DDM) under the Ministry of Disaster Management and Relief (MDMR)[89], will lead the implementation of this component and collaborate with BUET and Bangladesh Water Development Board (BWDB). The design of the information system will be based on existing good practices (DDM pilot project in 4 unions in collaboration with the Regional Integrated Multi-Hazard Early Warning System) which can be scale-up under this project). This system will be implemented in 19 Upazilas in Kurigram, Gaibandha, and Jamalpur districts. These 19 Upazilas have 174 unions of which 69 unions are considered as char and

[86] See Working Paper 6 for further details on the research proposed.
[87] The system is now used by the Flood Forecasting and Water Center (FFWC) of BWDB.
[88] RIMES is an inter-governmental agency and Bangladesh has been a member since 2012.
[89] The DDM has expressed its willingness to participate in writing, with concurrence of the parent Ministry, the MDMR.

island char. An appropriate targeting technique will be applied to identify the worst flood affected unions to bring them under the system. The necessary research and development service is available from RIMES, IWM and IWFM/BUET.

80. An MOU will be signed between the project (LGED) and DDM for transfer of funds as per annual plan to be developed by DDM. The present design mission has developed an overall technical and management system to be used by DDM. It will further refined during final design mission that will include overall management as well as activities of Sub-component 2.3 by DDM.

81. **Sub-component 2.4 Practical Policy Actions (USD 1.02 million)**: This sub-component focuses on internal governance, regulations and policies, as well as broader knowledge dissemination and policy engagement. It addresses aspects of more programmatic approaches, evidence-based learning and policy engagement, as well as partnership building. It contains three main sets of activities.

82. **(i) Practical policy initiatives**: This set of activities will address problems of silos and limited knowledge sharing and institutional learning. Often project generated solutions are forgotten once projects close, or staff moves, and are not mainstreamed into organisational regulations, standards and policies. The project will identify innovations in various past and ongoing projects and produce policy documents and action plans to replicate and mainstream such innovative activities across the organizations, with a focus on LGED. A number of studies (not exceeding 7) will be conducted to revise existing standards/practices and to develop design protocols, so that LGED/DDM/GoB can integrate climate resilient practices in other projects across its portfolio. The researchable issues include (not limited to) the following: (a) participation and management of LCS in minor construction (focus on risk, procurement, safety), (b) mainstreaming of application of vetiver as slope protection, (c) appropriate choice of various rural roads design, (d) common design and policy regarding construction and management of rural markets, and (e) various lessons and innovations that are expected to come out of the PROVATi^3 project. A common approach to address the issues will be as follows: a) study and document each issue in a policy paper; b) disseminate among concerned projects/departments to build consensus; and c) adopt policies/practices by means of appropriate administrative decisions. The PMU, and respective technical experts, will lead on the thematic discussion, potentially engaging external specialists/consultants and members of the CPS/PAT.

83. **(ii) Mapping of poverty and nutritional status**: As done in earlier partnership, PROVATi³ will continue joint collaboration of GOB, IFAD, WFP, and World Bank in mapping levels of poverty and extreme poverty, as well as nutritional status in Bangladesh.[90] Efforts have started and WFP is leading on data compiling and analysis. The PROVATi³ project will contribute to this effort, producing up-dated maps of poverty and nutritional status and assist in dissemination. Implementation will be led by the WFP team, and the PMU will establish an MoU with WFP to channel required funds. PROVATi³ can agree to host dissemination events and will use up-date maps for project monitoring and to fine-tune targeting and implementation. Poverty maps are expected for 2018/19, nutritional maps for 2020/21.

84. **(iii) Country Programme Support unit and LGED Climate Unit**: Under this sub-component, PROVATi³ will co-finance the Country Programme Support unit (CPS) and Project Assistant Team (PAT)[91] and the newly established LGED Climate Unit, finance from the Green Climate Fund. Both initiatives focus on programmatic approaches to development project implementation by fostering cross-learning, mutual support in technical aspects and continuous institutional memory, beyond project duration. For support to CPS, PMU and relevant technical experts will propose annual priority areas of collaboration (up to 3 areas per year), where CPS

[90] The first generation of these maps is used in Appendix 2 and for site selection in Working Paper 1.
[91] For further details see paragraph 164, Appendix 5 and Working Paper 7.

will provide thematic support and assists in knowledge generation and sharing. Furthermore the CPS can be used as support in times of difficulties, i.e. lack of adequate staff/skills. The support to and collaboration with the Climate Unit will be on technical aspects (link with sub-component 1.1 and 1.5), as well as knowledge sharing.[92]

85. To generate lasting improvement and ownership, consultation and engagement of key stakeholders within and out-side the institution are to be considered. Recommendations coming out of the studies/reviews should be discussed, validated and finally owned. This should include workshops and round-table discussions, as well as site visits. Communication material should not be limited to printed reports. Visual tools, such as info graphics, shorter 4pagers/policy briefings, photographs and/or short clips should be used as fit. The PMU is encouraged to pilot new approaches under this sub-component and test – within the mandate of the proposed activities – what can work best to reach set objective of improving regulations/policies/standards.

[92] During final design, plans foresaw start of the LGED climate unit for early 2018.

Appendix 5: Institutional aspects and implementation arrangements

1. **Introduction:** The basic structure of institutional aspects and implementation has been described in the main body of PDR. This appendix further elaborates various institutional and implementation modalities.

2. **Project Governance: Project Steering Committee**: The project will be under the overall guidance of an Inter-Ministerial Project Steering Committee (IMSC) headed by the Secretary, Local Government Division, Ministry of Local Government Rural Development and Cooperatives. Its members would include representatives from the Ministry of Disaster Management, Ministry of Finance (ERD), Ministry of Water Resources, Ministry of Land, etc. IFAD will also be member of the IMSC. The Committee may also co-opt other members and implementing partners of key sub-components. The IMSC will meet two times a year, and when necessary. The overall responsibility for PROVATi^3 will be assumed by the Local Government Engineering Department (LGED). LGED will appoint a Project Director who will be the ex-officio member-secretary of the IMSC.

3. **Functions of IMSC:** The IMSC would have the primary responsibility of guiding the project implementation activities and in all matters of policy regarding the project. Specifically, the IMSC would:

   (i) Ensure that project activities are in compliance with Government's policies;
   (ii) Ensure that project resources are being used to achieve project objectives;
   (iii) Ensure that project interventions are coordinated with other development programmes and projects;
   (iv) Suggest revisions and take important policy decisions; and
   (v) Oversee and monitor the systematic implementation of the project and recommend changes where necessary in coordination with IFAD.

4. The overall lead will be LGED to administer the project activities. LGED will have two other institutional partners, namely the Department of Disaster Management (DDM) and the Institute for Water and Flood Management (IWFM), the latter two institutions will be implementing sub-component 2.3 and 1.1, respectively. IWFM/BUET will be responsible to carry out a few specialized research-based studies for the benefit of the project. The details of the engagement modalities of DDM and IWFM/BUET are provided in the PDR. The roles of LGED, DDM and IWFM/BUET are presented below.

A. Roles and Responsibilities of LGED

Teams based in Dhaka

5. A **Project Management Unit** (PMU) will be set up at the LGED headquarters in Dhaka with a Project Director who will assume overall responsibility for project management of PROVATi^3. He/she will be assisted by technical staff, specialists and TA team and requisite support staff. He will also be assisted by the Project Assistance Team (PAT). A list of project staff is given in Appendix 5.

6. The PMU will have the following tasks: a) Project start up and launching; b) develop annual plan as per PDR; c) Implementation of the plan in collaboration with District XEN offices and Upazila Engineer's offices; d) supervise, ensure quality and time progress of project activities; e) Approve all finances of the project; f) Keep records of all financial transactions using IFAD approved software; f) conduct all M&E and KM related works; g) produce program and financial reports; h) Coordinate with Government and IFAD; i) host all IFAD missions; and h) suggest necessary changes in the project activities and or approach as the project is implemented.

7. **Country Programme Support (CPS)/ Project Assistance Team (PAT)**:[93] In addition the policy work under component 2.4, PROVATi³ will invest in enhancing LGED's already strong capacity by supporting the establishment of a joint Project Assistance Team (PAT) at LGED or ERD. The potential tasks are the following: facilitate cross-learning with other on-going IFAD projects implementing similar activities to accelerate start-up; support knowledge generation and sharing across IFAD financed project implemented by LGED and other IFAD partners more general, including annual KM events; support on-going IFAD financed project in preparation of project completion, MTR and design; support weak performing project through staff-sharing and technical assistance in respective areas. The staffing of the PAT is to be finalised, as is the reporting line. The CPS will not add any hierarchical layers in the project, but work as facilitators and support staff, to enhance functionality of PROVATi³ and links with other projects. This is a measure to move towards more programmatic approaches of implementation.

8. The CPS Mechanism aims at providing Project Management Units (starting with LGED-implemented projects) with demand-driven support services in areas of common interest, with a view to improve project performance and strengthen coherence and coordination between the projects. It has four specific objectives:

    - Harmonising approaches and procedures across projects and ensuring their alignment on national and IFAD procedures;
    - Sharing knowledge generated by the projects, between the projects, with Implementing Agents and other IFAD partners nationally and internationally;
    - Strengthening the capacities of project teams in areas of common interest; and
    - Making economies of scale by pooling resources to the benefit of a group of projects – initially those that are LGED-implemented and potentially all IFAD-financed projects at a later stage.

9. The PAT will provide technical support services in three key areas that have been identified jointly with Project Directors and project staff: M&E, Knowledge Management and Communication, and Financial Management. However, the design of this mechanism is flexible enough to respond to project needs in other technical areas as they arise and jointly identified by IFAD financed projects. Further details are provided in the working paper.

10. In the first year of implementation (2018-2019), the PAT team will be composed of the following staff one full-time M&E Specialist; one-full time KM and Communication Specialist; and one full-time FM Specialist. These specialists will report to the Project Director of PROVATi^3. PROVATi^3 will award annually renewable contracts to the PAT staff contingent on confirmed demand by the Project Directors and satisfactory performance. The PAT will be obligated to work in collaboration with relevant LGED units (i.e. M&E Unit, CreLIC, and Audit Cell under the Administration Unit, etc.), and this will be reflected in their AWPB. The team will be based in LGED, which will provide office accommodation, or at ERD. Short-term specialists as needed will be hired to address technical issues of common interest jointly identified by project directors. Furthermore, the PAT will support the climate change unit, to be established at LGED, and collaborate with WFP for improved mapping of poverty and under-nutrition.

11. By the end of the second year, an independent review will be organised by IFAD to assess the relevance, effectiveness, efficiency and impact of this CPS Mechanism. If found positive, expansion to other, non LGED-implemented IFAD-financed projects will be considered.

12. In the first year of the project, the cost associated with the staff and work of the PAT will be borne by PROVATI^3 grant resources. At the end of the first year, project directors and the CPO will jointly assess the mechanism, based on a review of achievements against expected

[93] More details on the CPS/PAT are provided in Working Paper 7.

outputs. If found useful, the second-year budget will be shared between IFAD financed LGED projects, with PROVATI[3] bearing 33% of the cost.

13. The discussion on the modalities and responsibilities of the PSU/PAT are still being reviewed jointly by IFAD and LGED in a bid to ensure ownership and sustainability. A short mission from May 5 to 11 consulted with on-going project and LGED management and proposed a number of following options, based on which the Working Paper 7 has been developed.

14. **Support to new project design and start-up.** The TA team will assist new Project Directors and staff in: (i) setting up their M&E/KM system, including SIMES; (ii) organising baseline studies; (iii) setting up a financial and procurement management system meeting IFAD and GoB requirements; (iv) building the capacities of new staff, particularly with regard to M&E, KM, communication and financial management.

15. **Contracting.** The LGED core staff in the PMU will be assisted by a Technical Assistance (TA) team with expertise in engineering design and supervision, climate resilience, livelihoods/employment, finance, procurement, social inclusion and gender participatory approaches, environmental and climate assessment, monitoring and evaluation, and local governance. The TA team will be led by senior team leader, a rural development specialist overseeing the range of PROVATi³ activities with expertise in procurement. The TA team will be contracted, against contracts renewable every year contingent on confirmed demand by the Project Directors and acceptable performance. They will be based in LGED, which will provide office accommodation. Short-term specialists as needed will be hired to address technical issues of common interest jointly identified by project directors. Contracts will be established by PROVATi³ and/or through the CPS.

16. Services will be provided to IFAD-financed projects but, in line with current practice developed by the KM consultant supporting the IFAD programme, the terms of reference of the TA team will include the obligation of working in collaboration with relevant LGED units (i.e. units dealing with M&E, KM and FM), and this will be reflected in their AWPB.

17. For an efficient and effective implementation of sub-component 2.1, PMU, LGED (including the Gender and Development Platform) and the contracted NGOs/MFIs will receive capacity building to further design and implement this sub-component. Two models of socioeconomic empowerment are suggested and will require two different forms of institutional and implementation arrangements:

    (a) The pilot model will require more extensive capacity building over the first 18 months of the project (2018-2019). PMU/LGED and contracted NGOs will first get an exposure visit in the region (Vietnam or Cambodia) to learn about the household methodologies using the Gender Action Learning System and the Financial Action Learning System . Second, they will be trained on the methodologies in-country through a training of trainers scheme. This will require contracting a pool of international experts or an international NGO. as trainer by the PMU;

    (b) The replication model will require capitalization, knowledge and skills exchange with LGED based on the CCRIP experience with LCS. This will involve a facilitation of cross-learning between CCRIP and PROVATI by the CPS/PAT under the coordination of PMU. Implementation of this model falls under direct responsibility of PMU and LGED with their respective staffs. The Livelihood Specialist will be in charge of trainings on IGAs and LGED in charge of trainings on social issues such as gender, nutrition, health, etc.

    (c) Monitoring and progress tracking will require a joint collaboration of NGOs and LGED under the overall coordination of PMU. The contracted NGOs will collect and report data from the participatory processes to the PMU. At baseline, mid-term and completion, the PMU will contract a company/firm for the RIMS surveys that will also undertake the WEAI at similar timeframe.

(d) University/research partner will be contracted to produce robust evidence on cost-effectiveness, efficiency and sustainability of applied modules, through applied research. The outputs will include documentation of lessons (approaches, successes and challenges) towards socioeconomic empowerment throughout the change process, knowledge products relevant for scaling up of good practices; and evidences to influence GOB/LGED to make informed policy recommendations under sub-component 2.4 and inform construction and LCS management practices under component 1.5.

18. For an efficient and effective implementation of sub-component 2.2, the mission found a two-stage approach as appropriate. Phase 1 (Inception Phase, may continue for first 2 years) will have two major streams of activities – a) pilot different implementation models (skill training followed by apprenticeship) for a few skills with some selected collaborators (skill providers) in few locations, and b) continuous market exploration for new skill development opportunities based on market demand. The second phase (Scale-up Phase) will capitalize on the learning of the first phase and scale up to the entire project area with successful implementation models.

19. The vocational skills training program will be outsourced to appropriate providers. The mission identified a number of such potential providers that includes government run training institutions, third party/non-government organizations and also private providers. The PMU will float open tender describing the requirements and select appropriate provider through a competitive process. As observed, government run vocational training institutions (such as TTC, Vocational Schools) have presence mainly up to district level, offer limited number of courses and are not fully staffed in terms of the number of instructors. In addition, in many occasions these schools have institutional barriers to customize training courses per the needs of the target population. On the other hand, a number of third party/non-government organizations have been identified that generally possess experience and can provide such skills training, with the ability to extend their services up to the Union level. Once the PMU floats the tender, it will select the training provider who can meet the requirements in a most competitive manner. However, per assessment by the PMU of the capacity of the potential service providers, multiple providers can be selected. The project will have close monitoring of the performance of the provider/s through a monitoring system developed.

20. **AWPBs.** AWPBs of the TA team will be established in consultation with all the projects and will be approved in a meeting by the Project Directors and IFAD CPO. AWPBs will specify annual expected outputs and will specify how costs will be covered.

21. **Financing.** Costs related to the Country Programme Support (CSP) mechanism will be financed as follows:

- *First year*: all costs will be borne by PROVATi[3] grant resources. At the end of the first year, project directors and the CPO will jointly assess the mechanism, based on a review of achievements against expected outputs. If found useful, the second-year budget will be shared between PROVATi[3] grant resources and project resources;
- *Second year*: PROVATi[3] grant resources will cover 66% of the costs, and other IFAD-financed LGED-implemented projects will share the balance. Cost-sharing between the projects will be organised so as to minimise complications and facilitate smooth payment (no cost-sharing on one single item of expenditure[94]).

[94] Past experience with the IFAD Multi-Stakeholder Event for Knowledge Sharing (December 2016) showed that splitting financing of one single expenditure item among all projects is in practice hard to achieve, because vendors cannot issue multiple invoices for fractions of the total amount. One expenditure item (such as for example one workshop) should therefore be financed by only one project at the time. A practical solution might consist in having each project covering annual costs on a rotational basis.

Teams based in districts

22. **LGED District Executive Engineers (XENs**): Component 1.2, 1.3 and 1.4 will be implemented by LGED District and Upazila Office as per design of the PMU. The XEN offices and Upazila Engineer Office will have PROVATi^3 dedicated technical, accounts and support staff members. The XEN will appoint contractors/LCS, as appropriate, for the construction of Union/Village roads and flood shelters, and particularly LCS groups for construction of markets and maintenance/rehabilitation of rural roads. He/she will be responsible for tendering, disbursement to contractors and LCS groups, supervision of works with the help of PROVATI3 staff members, and timely completion of project activities.

23. Monthly review meeting will be held at XEN Office to review progress of project activities.

24. **Upazila Engineer Office** will be responsible actual supervision of the construction works. The Upazila staff will have the responsibility for implementing and monitoring all project activities of Component 1.2, 1.3 and 1.4. He/she will be assisted by Upazila LCS cum Livelihoods officer to train LCS groups, monitor market development and monitor progress Component 2.1 and 2.2. S/He will be instrumental in imparting training of Officials of Market Management Committees (MMC) and School Management Committees and/or Union Disaster Management Committees (UDMC) for school-cum-shelter management, respectively, and continue to liaise with both MMC and UDMC for the regular maintenance of the infrastructure built and for community ownership of the infrastructure.

25. **Regional Offices**: Three Regional Offices will have the following specific responsibilities: a) Conduct and coordinate all LCS training activities under Component 1.2; b) Manage and supervise NGOs and training providers under Component 2.1 and 2.2 respectively; c) Assist PMU (Livelihoods Specialist) to select NGO-MFIs and training providers at the district and Upazilas level; d) Select trainees in collaboration with Upazila LCS cum Livelihoods officer; e) Ensure quality of vocational training; f) Coordinate with potential employers for the trainees; f) Supervise quality and progress of all construction works under Component 1; g) Coordinate with XEN Office and attend all review meetings; h) Coordinate with PMU in Dhaka.

26. One of the major institutional functions of the Regional Offices is to mobilize LCS Officers/ Union Development personnel to create enabling environment for targeting poor female LCS members and deserving youths for LCS-based activities including infrastructure monitoring and vocational training, respectively, through an open and transparent recruitment process, in presence of local stakeholders. This role will play a critical role towards achieving the overarching objective of building resilience of vulnerable communities.

27. **Project Coordination at district and Upazila level**. The project will coordinate with relevant line agencies and local government institutions the district, Upazila and Union level. Special attention will be given to coordination with office of the UNO and Union Parishad (Chair) as both are directly involved with market management. The UNO leases out markets every year and Union Parishad Chairman is Chairman of all MMCs. Project activities will be coordinated by arranging a monthly review meeting, to be held at the XEN Office.

B. Roles and responsibilities of Department for Disaster Management (DDM)

28. **DDM functions.** DDM is responsible for implementation of Component 3.2. It will have the following broad responsibilities: a) Appoint a Project Coordinator for Component 3.2; b) Fully develop the local flood information and dissemination system proposal in collaboration with IFAD expert; c) Finalize in collaboration with IFAD expert all activities (quantity, process and timeline) of this component; d) enlist an expert organization through competitive procurement process to actually develop engineering model for local flood information system, build village institutions to disseminate flood information, and develop IT based information dissemination system; e) recruit required human resources for the project; f) monitor implementation and progress; g) validate accuracy of forecasted and actual flood levels in project areas during monsoon; h) mainstream the system within DDM for application beyond the project period; i)

coordinate with GOB, LGED, BUET, DDM offices and committees at the district, Upazila, and Unions, and IFAD; j) prepare progress report in collaboration with PMU/LGED; and h) host IFAD missions.

Roles and responsibilities of IWFM/BUET

29. The Institute of Water and Flood Management of Bangladesh University of Engineering and Technology (IWFM/BUET) is responsible for implementation of Component 2.3. It will have the following broad responsibilities: a) Appoint a Project Coordinator for Component 2.3; b) Fully develop three research proposals to be funded by PROVATi^3; c) Finalize in collaboration with IFAD expert all activities (quantity, process and timeline) of this component; d) Appoint researchers, graduate students, and other technical/support staff to conduct the research works; e) recruit required human resources for the project; f) monitor implementation and progress; g) coordinate with LGED, DDM, and other institutions; and IFAD; h) prepare progress report in collaboration with PMU/LGED; i) Ensure timely completion of research findings to assist PMU/LGED and other stakeholders; and j) host IFAD missions.

Roles and responsibilities with WFP

30. The World Food Programme office Bangladesh will lead the production of poverty and nutritional status maps. The office will liase with the PMU on regular basis to up-date progress towards map production. WFP and PMU will jointly facilitate dissemination of the maps. WFP agrees to have PROVATi³ and IFAD logo on the maps.

D. Supervision

31. The project will be directly supervised by IFAD. Within IFAD, the Country Programme Manager will have direct responsibility for supervising the project. Supervision will cover overall physical and financial progress, compliance with the provisions of the loan agreement and achievement of project objectives. Cross cutting issues such as poverty targeting, gender targeting and environmental aspects will also be reviewed periodically. There will be one full supervision mission per year. Where needed, IFAD will provide additional support in areas such as technical aspects, targeting, financial management, monitoring and evaluation and knowledge management. Supervision will broadly cover the following aspects:

Fiduciary and Management Aspects: In the supervision, an assessment of overall project performance in light of project objectives will be conducted and it will include a review of financial and physical progress and compliance with the provisions of the loan agreement. The assessment by the supervision mission will cover the following aspects:

(a) Project management and coordination performance; structure, staffing and performance of the Project Management Unit, District Offices and Upazila Offices, selection of service providers and project monitoring and impact assessment and reporting system.

(b) Financial management aspects including the structure/performance of financial management and accounting systems, review of the flow of funds arrangements, review the status of the Special Accounts and Project Accounts, examination of project expenditure and sources of financing; and the arrangements made for audit processes.

(c) Procurement and contracting with respect to compliance with procurement guidelines and ceilings, progress made in procuring goods and services, and procurement documentation.

Cross Cutting Issues: The said assessment by the supervision mission will also include

(a) Targeting: Review the socio-economic targeting of project investments to ascertain that the project is reaching and affecting the intended beneficiaries.

(b) Gender: Review progress in mainstreaming gender aspects in, planning, execution, monitoring, and reporting;

(c)Youth: Review of progress towards achieving high levels of youth participation;

(d) Climate: review achievements to mainstream climate resilient features in planning/design, construction and maintenance/use;

(e) Environment: To assess the impact of project activities on the very vulnerable environment of the project areas.

32. **Reporting:** The PMU will design a reporting system to track the project physical, financial performance and emerging impact.

(a) A consolidated Physical and Financial *Monthly Progress Report (MPR*) will be prepared by the PMU which will consolidate all the physical progress made on each of the five project components. This report will also report on overall expenditures on the Project under each component.

(b) A quarterly *Progress Reports (QPR)* will be prepared which consolidates the monthly reports adding any additional financial, procurement, training and TA and physical progress on all components including report from DDM and IWFM.

(c) An *Annual Project Progress Report* (APR) will be prepared within one month of the end of the Project Year to cover the entire financial year. These reports will be presented to PSC and IFAD.

(d) The PMU will develop specific reporting formats for each component of the project and train project staff in their use and consolidation.

(e) Any Service providers hired for the purpose of PROVATi^3, especially in Components 2.1, 2.2, 2.3 and 2.4 will have to submit monthly, quarterly and Annual Progress Reports on agreed reporting formats. PMU will be responsible to make prior agreement with service providers before entering into any contractual arrangement.

33. **Horizontal coordination between LGED and DDM in region**: At project start-up, DDM and LGED under the leadership of the PMU, will suggest type and frequency of coordination meetings in the three districts where sub-component 2.3 is implemented. Synergies could be reached in community mobilisation and site supervision. Finally, joint preparation of Site visits from supervision missions and policy makers require good coordination. The proposed coordination mechanism will be presented to project steering committee for information.

34. **Horizontal coordination between NGOs/MFIs, and LGED**: Sub-components 2.1 and 2.2 will be out-sourced to NGOs/MFIs and/or private sector/third-party service providers. Since tendering will allow for several parties to bid for entire project area/ target group, or just a part/region, coordination among those and with the remaining physical construction will be key. In line with above paragraph, the PMU will discuss feasible coordination modalities with the service providers once contracts are awarded and share with project steering committee for information.

Appendix 6: Planning, M&E and learning and knowledge management

A. Project Orientation and Review (LGED)

1. **Sharing of PDR and technical documents with project staff members**. It is critically important that all project staff members, especially specialists and officers are given the PDR and technical papers (working papers) at the very beginning of the project. It is be responsibility of the Project Director to ensure that these documents are widely shared and senior officials familiarize them thoroughly with these documents. PIM should also be clearly understood by senior staff members.

2. **Orientation meetings for all PROVATi^3 project staff.** All PROVATi^3 project staff members will receive a two-day orientation training at the start of the project. The objective of the training will be to development a clear understanding of project objectives, project components, implementation methodologies of each component/activity, financial arrangements, monitoring and evaluation requirements, LCS activities etc. Special emphasis will be given on Component 2, that is, LCS empowerment and vocational training, two of the most innovative activities of this project. This orientation will also discuss about IFAD procedures and requirements.

3. **District orientation meetings**. The project will organize six meetings, one in each district, with XEN and LGED district officials, all Upazila engineers in attendance. The objective is also to explain the objectives, activities, process of implementation, finances, M&E and KM of the project. It will also be important to explain how the project activities match with LGED's institutional set up as well as additional staff members of the project. Besides, Upazila Engineers must have the understanding of engineering detailed features of all infrastructures of the project.

4. **Staff capacity building**. For capacity building of project staff several training courses on LCS management, MMC management, LCS empowerment and selection of trainees for vocational training program, accounting and procurement have been planned. All such hands-on training will help project staff members to internalize project activities and procedure and help maintain quality and timely completion of project activities. There will be training on TOMPRO accounting and project management software.

5. **LCS group formation and training**. The staff development training will include detail discussion on formation of LCS groups, selection criteria, training on construction and social issues, use of protective gears and constructions tools, LCS construction work management including payment system, supervision and monitoring works of KNG-MFIs to be recruited for LCS empowerment etc. The main participants for this training will LCS cum Livelihoods officers who will be working at the Upazilas.

6. **Training on vocational training courses**. The LCS cum livelihoods officers will also receive training on management of component 2.2. The focus will be selection of trainees, selection process, selection of trades, quality control of vocational training courses, monitoring of courses, establishing linkage with employers etc.

7. Poverty and gender issues. All staff of the project will undergo a training on poverty and issues in PY1 and a follow-up training to ensure appropriate project implementation. The training will focus on why gender awareness makes a difference in project execution, how gender mainstreaming makes development projects more successful and what tools are available for use in making gender mainstreaming work. The PD will arrange for the workshop in collaboration with IFAD

8. **District monthly review meetings**: Regular review meetings will be held over the project period to discuss progress, resolve operational problems and ensure quality and timeliness of

project implementation. All district and Upazila PROVATi[3] staff members, XEN and Upazila engineers will attend these meetings. It will be an important supervision and monitoring tool for the project.

9. **Annual review and planning workshops.** These workshops will be organized annually in each District in order to provide an opportunity for project staff, key stakeholders and selected project beneficiaries to review project performance and to recommend improvements for incorporation during future implementation of the project.

B. Annual Work Plan and Budget (AWPB)

10. The AWPB will represent the key planning document for the Project. It will serve as the instrument for identifying and integrating management priorities for implementation, forecasting procurement requirements and facilitate the mobilization of staff and resources when needed. It will act as the management tool to control costs and assess achievements. A draft AWPB will be prepared for discussion using the schedules and format recommended by IFAD. PROVATI3 will integrate government and IFAD planning processes. Annual planning for projects implemented by LGED is based on the Governments process for its overall Annual Development Plan. In the last quarter of the financial year (March to June) the project will draw up an Annual Work Plan (AWP). This plan will outline the activities and budget for each project year as set out in the Development Project Proforma (the Government's Project Document) but may also include works carried over from the previous AWP. Steps are as follow:

    (a) A draft AWPB will be prepared for discussion using the schedules and format recommended by IFAD;

    (b) Although annual in scope, the AWPB will be disaggregated into quarterly segments for monitoring purposes;

    (c) The AWPB will be submitted to IFAD for its no-objection no later than 60 days before the beginning of the relevant Project Year;

    (d) This AWPB will be incorporated into the government's overall revised ADP.

    (e) If required, the PMU may propose adjustments in the AWPB during the relevant Project Year, which will become effective upon approval by and IFAD.

C. Monitoring & Evaluation

11. **ME/MIS**: PROVATi³ will have a comprehensive M&E system to generate management information and provide LGED and IFAD with evidence of results and impact against logframe indicators and IFAD's Results and Impact Management System (RIMS). The PMU will include a Monitoring Evaluation and Knowledge Management (MEK) specialist based at PMU. He/she will be responsible for baseline and RIMS surveys, annual outcome surveys and collection of regular monitoring data, as well as project reporting, MIS and knowledge management.

12. M&E Specialist will review the Project Logframe and develop a plan for monitoring each of the key indicators listed in the Logframe. An indicative list to guide project staff on the data to be collected for each log-frame indicator, method of collection, frequency and responsibility for collection will be developed and given in the PIM (final design mission). The Monitoring and Evaluation tasks will involve the following elements:

    (a) **Activity monitoring**: Project implementation offices (Upazila, District and Region) will generate monthly reports on activities and outputs, which will be collated by the PMU in a consolidated report. Reporting will show progress relative to annual and project targets disaggregated by gender, where appropriate. With over three-quarters of project expenditure on civil works, monitoring of construction contracts will be a key element of such activity monitoring and CCRIP/LGED has a well-established process for such

monitoring involving a series of contract milestones. This will need to cover contracts implemented by Labour Contracting Societies (LCS) as well as by contractors.

(b) **Process monitoring:** The project will monitor the functioning of institutions established and supported by the project. This includes Labour Contracting Societies (LCS), Marketing Management Committees (MMCs), selected NGO-MFIs and vocational training providers. Each of these has their own role and structure and need different monitoring approach. However, there are some common themes such as targeting of membership, selection of leaders, decision process and financial management. The CCRIP project has developed manuals for LCS management and MMC, which may be further revised and finally used by PROVATi^3.

(c) **Outcome monitoring** will gather information on outcome and objective level logframe indicators. A series short studies will be done to see impacts on LCS, impact of road construction on traffic, impact of market development on livelihoods, management of MMCs and flood shelters etc., LCS empowerment, impact of vocational training etc. In particular outcome monitoring will aim to collect evidence of impacts of improvements in physical infrastructure to changes in farm production, expansion of business, availability of inputs, new investments in the markets, wage employment, etc., resulting in increased sales, which in turn will result in increased income and improved food security, reduction in vulnerability, leading finally to reduced poverty.

(d) **Impact monitoring** will gather information on IFAD's anchor indicators regarding asset ownership and reduction in child malnutrition and other 2nd level indicators given in IFAD's Results & Impact Management System. RIMS data will be gathered from a sample of the population of the project area as a whole, and so include households who are only direct beneficiaries of the project. The scheduled RIMS surveys will be complemented with indicators from the Women's Empowerment in Agriculture Index following the same setting and timeframe. Additional indicators will relate the anchor indicators to the results of project interventions and thus enable a degree of attribution of change. The project will report on RIMS Level 1 indicators of project outputs and activities on an annual basis. After the MTR, ratings for the effectiveness and sustainability of each component will be included. These ratings will be justified by evidence from indicators of project outcomes. The impact monitoring will include the following studies:

- ***Baseline Survey***: A BLS is designed to assess the physical and socio-economic status of the project area and its inhabitants in order to define their 'baseline' status before the implementation of project activities so as to allow for the impact of the project to be measured at a later stage by comparison to the baseline. The MEK will arrange for outsourcing the Baseline Survey as soon as possible after the initiation of the Project to a competent agency experienced in conducting household surveys. This survey will cover selected project unions. The indicators to be monitored will be selected from the project logframe and will include RIMS indicators as well as other indicators specified in the Log-frame. The methodology for this will be agreed with IFAD.
- ***Participatory beneficiary assessments*** will be undertaken periodically by contracted NGOs to obtain the feedback of beneficiaries and record any changes whether positive or negative, in the lives of the beneficiaries due to project interventions. This will include the members of the LCS, trainees of vocational training programs, MMCs and traders, and poor households impacted by the community and communication infrastructure. A structured report will be prepared to record the findings.
- ***Special studies*** will be undertaken from time to time to examine certain aspects of project implementation.
- ***Mid-term evaluation survey*** will be conducted in the fourth year of the project and will provide the first detailed opportunity to check the project achievements

towards its goal and objectives and examines the need for any amendments to the implementation arrangements, expected outputs or outcomes.

- At the end of the project a ***completion evaluation*** will be conducted, as an input into the ***Project Completion Report (PCR)*** through a formal survey undertaken by a neutral agency (with no previous involvement in project implementation) to examine the overall progress and direction of the project.
- At the start of the project, the PMU will create geo-reference – and validate- the locations of all the markets, cyclone shelters and roads in a web based application like Google earth. In this map, it will clarify the type of market that has been upgraded

13. **Link to KM**: The project will plan early on how to use ME data for knowledge generation and sharing. Data is not simply generated for compliance, but should be used to improve implementation, as well as assess implementation and design features and recommend improvements/adjustment, where need arises.

14. **Evidence based policy recommendations**: The project will use its data to generate recommendations on how to further improve implementation of rural development projects in Bangladesh. This is partly explained under the treatment measurements suggested for sub-component 2.1, which will help proving which modalities of LCS will work under what conditions. Similar options will be explored during implementation. The appraisal mission shall – in coordination with LGED ME experts – plan the design of ME/MIS and surveys to allow appropriate evidence generation through systematic data collection. The project might not be able to measure attribution, but at least contribution/correlations through quantitative analysis, and or systematic reviews and analytical narratives (qualitative).

15. **Partnership**: In addition, a partnership with leading research institutions is to be explored to facilitate data analysis and assessment in due time.

16. Some M&E activities would be contracted to external agencies. This includes the monitoring of the RIMS anchor indicators which would be contracted to an agency experienced in collection of anthropometric data. MTR and final impact studies will be outsourced. Short studies and case studies will be conducted by the M&E section.

D. Reporting

17. The PMU will design a reporting system to track the project physical, financial performance and emerging impact:

- A consolidated Physical and Financial **Monthly Progress Report (MPR)** will be prepared by the PMU which will consolidate all the physical progress made on each of the five project components. This report will also report on overall expenditures on the Project under each component.
- **A Quarterly Progress Reports (QPR)** will be prepared, which consolidates the monthly reports of the past three months adding any additional financial, procurement, training and TA and physical progress on all five project components.
- An Annual Project Progress Report (APR) will be prepared within one month of the end of the Project Year to cover the entire financial year. These reports will be presented to PSC and IFAD.
- The PMU will develop specific reporting formats for each component of the project and train project staff in their use and consolidation.
- The Upazila and Regional offices will regularly identify success stories or failures and report these for inclusion in the reports.

E. Knowledge management

18. Knowledge Management (KM) activities will use project data and results in order to draw lessons and disseminate experiences. The M&E Specialist will be responsible for knowledge management and learning. The first of the uses of M&E data is for internal project review and planning workshops. KM activities will aim to share project results and lessons within LGED and with other agencies. This will involve contributions to LGED and IFAD newsletters, posting key information and reports on the PROVATi^3 page of the LGED website, and experience sharing workshops both organised by the project and by other agencies. Wider dissemination will come from participation in IFAD knowledge forums.

F. M&E of Component 2

19. DDM will monitor progress of the project activities and report to IFAD through PMU/LGED. This activity has the most important findings to be shared with wider stakeholders about the effectiveness of local flood information system.

20. IWFM will produce research reports and disseminate through technical seminars to disseminate its research results to wider audiences.

Appendix 7: Financial management and disbursement arrangements

Financial Management (FM) Assessment

The lead project agency and the implementing agency are required to maintain acceptable financial management systems to guarantee an appropriate use of funds and reliability in the financial reporting. A financial management assessment of the Climate Resilient Community Development (herein referred to as "PROVATi^3" or the "Project") was carried out in accordance with IFAD's Guidance Note on Undertaking Financial Management Assessment at Design, issued in 2012. The objective of the FM assessment was to provide assurance that the lead project agency and the implementing agency will have sufficiently strong financial management systems and controls in place to properly manage, control and report project finances in order to ensure that project funds are used economically and efficiently for the purpose intended. On the understanding that PROVATi^3 will be implemented by a PMU embedded under a Division of the Lead Project Agency, the assessment has found the proposed arrangements to be acceptable.

The assessed FM risk of the project is considered high as summarized in Table 1.

Public Financial Management and Governance

The Transparency International Corruption Perceptions Index for Bangladesh was 26 for 2016 (High Risk). Bangladesh's ranking has deteriorated from 139th position in 2015 to 145th in 2016.

The Public Expenditure and Financial Accountability 2016 (PEFA), assessment indicates that seven performance indicators improved, fourteen remain the same and seven deteriorated since the last PEFA of 2010. Control in budget execution, reporting, accounting and audit still remain weak in Bangladesh PFM.

In the second multi-year PFM reform strategy 2016-2021, three important issues have been prioritized. These are: capacity development in revenue mobilization, implementation of the Budget and Accounts Classification System (BACS) and the implementation of a modern information technology system (Integrated Budget and Accounting System iBAS++). Existing initiatives to improve auditing systems and ensure transparency and accountability in government expenditure will be continued. The thrust of the current PFM reform is to build on the past and to strengthen initiatives that have struggled to take hold. Overall, weaknesses remain, particularly in the control environment and tax system, as well as inefficiencies resulting from the fragmentation of recurrent and development budgets.

Internal controls and internal audit remain an area of substantial weakness across the PFM system in Bangladesh. The control environment is dependent on detailed financial rules and regulations that outline in great detail internal controls that should be followed for all transactions; however, these are often circumvented by officers themselves to expedite their workloads (PEFA 2016).

Manual accounting remains the prevalent practice across Bangladesh public institutions. Annual financial reports are prepared using a combination of IPSAS and Bangladesh Government accounting standards, which accommodate the 'modified-cash' basis of accounting. Initiatives such us the iBAS++ (important element of the World Bank project SPEMP) are being designed to support both cash and accrual basis of accounting and intend to provide transparency and an enhanced control framework to support financial decision-making at all levels of government. A recent World Bank

Policy Note reviewed key issues for the successful implementation of iBAS++, such as the capability to be used for donor funded projects. The implementation of IBAS++ is not expected to be effective in the short term.

In terms of government administration, Bangladesh is divided into eight administrative divisions: Barisal, Chittagong, Dhaka, Mymensingh, Khulna, Rajshahi, Rangpur and Sylhet. Each division is named according to the largest city within its jurisdiction, which at the same time serves at its administrative centre. The divisions are composed of 64 districts, or zilas, each run by a Deputy Commissioner appointed by the government. The districts are further divided into 489 sub-districts called Upazilas, which in turn are made up of Unions.

Every administrative unit maintains a representation from its line Ministry, with whom consolidates its financial information. The Office of the Controller General of Accounts (CGA) is responsible for compilation and consolidation of Finance and Appropriation accounts of all Ministries, following the accounting principles and procedures established by the Office of the Comptroller & Auditor General (OC&CAG).

All financial transactions made under the administrative architecture of Bangladesh are handled by 56 banks widely spread across their entire territory, that operate under the full control and supervision of the Central Bank of Bangladesh. Government transactions are made mainly via checks and cash transactions are not a common practice across government institutions.

Financial Management of the Implementing Agency

The Local Government Engineering Department (LGED) is the Implementing Agency (IA) for PROVATI[3]. LGED does not have an integrated financial management organization; its financial management is segregated and ring fenced for each project and revenue budget unit. LGED's accounting system is cash manual based, uses single entry book-keeping, and does not include a statement of assets and liabilities. LGED neither prepares interim financial statements to facilitate monitoring of budget implementation nor produces an annual financial statement to show its overall financial position. In 2015, LGED had a change of management and with the support of multilateral donors, active in the country, introduced a number of reforms to mitigate FM risks – some flagged by a 2013 Transparency International report. Among others reforms, LGED took steps to enhance the professional procurement skills of the LGED staff and strengthen management and monitoring. Furthermore, the Government e-procurement system was adopted by LGED, significantly reducing the risks of corruption and collusion in their procurement practices.

The inherent risk of the project is deemed to be high.

Risk Assessment and Mitigation

The summary risk analysis provided in this section has been developed according to the assessment performed of LGED. Table 1 identifies the key risks related to the Project's financial management and suggests how such risks can be mitigated.

Table-A7.1: Key Financial Management Risks and Mitigation Measures

Type of risk	Risk rating	Risk mitigating measures	Residual risk rating
Inherent Risks	High		High

Project Control Risks			
Organization and Staffing LGED's structure is heavily decentralized, making it difficult to have adequate accounting staff across its field offices. PMUs are staffed by GoB funding and IFAD Funding (FMS consultants). LGED has had many years of experience working with IFAD, whose capacity has improved during recent years; but for new projects, it is expected to face the same problems; limited capacity of the FMSs, both at the PMU level and at the district level.	High	From the beginning, the project is expected to have a solid finance structure with adequate training and close monitoring. **PMU** **IFAD loan -** 1 Financial Management Specialist + 2 Finance Assistants **GoB funds -** 1 Accountant + 1 Accounting Assistant **Districts** **IFAD loan** - 6 District Finance Managers (in larger Districts there may be one additional Finance Assistant) **GoB funds** - 1 Accountant per district (in larger Districts, one additional Accounting Assistant is also available)	Medium
Budgeting LGED follows the guidelines of the General Economics Division in preparing the "Development Project Proforma/Proposal" for development projects, which is a detailed budget required for every approved project. The guideline was prepared with extensive consultations among GoB stakeholders, planning professionals from the Planning Commission, Ministries/Divisions and Implementing Agencies.	Low	LGED has extensive experience preparing DPPs for IFAD co-funded projects.	Low
Funds Flow The DAs, with some exemptions, normally are maintained in the Central Bank of Bangladesh. PMUs use Project Accounts (PA) in local currency. Cost centres located at a district level maintain individual project accounts in commercial banks. Projects do not handle cash, every payment is made through checks. LGED manages different levels of authority in its structure. Larger payments, such as those for infrastructure, are made directly by IFAD or the PMU, depending on the level of authority. These arrangements are specified in the DPP.	Medium	To avoid any delay in the implementation the designated account will be stablished according to GoB procedures. The DA will carry a six-month advance that should be sufficient to ensure liquidity, but may be adjusted based on implementation requirements.	Low
Internal Controls Due to the change from manual accounting to an automated accounting system, IFAD co-funded projects needed to adapt their systems to a more advanced and modern way of management. The PIMs and Financial Manuals of on-going projects will be an adequate source of information for the projects, with room for any improvement.	High	The project will be requested to maintain a strong, documented, internal control system based on the government regulations and IFAD's requirements. A Finance Manual, with clear segregation of duties, will be a disbursement condition.	Medium

Accounting Failure to maintain accurate and timely accounting information due to manual accounting systems.	High	An off-the-shelf accounting software package will be procured at the beginning of the project. The contract will include a provision for customisation to meet IFAD reporting requirements and different intensive training stages for both PMU and PIUs.	High (the performance will be evaluated after one year of project´s implementation.
Financial Reporting Manual accounting systems limit the reliability and usefulness of financial reporting. Consolidation of financial information from the District offices to the PMU is usually and issue, at least at the beginning of a project.	High	It is expected that the project will be consistent with the arrangements of ongoing IFAD co-funded projects implemented by LGED. The finance unit will be fully trained in the use of the automated system that will be procured. Intensive training will take place at different stages of project implementation and at different levels. Semi-annual Interim Financial Reports (IFRs) will be prepared by the PMU and submitted to IFAD within 45 days after the end of each semester.	Medium
Internal Audit LGED established an internal audit unit in 1995, following recommendations from the first MANCAPS study. This unit is headed by an Executive Engineer (XEN) and staffed by Audit Specialists. All of the staff are funded from the revenue budget. The large majority of the work of the unit takes place at a transaction level rather than reviewing internal control systems and procedures.	High	If the Internal Audit function doesn't meet the expected Internal Audit function requirements, the PMU will contract with a private firm that has adequate and relevant experience under a TOR to be prepared by the FMS and cleared by IFAD.	High (the independence of the Internal Audit Department will be assessed during the first year of project´s implantation)
External audit All donor funded projects are audited by FAPAD on a yearly basis. Its performance, in terms of quality and timelines, has improved in recent years.	Medium	In line with its constitutional mandate, external audit is conducted by FAPAD. This Directorate depends on the Office of the Comptroller & Auditor General (OC&CAG), the supreme audit institution in Bangladesh. To mitigate the risk of late submission, the project will be required to submit their unaudited financial statements within two months of year end. According to the performance of the project and in addition to the FAPAD audit, it may be possible that IFAD requests the project to be audited by an external audit firm.	Medium
OVERALL RISK	**High**	**RESIDUAL OVERALL RISK**	**High**

Implementation Arrangements. The government of Bangladesh, represented by the Economic Relations Division (ERD) of the Ministry of Finance, is the Borrower of the loan and recipient of the grant. The Local Government Engineering Department (LGED) of the Ministry of Local Government, Rural Development & Cooperative is the Implementing Agency (IA), under which a PMU will be established for the day-to-day financial management activities of the project, including accounting, reporting, and coordinating audit processes. The project financial arrangements will be consistent with ongoing projects implemented by LGED (HILIP-CALIP and CCRIP,).

Cost Centres. PROVATI^3 is a project integrated in the government administration of Bangladesh and designed to promote the use of existing government structures at the central, district, and sub-district (Upazila) levels. The project is structured with one PMU at the central level, with overall Financial Management responsibility, including the consolidation of the financial information produced by the Project Implementation Units (PIUs) located at LGED´s offices in the districts of implementation. Is expected that the PIUs as well as the PMU, use an automated accounting system to implement the project.

Regional Office. There will be three Regional Offices (RO) located in the LGED offices in the districts of Rangpur, Kurigram and Jamalpur. The ROs will be responsible for progress supervision, monitoring of LCS works, quality control, supervising component 2, impact monitoring, and maintaining close links with other stakeholders. In terms of FM, the RO won't be considered a cost centre, but it will serve as a link to provide FM training to the different PIUs of the districts.

Upazila Office. In terms of FM, the role of the Upazila will be limited to prepare and submit accurate supporting documentation for the approval and consecutive disbursement of PIUs.

Labour Contracting Societies. Labour contracting societies (LCSs) are mechanisms formed from targeted groups of poor women who, based on certain criteria, become eligible to receive contracts from LGED through non-competitive bidding according to LGED guidelines.

Organisation and staffing. The PMU will be responsible for implementing all operational fiduciary functions across the project. The Finance Unit at the PMU will be composed of six full-time staff: two funded by GoB funds (one Accountant and one Accounting Assistant) and three funded by IFAD's loan (one Finance Manager and two Finance Assistants).

Every Project Implementation Unit (PIU) located at the district level will be in charge of the fiduciary functions within its jurisdiction, and will be composed at least of two accountants: one funded by GoB funds and one funded by IFAD's loan. An additional Finance Assistant is expected to be funded by IFAD's loan in the case of larger districts.

The duties, responsibilities, lines of supervision, and limits of authority of finance staff will be defined in their ToRs and will be documented in the PROVATi^3 finance manual.

Fiduciary functions. The PMU's fiduciary functions include: preparation of the Annual Work Plan and Budget (AWPB) and the Procurement Plan (PP), submission of withdrawal applications to receive IFAD fund remittance and meet project expenditures; transfer and monitoring of funds to project implementing partners and PIUs; maintaining fixed asset, procurement and advances registers, preparation and submission of financial statements and reports and coordinating auditing processes. The PMU will strengthen the FM capacity at the district level through continuous training.

Disbursement arrangements and flow of funds. Funds for PROVATi^3 will flow to a Designated Account (DA) in the Central Bank of Bangladesh under SAFE arrangements. The DA will be operated by the PMU in accordance with imprest fund arrangements. The PMU will maintain a project account

in local currency to implement project activities and to transfer funds to PIUs and implementing partners. The PIUs and implementing partners will also maintain operational accounts in local currency in commercial banks to receive funds from the DA in accordance with the AWPB, periodic fund requirements and MOUs. Disbursement procedures and other instructions will be detailed in the Letter to the Borrower (LTB), which will be issued when the financing becomes effective.
The PMU will be responsible for transferring project funds to the operating accounts at PIUs on the basis of three month estimated expenditure and approved work plans. These transfers will be treated as advances at the PMU, with monthly reporting on the use of funds. These accounts will appear as unreconciled items on the financial statements until they have been accounted for and liquidated.
A start-up advance may be provided once the financing agreement has become effective, to facilitate implementation readiness activity, pending satisfaction of the disbursement conditions specified in the Financing Agreement. The ceiling of the start-up will be agreed upon at negotiations based on a realistic plan.

Transfers to entities implementing PROVATi^3 activities, will be governed by legal agreements (MoUs or contracts). The Government counterpart funds will be provided in line with the GOB MOF and Treasury existing financial regulations and procedures. Any contribution received for the project from other donors will be under a Cooperating Inter-Agency Agreement with IFAD. Transfers to entities will be treated as advances, with monthly reporting on the use of funds, and these accounts will appear as unreconciled items on the financial statements until they have been accounted for and liquidated.

The disbursement of the grant from IFAD financing will flow to a second DA in the Central Bank of Bangladesh under SAFE arrangements. The DA will be operated by the PMU, and transfers through a project account in local currency will be made to implementing partners, such as the World Food Programme (WFP) for the maps and pilot activities, BUET for climate change risks assessment and DDM for community based flood preparedness system and other emerging technical studies and activities.

Internal controls. PROVATi^3 will be required to establish adequate internal controls and procedures in the PIM and in the Financial Manual to guarantee: (a) operations are being conducted effectively and efficiently; (b) financial and operational reporting is reliable; (c) applicable laws and regulations are being complied with, and (d) assets and records are safeguarded.
At a minimum, the procedures should include the following measures: (a) Reliable personnel with clear responsibilities and adequate segregation of duties; (b) Adequate financial records management system with complete audit trail; (c) Physical safeguard, including use of safe, locks, guards, limited access, and access by authorized persons to provide security for project assets; (d) Independent check, with procedures made subject to random independent reviews.

Accounting. The accounting policies and procedures of the project will be governed by the existing Government (GoB) system and the Bangladesh Government Accounting Standards under cash basis of accounting, which are in the process of being aligned to IPSAS. . The PMU will maintain an adequate FM system across all levels of implementation, to provide accurate and timely financial information to IFAD and to the GoB.

PROVATi^3 will procure and adopt an accounting system package conforming international standards during start-up. The accounting software will also be used by the PIUs of the districts. The project will guarantee the availability of resources to conduct periodic training on the use of the accounting software to strengthen the capacity at the district level.

As there has been positive results from the use on an accounting software by LGED which has been recalibrated to meet the accounting and reporting requirement for both government and IFAD, LGED should ensure consistency in using the same software for PROVATI which would provide LGED and

the Project better value for money. This ensure the initial investment of LGED in acquiring and reconfiguration of the accounting software is not lost.

Financial reporting. The PMU will be responsible for consolidating the financial information from the districts to prepare semi-annual and annual (audited) Financial Reports (FRs) for all relevant parties. The FRs will be consistent with International Accounting Standards and the project's Finance Manual. Semi-annual Financial Reports with accurate and updated financial information will be prepared by PMU for submission to IFAD within 45 days from the end of each semester.

Financial Reports, prepared by component and by category of expenditure, will be produced directly from the accounting system of the project, and not from any other stand-alone manual or electronic system. The PMU will need to have the capacity to record GoB contributions, as well as in-kind contributions of private companies and beneficiaries, if necessary.

Internal Audit. Internal auditing will be carried out by the Internal Audit Unit of LGED in accordance with an auditing plan and reports to be submitted to the relevant parties. Internal auditing will be carried out by the Internal Audit Unit of LGED in accordance with a specific auditing plan and reports to be submitted to the relevant parties. Going beyond the financial aspects and transactions, the internal audit will be expected to be carried out under the following key internal audit functions: (i) ascertaining whether the system of internal checks and controls operating within the organization for preventing errors and fraud is effective in design as well as in operation; (ii) ascertaining reliability of accounting and other records as well as seeing that accounting methods provide the information necessary for preparation of correct financial statements; (iii) ascertaining the extent to which the project entity's assets are safeguarded from any unauthorized use or losses; (iv) ascertaining whether administrative and financial regulations of the government and IFAD's requirements are followed; and (v) ascertaining the effectiveness of the system of internal control adopted in preventing, as well as detecting waste, idle capacity and extravagance.

External *audit*. The Foreign Aided Projects Audit Directorate (FAPAD) of the Office of the Comptroller & Auditor General (OC&CAG) of Bangladesh will conduct an audit of the project's annual financial statements within six months of the end of the fiscal year. The audit will be carried out on a yearly basis and in compliance with INTOSAI and IFAD Guidelines on Project Audits. IFAD is engaging with FAPAD for a more consistent implementation of international standards in its audits in the Bangladesh Portfolio. Depending on the performance of the project and in addition to the FAPAD audit, the additional services of an external audit firm may be requested.

External auditors will be required to express three audit opinions on the project financial statements, operation of the designated account and on the certified Statements of Expenditure (SOEs). In addition, a detailed management letter containing the assessment of the internal controls, audit findings, update on previous audit observations, compliance with IFAD Financing Agreement covenants and suggestions for improvement will be prepared and submitted together with the audit report.

Supervision. FM implementation review shall be undertaken at least annually, with additional support missions as necessary during project implementation to ensure that the loan proceeds are used for the purpose for which they were granted, which may take two weeks at the most. The scope of the supervision will be carried out in accordance with IFAD's Guidance Note on Undertaking Financial Management Assessment at Supervision, issued in 2015.

FINANCIAL MANAGEMENT ASSESSMENT QUESTIONNAIRE (FMAQ)

Project: Climate-Resilient Community Development (PROVATI[3])	**Date: August2017**
Implementing Entity: Local Government Engineering Department (LGED)	
Self-assessment completed by: Álvaro Fernández, IFAD Finance Officer	**Date: August 2017**

	Topic	Response	Remarks
1.	**Organization and Staffing**		
1.1	Which entity is the LPA? What is the entity's legal status?	The Government of Bangladesh, represented by the Economic Relations Division (ERD) of the Ministry of Finance, is the Borrower of the loan. Implementing Agency is LGED. LGED is a public-sector organization under the Local Government Division (LGD) of the Ministry of Local Government, Rural Development & Cooperatives.	
1.2	Will financial management of the project be the responsibility of the LPA or be undertaken within the-PIU?	A PMU will be responsible of the day-to-day FM aspects.	
1.3	Has the entity implemented a donor financed project in the past - if so, please provide details?	Yes, LGED has significant experience implementing projects funded by donors (IFAD, WB, ADB, etc.)	
	Staffing		
1.4	What is the (proposed) organizational structure of the accounting department? Attach an organization chart.	It is envisaged to have six cost centres' in the six districts of intervention.	The proposed structure is: **PMU** **IFAD loan** 1 FMS + 2 Finance Assistants **GoB funds** 1 Accountant + 1 Accounting Assistant **PIUs - Districts** **IFAD loan** 6 FMS (in larger Districts maybe 1 Finance Assistant more) **GoB funds** 1 Accountant per district (in larger Districts one additional Accounting Assistant is available)
1.5	Identify the (proposed) accounts staff, including job title, responsibilities, educational background and professional experience. Attach job descriptions and CVs of key accounting staff.	Job descriptions and qualification requirements will be included in the PIM.	
1.6	Are written position descriptions that clearly define duties, responsibilities, lines of supervision, and limits of authority for all of the officers, managers, and staff?	The organizational hierarchy and job descriptions are similar across LGED donor IFAD co-funded projects. This information is normally inserted in the PIM.	

1.7	Is the finance and accounts staff adequately qualified and experienced?	Normally the FM staff deputed from the government has limited capacity. This is a recurrent issue on a larger scale at District and Sub-district level.	Projects of LGED usually hire FM specialists (long term consultants) to support the FM structure of donor funded projects.
1.8	Are the project accounts and finance staff trained in IFAD procedures?	GoB staff - No IFAD funded staff - Yes	IFAD provides training as part of the start-up of the project and on a regular basis.
1.9	Are any Finance Staff appointed on contract? What is the duration of the contracts? Indicate key positions not contracted yet, and the estimated date of appointment.	Government deputed staff is permanent. Projects of LGED usually hire FM specialists (long term consultants) to support the FM structure of donor funded projects. The consultants are hired on a one year renewable basis.	It is recommended that the recruitment of the FMS be a disbursement condition.
1.10	What is training policy for the finance and accounting staff?	Training is based on specific needs without an specific plan. No training policy evidenced.	
1.11	Is there evidence that finance staff is regularly transferred to other Government departments? At what frequency are personnel transferred?	Government officials are deputed according to the circumstantial need. This usually happens when a new project starts.	
1.12	Is the project finance and accounting function staffed adequately?	With the support of external consultants (Finance Management Specialist and Finance Assistants) the accounting function can be considered adequately staffed.	

Topic		Response	Remarks
2.	**Budgeting**		
2.1	Who is responsible for preparation and approval of project budgets?	Preparation: PMU Endorse: LGED Approval: Project Steering Committee	The government follow specific procedures to approve the DPP of the project.
2.2	Are project budgets prepared for all significant project activities in sufficient detail to provide a meaningful tool with which to monitor subsequent performance?	Budgets are prepared by category, component and source of financing.	
2.3	Are procedures in place to plan project activities, collect information from the units in charge of the different components, and prepare the budgets?	LGED internal budgeting procedures are in place to collect information from the different units.	
3.	**Funds Flow/Disbursement Arrangements**		

3.1	Does the Implementing Entity have previous experience of using imprest fund and donor funding SOE procedures? Were there any problems or issues encountered by project staff in the operation of the imprest fund or SoE procedures in the past?	LGED has vast experience in this regard. There are some issues regarding the management on several bank accounts and automated preparation of SoEs. This is principally caused due to the manual accounting procedures across all government institutions in Bangladesh.	
3.2	Does the entity have/need to develop capacity to manage foreign exchange risks?	IFAD co-funded project reported some issues regarding the foreign exchange. They weren't able to adapt to the fluctuation between.	Bangladesh is eligible for loans in USD according the latest IFAD framework.
3.3	Are the beneficiaries required to contribute to project costs? How are payments made for the counterpart funds? If counterpart funds are to be contributed in kind (in the form of labour), are proper guidelines formulated to record and value the labour contribution?	Beneficiaries do not provide funds. The Labour Contracting Societies (LCS) provide labour in civil works contracts assigned to them and receive payments as wages and a profit element, which is embedded into the contract. GoB transfer funds to the project through MoF to a project DA in Taka.	LGED has guidelines for the implementation through LCS.
3.4	Is part of the project implemented by communities or NGOs? Does the PIU have the necessary reporting and monitoring features built into its systems to track the use of project proceeds by such agencies?	Projects in LGED face issues handling advances to partners and/or Implementing Units. The major problem is the poor ability to adapt to an automated accounting environment.	
3.5	Describe (proposed) project funds flow arrangements; (attach flow chart and explanation of the flow of funds from IFAD, government and other financiers.	One DA in USD in the central bank of Bangladesh under SAFE arrangements. One PMU Project account in local currency in a commercial bank for day-to-day operations Bank (PMU) Six District Project accounts in local currency in a commercial bank for day-to-day operations	
3.6	In which bank will the Imprest Account be opened?		
Topic		**Response**	**Remarks**

4.	**Internal Controls**		
4.1	Segregation of duties - are the following functional responsibilities performed by different units or persons: (i) authorization to execute a transaction; (ii) recording of the transaction; and (iii) custody of assets involved in the transaction?	Based on the experiences of the ongoing projects, is possible to observe a level de segregation of Duties. However, there is still considerable room to improve the internal control system.	
4.2	Are the functions of ordering, receiving, accounting for, and paying for goods and services appropriately segregated?		
4.3	Are bank reconciliations prepared by someone other than those who make or approve payments?		
5.	**Accounting Systems, Policies and Procedures**		
5.1	Does the entity have an integrated accounting system that allows for the proper recording of project financial transactions, including the allocation of expenditures in accordance with the respective components, disbursement categories, and sources of funds? Will the project use the entity accounting system?	UFMS, the system used by LGED, lacks of the following: - It is not possible to reconcile the information from the District levels - Single entry basis - Customization with the support of the WB is still being in process. Some of IFAD co-funded projects procured Tompro as their main accounting software. Tompro is an stand-alone software, standardized to comply with international standards and with the possibility to be customized for donor funded projects.	
5.2	Are controls in place concerning the preparation and approval of transactions, ensuring that all transactions are correctly made and adequately explained?	Yes, but needs further improvement.	
5.3	Is the chart of accounts adequate to properly account for and report on project activities and disbursement categories?	During the latest years it was possible to introduce an international standardized accounting system in the projects administered by IFAD. The implementation was a cumbersome process and lots of efforts were deployed. Different results in terms of quality, reediness and accuracy were	
5.4	Can cost allocations to the various funding sources be made accurately?		

5.5	Are the General Ledger and subsidiary ledgers reconciled and in balance?	identified across the project, however this does not detract from the merit of very favourable results. The software allows the use of a modified accrual basis of accounting, setting a proper chart of accounts, accounting by various funding sources, and reconciling in different expenditure units. At this stage the software capabilities are not fully used because the accounting is still under cash basis. The software requires a medium level knowledge in accounting, which is not the case at district and sub-district level.	
5.6	Are all accounting and supporting documents retained on a permanent basis in a defined system that allows authorized users easy access?		
5.7	What is the basis of accounting (e.g., cash, accrual)?		
5.8	What accounting standards are followed?		
5.9	Does the project have an adequate policies and procedures manual to guide activities and ensure staff accountability?	The PIM defines these procedures. Additionally, LGED has a manual for donor funded projects.	
5.10	Do procedures exist to ensure that only authorized persons can alter or establish a new accounting principle, policy or procedure to be used by the entity?	LGED procedures exist.	
5.11	Is there a written policies and procedures manual covering all routine project financial management activities? Are manuals distributed to appropriate personnel?	LGED procedures for donor funded projects are issued for FM activities. This manual is distributed to the appropriate personnel.	
Topic		**Response**	**Remarks**
	Cash and Bank		
5.13	Does the organization maintain an adequate, up-to-date cashbook, recording receipts and payments?	The ongoing projects maintain records and supporting documentation. Minor observations were made regarding the Cash and Bank management on the annual audits and supervision missions.	
5.14	Are bank and cash reconciled on a monthly basis?		
5.15	Indicate names and positions of authorized signatories of project bank accounts.		
	Safeguard over Assets		
5.16	Is there a Fixed Asset accounting system, with a Fixed Asset Register, fully implemented - as part of an integrated accounting system? Is the system maintained up to date?	The ongoing projects asset register is maintained manually and updated constantly. At district level, manual registers	

5.17	Are there periodic physical reconciliation of fixed assets and stocks?	are maintained and updated yearly in the best cases.	
	Other		
5.18	Has the project advised employees, beneficiaries and other recipients to whom to report if they suspect fraud, waste or misuse of project resources or property?	No written instruction or information note was emitted.	
5.19	Do policies and procedures clearly define conflict of interest and related party transactions (real and apparent) and provide safeguards to protect the organization from them?	No written policy or procedure was emitted.	
5.20	Do controls exist for the preparation of the project payroll and are changes to the payroll properly authorized	Yes, with staff limitations and manual processes.	
6.	**Reporting and Monitoring**		
6.1	Does the reporting system need to be adapted to report on the project components?	As mentioned before, the accounting software implemented in HILIP-CALIP and CCRIP (Tompro) can reach this level of detail. However, its process of implementation can also be frustrating and demanding in an environment in which single entry manual accounting is the general practice.	
6.2	Does the project have established financial management reporting responsibilities that specify what reports are to be prepared, what they are to contain, and the frequency of production.?		
6.3	What is the frequency of preparation of financial statements? Are the reports prepared in a timely fashion so as to useful to management for decision making?		
6.4	Do the financial reports compare actual expenditures with budgeted and programmed allocations?		
Topic		**Response**	**Remarks**
6.5	Are financial reports prepared directly by the automated accounting system or are they prepared by spreadsheets or some other means?		
6.6	(In case of need of consolidated financial statements) Is the accounting system sufficiently equipped to ensure proper consolidation of entities" financial data?		
	Information Systems		
6.7	Is the financial management system computerized?	The implementation of an accounting software package in the ongoing projects of LGED did not start from an early stage. For this reason the automated system didn't reach an adequate level of reliability and capacity to produce necessary financial reports. Also, the low FM capacity of the staff is related to the manual accounting practice in the country.	It is recommended that if a system is implemented, it should be gradually starting with cash basis (similar to the government's current manual bookkeeping) to an accrual basis of accounting system.
6.8	Can the system produce the necessary project financial reports?		
6.9	Is the staff adequately trained to maintain the system?		
6.10	Are adequate systems in place to "back up" financial records?		

7.	**Internal Audit**		
7.1	Is there an internal audit department in the LPA?	LGED has an Internal Audit Department.	
7.2	What are the qualifications and experience of internal audit department staff?	10 to 15 staff with a variety of experience, exposure and background.	
7.3	To whom does the internal auditor report?	They discuss the report with the highest authority of the project/division, for later submission to the Chief Engineer of LGED.	
7.4	Will the internal audit department include the project in its work program?	Not necessarily, this is performed randomly They are more regular with donor funded projects. They monitor the Civil Audits performed by the OC&CAG.	
7.5	Are actions taken on the internal audit findings?	They send the reports to the Chief Engineer, who takes appropriate action if needed.	.
8.	**External Audit**		
8.1	Who is the external auditor of the entity?	Office of the Comptroller & Auditor General (OC&CAG)	Through the Foreign Aided Projects Audit Directorate (FAPAD)
8.2	Are there any delays in audit of the entity? When are the audit reports issued?	Minor delays during the last years.	
8.3	Is the audit of the entity conducted according to the International Standards on Auditing?	Yes	
8.4	Were there any major accountability issues brought out in the audit report of the past three years? Were there any issues noted in prior audit reports related to the operation of project imprest accounts or use of SOE procedures?	Audit reports are generally received with a slight delay, with some improvements noted in the last two years. The audit reports do not fully meet IFAD's requirements and have a narrow focus on transactions more than financial reporting and controls.	
8.5	Will the entity auditor audit the project accounts or will another auditor be appointed to audit the project financial statements?	It is recommended that an external audit is practiced every year by a private firm.	FAPAD conducts audits for all donor financed projects in Bangladesh.
8.6	Has the project prepared acceptable terms of reference for an annual project audit?	FAPAD conducts the audits for donor funded projects according to its mandate.	External audit is not encouraged because FAPAD has its own mandate.

Appendix 8: Procurement

Introduction:
The Government of Bangladesh under Public Procurement Reform Project (PPRP-II) has developed as a set of procurement performance-related indicators named PROMIS. This has elements regarding procurement performance on advertising, bidding, timeliness in evaluation and award, complaint resolution, F&C prevalence etc.. After implementing PRMF, where LGED agreed to have complaint boxes in every district offices, the occurrence of complaints has diminished restively.

The introduction of e-procurement has also strengthen LGED and GOB oversight in public procurement limiting influence and manipulation of bids. Independent procurement post reviews and audits have been which have identified among others, were as follows: (a) bid evaluation not done properly; (b) documents accepted for evaluation had inherent faults (i.e. bid securities from unscheduled banks); (c) false/doctored experience certificates; (d) apparent political influence in procurement decisions; (e) many occasions where contracts were not completed on time; (f) collusion among bidders and inappropriate bidding practices by LGED officials. On the findings of F&C or inappropriate bidding practices, LGED has taken adequate actions to investigate and debarred firms and disciplinary actions against its officials in relevant cases

LGED is one of the target agencies of the Government's PPRP-II. As part of it, huge capacity building of LGED has taken place in last nine years, and currently 377 out of 624 procuring entities (about 60 per cent) of LGED have at least one person with national three-week training on procurement. LGED is also a front-runner in procurement monitoring and electronic government procurement.

IFAD Financial Management and Procurement Specialist : As implementing agency for CRCD, LGED has considerable expertise and experience in this area. However, to further strengthen procurement processes, it is proposed that an IFAD Financial Management and Procurement Specialist support the project with a number of short inputs, especially at the start-up phase. Terms of Reference of the IFAD FM & Procurement Specialist will be included in the Project Implementation Manual. The level of assistance to be provided to the project will be decided by the IFAD CPM in consultation with the Project Director.

An assessment of the procurement capacity of LGED for carrying out procurement under another Project of IFAD, the CCRIP has been undertaken by ADB and IFAD, and was validated by the design mission for CCRD, described below.

LGED PROCUREMENT CAPACITY ASSESSMENT

Part A. General Agency Resource Assessment	**Response**
A.1. Is there a procurement department?	LGED has a procurement unit in the Headquarter. The procurement unit provides policy issues and directives related to procurement to all procuring entities of the department.
A.2. What procurement does it undertake?	LGED undertakes all kinds of public procurement related to goods, works and services mainly for developing urban and rural infrastructures as well as small scale water resources projects.
A.3. Are the staff provided with written job descriptions?	Yes.
A.4. How many years experience does the head of the procurement unit have in a direct procurement role?	30 years.
A.5. How many staff in the procurement department are:	10 (ten) nos.
i. Full Time?	10 (ten) nos.
ii. Part Time?	-

iii. Seconded?	-
A.7. Do the staff that will be involved with the procurement have English language skills sufficient	Yes, the procuring entities those who will be involved in the procurement have sufficient proficiency in English. The procurement documents in terms of bidding document, specification, public procurement law and rules are being practiced in English. The LGED procuring entities are being continuously trained up with the procurement law, rules and bidding documents and contract management.
A.8. Is the number and qualifications of the staff sufficient to undertake the additional procurement that will be required under the proposed project?	The Ministry of Planning has been residential training course for developing the knowledge and skill of the procuring entities for major procuring departments of Bangladesh. LGED is one of those departments receiving that kind of extensive training on procurement. Most of the Procuring entities of LGED have been trained on that course. Some of the LGED officers have completed post-empowerment degree on procurement from the abroad. GED has been conducting different kinds training courses on procurement for all levels of staff involved with the procurement. With national and international training and huge procurement practice in different national and foreign aided projects, the capacity of LGED officials and staff has developed sufficiently at a level to undertake the procurement proposed under the project.
A.9. Does the unit have adequate facilities such as PCs, internet connections, photocopy facilities, printers etc. to undertake the expected procurement?	The LGED procurement unit is equipped with facilities of PCs, internet connections, photocopy facilities, printers etc. The procurement under the CRCD will be undertaken by and in collaboration with the Project Management Unit (PMU). The PMU will be equipped with adequate facilities such as PCs, Internet Connections, photocopy facilities, printers etc. for smooth implementation of procurement.
A.10. Is there a procurement training program?	There are various training programs on procurement arranged by the Ministry of Planning and LGED for the officials and staff responsible for procurement This kind of training programs continues round the year.
Part B. Agency Procurement Processes, Goods and Works	
B.2. If the above is yes, what where the major challenges?	Some major challenges are as follows: • Procurement of consultants usually causes delay, which leads to start-up delay in civil works and goods; • Designing realistic procurement plan after considering all uncertainties.
B.3. Is there a procurement process manual for goods and works?	Yes. All public procurements are being undertaken in accordance with the Public Procurement Ruleas-2008 supported by Public Procurement Act-2006. Comprehensive procurement process for goods, works and services are described in that document. All those documents are available in the Central Procurement Technical Unit (CPTU) website: www.cptu.gov.bd
B.4. If there is a manual is it up to date and does it cover foreign assisted procurement?	Yes. The public procurement rules are amended from time to time and those amendments are notified to all procuring entities through notification in the Government Gazette. All amendments are also available in the CPTU website. Such document is used for foreign assisted procurement if that document is acceptable to the concerned donor. Otherwise, customized procurement documents are prepared with concurrence of the donor and that document is used for foreign assisted procurement.
B.5. Is there a systematic process to identify procurement requirements (1 year or more)	Yes. Considering the available resources against prioritized requirement, all procuring entities of LGED have to submit the annual procurement plans to the head of procuring entity for approval at the end date of the current year for the following year. Procurement requirements are determined from the procurement plan. However, such plans are modified time to time depending on the availability of resources or other reasons.
B.6. Who drafts the specifications?	The Maintenance Unit and Quality Control Unit jointly publish standard general specifications of civil works with rates at the dead end of the financial year for the following year. The specifications and rates are

	updated in each year with the assistance of experts working in those units.
B.7. Who approves the specification?	The Head of Procuring Entity i.e. the Chief Engineer approves the specification.
B.8. Are there standard bidding documents in use and have they been approved for use on ADB funded projects?	Yes. Under the purview of the Public Procurement Rule , the standard bidding documents have been prepared by the Central Procurement Technical Unit (CPTU) for all kind of procurements. These documents are available in the CPTU website: www.cptu.gov.bd Those standard bidding documents are used for foreign aided procurements if those are acceptable to the donor. Otherwise, customized bidding documents are prepared in concurrence with the donor for the foreign aided procurement. Most of the donors including ADB accepted the bidding documents of CPTU for National Competitive Bidding (NCB).
B.9. Who drafts the bidding documents?	Central Procurement Technical Unit (CPTU) is responsible for preparation and modification of Standard Bidding Documents. The project management office is responsible for making customized bidding documents acceptable to the respective donors.
B.10. Who manages the sale of the document?	In case of works procurement, the District Executive Engineer (Procuring Entity) manages the sale of all bidding documents. The biding documents are sold at least by the following offices: 1. The Executive Engineer of the district (procuring Entity); 2. The Upazilla Engineer of the Upazilla where the site is located; 3. Superintending Engineer of the concerned LGED region; and 4. The Project Director, of the concerned project. However, records of all sales are available at the office of the Procuring Entity. The Project Director becomes the procuring entity for the case of goods and services and he/she manages the sales of bidding document of those procurement. .
B.11. Are all queries from bidders replied to in writing?	Yes.
B.12. Is there a minimum period for preparation of bids and if yes how long?	Yes. The minimum period for preparation of tender for NCB procurement is 28 days since the publication of the tender in the newspaper but the same is 42 days for ICB procurement.
B.13. Does the bidding document state the date and time of opening and how close is it to the deadline for submission?	Yes. Within 3 (three) hours since opening.
B.14. Is the opening public?	Yes.
B.15. Can late bids be accepted?	No.
B.16. Can bids be rejected at bid opening?	No.
B.17. Are minutes taken?	Yes
B.18. Who may have a copy of the minutes?	The bidders or their authorized representatives those who attend the opening of the tender.
B.19. Are the minutes free of charge?	Yes.
B.20. Who undertakes the evaluation (individual(s), permanent committee, ad-hoc committee)?	The evaluations are undertaken by permanent Tender Evaluation Committees formed as per the Public Procurement Rules and subsequent directives by the procurement unit.
B.21. What are the qualifications of the evaluators in respect to procurement and the goods and works under evaluation?	Minimum Graduate in Engineering
B.22. Is the decision of the evaluators final or is the evaluation subject to additional	The evaluators can only recommend to the appropriate approving authority (determined in accordance with the Government Delegation of Financial Power) for approval.

approvals?	
B.23. Using at least three real examples how long between the issue of the invitation for bids and contact effectiveness?	Maximum 4 (four) months.
B.24. Are there processes in place for the collection and clearance of cargo through ports of entry?	Yes.
B.25. Are there established goods receiving procedures?	Yes.
B.26. Are all goods received recorded as assets or inventory in a register or similar?	Yes.
B.27. Is the agency/procurement department familiar with letters of credit?	Yes.
B.28. Does the procurement department register and track warranty and latent defects liability periods?	Yes.
Part C. Agency Procurement Processes, Consulting Services	
C.1. Has the agency undertaken foreign assisted procurement of consulting services recently (last 12 months, or last 36 months)?	Yes.
C.2. If the above is yes what where the major challenges?	Delay in getting concurrence from the development partners in various layers of procurement process such as: EOI, RFP, Technical Evaluation, Financial Evaluation, Combined Evaluation, Contract Negotiation, Agreement etc.
C.3. Is there a procurement process manual for consulting services procurement?	Yes.
C.4. Is the manual up to date and does it cover foreign assisted projects?	Yes.
C.5. Who identifies the need for consulting services requirements?	LGED and the development partners.
C.6. Who drafts the ToR?	LGED and the development partners.
C.7. Do the ToR followed a standard format such as background, tasks, inputs, objectives and outputs?	Yes.
C.8. Who prepares the request for proposals?	The designated Project Director of LGED
C.9. Are assignments advertised and expressions of interest called for?	Yes.
C.10. Is a consultants' selection	The Proposal Evaluation Committee (PEC) is a permanent committee

committee formed with appropriate individuals in terms of	formed by the Head of Procuring Entity.
C.11. What criteria is used to evaluate EOIs?	The major criteria are as follows: • Consultancy firm's facilities and area of expertise; • Similar assignment; • Experience in similar operating environments and conditions; • Professional qualifications and adequate resources; • Managerial strength and financial capacity.
C.13. Do firms have to pay for the proposal document?	No.
C.14. Does the evaluative criteria follow a pre-determined structure and is it detailed in the RFP?	Yes.
C.15. Are pre-proposal visits and meetings arranged?	Yes.
C.16. Are minutes prepared and circulated after pre-proposal meetings?	Yes.
C.17. To who are minutes distributed?	The consulting firms or their authorized representatives those who present in the meeting and those consulting firms who received RFP documents.
C.18. Are all queries from consultants answered to in writing?	Yes.
C.19. Are the financial and technical proposals in separate envelopes?	Yes.
C.20. Are proposal securities required?	No.
C.21. Are technical proposals opened in public?	Yes.
C.22. Do the financial proposals remain sealed until technical evaluation is completed?	Yes.
C.23. Are minutes of technical opening distributed?	Yes.
C.24. Who determines the final technical ranking and how?	The Proposal Evaluation Committee determines the final technical ranking according to predetermined evaluation criteria.
C.25. Are the technical scores published and sent to all firms?	Technical scores are disclosed/published prior to opening financial proposal.
C.26. Is the financial proposal opening public?	Yes.
C.27. Are there minutes taken and distributed of financial proposal opening?	Yes.
C.28. How is the financial evaluation completed?	Financial Evaluation is carried out in accordance with the procurement guidelines. In general, arithmetical calculations are checked and corrected. If any work was proposed in the technical proposal but not priced in the financial proposal must be loaded by the highest price of the participating firms. All taxes and provisional sum must be taken out from the financial proposal for cost comparison.
C.29. Are face to face contract negotiations held?	Yes
C.30. How long after financial evaluation is the selected firm to	3 (three) week.

negotiate?	
C.31. What is the usual basis for negotiation?	• Methodology of Works; • Work plan: • Organization and staffing: • Deliverable; • Proposed contract price etc.
C.32. Are minutes of negotiation taken and signed?	Yes.
C.33. How long after negotiations until the contract is signed?	2 (two) months.
C.34. Are advance payments made?	Yes
C.35. Is there an evaluation system for measuring the outputs of consultants?	No. However, the LGED officials are aware of this evaluation system and capable of managing a balance between the expenditure against the consultant input compared to delivered output.
Part D. Process Oversight and Control	
D.1. Is there a standard statement of ethics and are those involved in procurement required to formally commit to it?	Yes.
D.2. Are those involved with procurement required to declare any potential conflict of interest and remove themselves from the procurement process?	Yes.
D.3. Is the commencement of procurement dependent on external approvals (formal or de-facto) outside of the budgeting process?	Yes.
D.4. Who approves procurement transactions and do they have procurement experience and qualifications?	According to delegation of financial power of the Government, different layers of approving authority ranging from district level Executive Engineer, Project Director, Development Partner, Line Ministry and Cabinet Committee approves procurement transactions within their financial power.
D.5. Which of the following actions require approval outside of the procurement unit or a permanent evaluation committee and who grants the approval?	
a) Bidding document, invitation to pre-qualify or request for proposal	Development Partner
b) Advertisement of an invitation for bids, pre-qualification or call for expressions of interest	Development Partner
c) Evaluation reports	As per delegation of financial power, Line Ministry or Cabinet Committee (CCGP) and Development Partner.
d) Notice of award	Development Partner.
e) Invitation to consultants to negotiate	Development Partner.
f) Contracts	Development Partner.

D.6. Is contractual performance systematically monitored and reported upon?	Yes
D.7. Does the agency monitor and track its contractual payment obligations?	Yes
D.8. On average how long is it between receiving a firm's invoice and making payment?	2(two) week.
D.9. What is the standard period for payment included in contracts?	2 (two) week.
D.10. When payment is made late are the beneficiaries paid interest?	Yes, if the claim is justified.
D.11. Are payments authorized by the same individuals empowered to approve invitation documents, evaluations and contracts?	No.
D.12. Is there a written auditable trail of procurement decisions attributable to individuals and committees?	Yes, there is a narrative in the procurement documents of each individual and committee approval.
D.13. Are procurement decisions and disputes supported by written narratives such as minutes of evaluation, minutes of negotiation, notices of default/withheld payment?	Yes
D.14. Is there a formal non-judicial mechanism for dealing with complaints?	Yes
D.15. Is a complaints resolution mechanism described in national procurement documents?	Yes
Part E. Records Keeping	
E.1. Is there a referencing system for procurement files?	Yes
E.2. Are original contracts secured in a fire and theft proof location?	Yes
E.3. Are copies of bids or proposals retained with the evaluation?	Yes
E.4. Are copies of the original advertisements retained with the pre-contract papers?	Yes
E.5. Is there a single contract file with a copy of the contract and all subsequent contractual correspondence?	Yes
E.6. Are copies of invoices included with contract papers?	Invoices are not included in the contract but are kept in separate files containing the copy of the contract and related correspondences.
E.7. For what period are records kept?	3 (three) years for the Project

Arrangements for Procurement under the Project

i. Procurement of goods, works and services financed from resources provided or administered by IFAD will be undertaken in accordance with IFAD's Procurement Guidelines and Handbook (dated September 2010, or as amended from time to time). In all cases whereby procurement is packaged along with goods, works and services financed by ADB, the procurement would be undertaken in conformity with ADB's Procurement Guidelines (2010, as amended from time to time) and ADB's Guidelines on the Use of Consultants (2010, as amended from time to time).

ii. International Competitive Bidding (ICB) shall be undertaken in accordance with the rules and regulation for ICB as established by the World Bank in line with the provisions of the IFAD Procurement Guidelines. Goods and Civil works and goods procured using NCB will follow the Public Procurement Act, 2006 and Public Procurement Rules, 2008 of the Government of Bangladesh. All procurement to be financed by IFAD proceeds require the details of the procurement, types of procurement methods, the need for pre or post-qualification, estimated cost, prior or post review requirements to be respectively included in the Procurement Plan to be submitted by the Implementing Agencies. IFAD's approval of the procurement plan is mandatory and any changes or modifications must be communicated and approved by IFAD.

iii. National Competitive Bidding. The procedures to be followed for national competitive bidding shall be those set forth for the National Open Tendering Method in the Government's *Public Procurement Rules, 2008* (as updated and issued pursuant to the Bangladesh *Public Procurement Act, 2006*) with the clarifications and modifications described in the following paragraphs required for compliance with the provisions of the Procurement Guidelines.

- Anti-Corruption. Definitions of corrupt, fraudulent, collusive and coercive practices shall reflect the latest IFAD Board-approved Anti-Corruption Policy definitions of these terms and related additional provisions (such as conflict of interest, etc.). IFAD shall jointly apply and extend debarment and sanctions
- Location of Bid Submission**. S**ubmission of bids to 'primary' and 'secondary' locations, or 'multiple droppings' of bids, shall not be required or allowed. Advertisements and bidding documents shall specify only one location for delivery of bids.
- Rejection of All Bids and Rebidding. Bids shall not be rejected and new bids solicited without IFAD's prior concurrence.
- Member Country Restrictions. No restriction applicable to IFAD resources, unless procurement is packaged along with goods, works and services financed by ADB, in which case the procurement would be undertaken in conformity with ADB's Procurement Guidelines and ADB's Guidelines on the Use of Consultants
- Lottery. A lottery system shall not be used to determine a successful bidder, including for the purpose of resolving deadlocks.
- Qualification Requirements. A successful bidder must be determined by an assessment process that shall include the application of qualification requirements to all bids or the lost responsive bidder.

iv. All procurement for goods, works and services financed from resources funded or administered by IFAD require bidding documents and the contracts to include a provision requiring suppliers, contractors and consultants to permit IFAD to inspect their accounts ,records and other documents relating to the bid submission and contract performance, and to have them audited by IFAD-appointed auditors.

v. All advance contracting and retroactive financing of resources provided or administered by IFAD regarded as an exception by the IFAD General Conditions must be clearly established (detailed cost and procurement packages) in the Project Design Document and approved by the IFAD and will be undertaken in conformity with provision of IFAD General Conditions and IFAD Procurement Guidelines and Procurement Handbook (2010, as amended from time to time). The issuance of invitations to bid under advance contracting and retroactive financing will be subject to

IFAD prior review and no objection. The approval of advance contracting and retroactive financing does not commit IFAD to finance the Project.

vi. Procurement of civil works should be undertaken in sizable bid packages ensuring road works are not split to accommodate contractors financial capacities to qualify for the bidding or to intentionally avoid seeking IFAD prior review. Any civil works which are to be split into small bid packages due to specific implementation consideration must to clearly established and highlighted in the procurement plan.

vii. Civil works undertaken by the Labour Contracting Societies (LCS) which would be formed through a defined selection criteria, contracted directly by the Project. The selection criteria and the operational and implementation arrangement for the LCS would be defined in the Project Administration Manual. While the LCS has been accessed as incapable of handling implementation, administration, financial management and procurement of the activities, the Project Implementation Manual (PIM) shall define the roles and responsibilities of the intermediaries who will assist the LCS in preforming the activities.

viii. The contract detailed to be signed with the LCS, should ensure transfer liabilities and accountabilities to the intermediaries rather than maintaining these liabilities and accountability with the LCS. LGED should also explore options to use lump sum contract for LCS activities which can minimise the use of schedule rates. Lump sum contract for LCS activities would increase efficiency gains and minimising transaction cost currently attributed to lengthy procedural requirement for preparing the running bills.

ix. Independent Quality Monitoring and Assessment would be introduced to minimise risk and ascertain periodic information on the progress of the schemes.

x. Procurement of materials and goods by the LCS for the civil works contracted would be undertaken in accordance with the provision of the IFAD Procurement Guidelines and shall be largely limited within the markets in each district. Any requirement for the Project to purchase specific goods from markets in outside of the district shall be justified and documented by the Project. This justification should provide details of materials and goods to be purchased and reasons for the purchase which included a comparative analysis of the cost of procuring the materials in markets outside the district where these activities are implemented.

xi. IFAD shall introduce as part of fiduciary processes through its supervision mission or as separate mission, biennial reviews of the LCS contract performance with regards to the implementation of activities contracted which includes the accounting and procurement of goods and materials carried out by the LCS (with the assistance of the intermediaries). This review shall include the performance of the intermediaries.

xii. As implementing agency for CRCD, LGED has considerable expertise and experience in this area. However, to further strengthen procurement processes, it is proposed that a Procurement Specialist supports the project with a number of short inputs, especially at the start-up phase. Terms of Reference of the IFAD Procurement Specialist will be included in the Project Implementation Manual.

xiii. Each AWPB must contain a Procurement Plan, which shall identify procedures which must be implemented by the Borrower/Recipient in order to ensure consistency with the IFAD Project Procurement Guidelines.

xiv. The Fund shall review and provide its no-objection to the Procurement Plan, which shall include as a minimum:

a. A brief description of each procurement activity to be undertaken during the period by each and every Project Party;
b. The estimated value of each procurement activity;
c. The method of procurement or selection to be adopted for each activity; and
d. An indication as to whether the Fund shall carry out prior or post review in respect of each and every procurement activity.

xv. Any amendments to the Procurement Plan shall be subject to the Fund's 'no objection'.

xvi. Procurement Methods: The application of different methods of procurement for goods, works and services will be in accordance with the methods of procurement for goods, works and services (non-consulting) as established and approved in the Procurement Plan.

xvii. Consultancy and Services: Each contract for the selection of consultancy services, shall be selected in accordance with any one of the selection methods as per the IFAD Project Procurement Guidelines and its Project Procurement Handbook as listed below:

a. Quality and Cost Based Selection

b. Fixed Budget Selection

c. Least Cost Selection

d. Selection Based on Consultants Qualification

xviii. Selection of individual consultants: Individual consultants are selected on the basis of their qualifications for the assignment of at least three candidates among those who have expressed interest in the assignment or have been approached directly by the PCU or Implementing Agencies. Individuals employed by the PCU, and the Implementing Agencies/Partners shall meet all relevant qualifications and shall be fully capable of carrying out the assignment. Capability is judged on the basis of academic background, experience and, as appropriate, knowledge of the local conditions, such as local language, culture, administrative system, and government organization.

xix. Individual consultants or consultancy firms may be selected on a sole-source basis with due justification in exceptional cases such as: (a) tasks that are a continuation of previous work that the consultant has carried out and for which the consultant was selected competitively; (b) assignments lasting less than six months; (c) emergency situations resulting from natural disasters; and (d) when the individual consultant is the only consultant qualified for the assignment.

xx. IFAD will undertake to review the provisions for the procurement of goods, works and services to ensure that the procurement process is carried out in conformity with its Procurement Guidelines. For the purposes of IFAD's Procurement Guidelines, the following procurement decisions shall be subject to prior review by the IFAD for the award of any contract for goods, equipment, materials, works, consultancy and services under the Project:

a. Procurement of goods, materials and works

i. Prequalification documents and shortlist when prequalification is undertaken;

ii. Bid Documents for goods, materials and works;

iii. Evaluation Report and Recommendation for Award; and

iv. Contract and amendments.

b. Procurement of consultancy services and services

i. Prequalification documents and shortlist when prequalification is undertaken;

ii. Request for Proposal;

iii. Technical evaluation report;

iv. Combined (technical and financial) evaluation report and the recommendation for award; and

v. Contract and amendments.

c. Procurement of individuals consultants

i. The Terms of Reference of the Assignment

ii. The Evaluation Report and recommendation for selection

iii. Contract and amendments

xxi. IFAD Prior or Post Review: Except as IFAD may otherwise agree, the prior or post which applies to various procurement of goods, works and consultant recruitments shall be defined as follows:

Procurement Method	Prior or Post	Comments
Procurement of Goods and Works		
ICB Works	Prior	
ICB Goods	Prior	
NCB Works	Prior	Except procurement valued below USD 200,000
NCB Goods	Prior	Except procurement valued below USD 50,000
Shopping for works (quotations)	Post	
Shopping for goods (quotations)	Post	
Direct Works	Post	Except the first LCS contract for each District shall be subject to prior review
Direct Goods	Prior	Except procurement valued below USD 5,000
Recruitment of Consulting Firms		
Quality and Cost-Based Selection (QCBS); Fixed Budget Selection (FBS); Least Cost Selection (LCS); Selection Based on Consultants Qualification (CQS)	Prior	Except procurement valued below USD 50,000
Sole Source Selection (Single Source Selection)	Prior	All contracts
Recruitment of Individual Consultants		
Individual Consultants	Prior	Except procurement valued below USD 20,000

III. GOVERNANCE AND ANTI-CORRUPTION (GAC)

21. Anticorruption measures will include (a) undertake necessary measures to create and sustain a corruption-free environment for activities under the Project; (b) institute, maintain and ensure compliance with internal procedures and controls for activities under the Project, following international best practice standards for the purpose of preventing corruption, money laundering activities, and the financing of terrorists, and shall require all relevant ministries and agencies to refrain from engaging in any such activities; (c) comply with requirements of IFAD's Policy on Preventing Fraud and Corruption in Its Activities and Operations (2005, as amended to date); (d) ensure that the Good Governance Framework is implemented in a timely manner. is actively engaged to allow potential Project beneficiaries and other stakeholders to channel and address any complaints they may have on the implementation of the Project.

Appendix 8.1: Eighteen-month procurement plan

Country: Bangladesh		
Project Name & ID: Climate Resilience Community Development (CRCD) Project		
Implementing Agency: LGED		
Loan No.:		
Prepared on:		
Summary of IFAD Funds Procurement Cost for April 2018 to September 2019 18 months		
SN	Description	Cost Estimate (USD in thousand)
1	Consultants Service	456.00
2	Non-Consultants Service	21.00
3	Works	3,418.00
4	Goods	735.00
	Grand Total	4,630.00

IFAD Funds: Procurement Plan (PP) for Consultants Service for 18 months

Prepared on:

Project Name & ID: Climate Resilience Community Development (CRCD) Project	Implementing Agency: LGED
Loan No.:	

Duration: April 2018 to September 2019

In USD'000

S. No	Description	Selection Method	Lump Sum or Time Based	Estimate amount in NPR thousand	Pre/ Post Review	Plan vs Actual	Request for Expression of Interest		Terms of Reference		Short List		Plan vs Actual	Request for Proposal		Bid Proposed		Bid Evaluations Technical (T) and Financial (F)					Plan vs Actual	Contract Finalization			Procurement Agency	Ref. to AWPB
							Date Published	Closing Date	Date Proposed	Date No-Objection	Date Proposed	Date No-Objection		Date Proposed	Date No-Objection	Invitation Date	Submission/Closing Date	Submission Evaluation Report (T)	No-objection Evaluation Report (T)	Opening Financial (F) Proposal	Submission Evaluation Report Technical(T) and Financial (F)	No-objection Evaluation Report Technical(T) and Financial (F)		Contract Amount	Contract Award	Contract Signature		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
1	Study for Demand Skills -DDM	SSS		356.00		P							P	1-Jun-18	30-Jun-18							31-Aug-18	P	356	5-Sep-18	10-Sep-18	LGED	IV
						A							A										A					
2	Climate Change Research	NCB	Lump Sum	100.00		P							P			1-Jun-18	20-Jun-18	30-Jun-18	15-Aug-18	16-Aug-18	31-Aug-18	15-Sep-18	P	100	20-Sep-18	1-Oct-18	LGED	IV
						A							A										A					
	Total Cost			456.00																								

Note:

Prepared by

Signature:
Name:
Position:
Date:

Project Director

Signature:
Name:
Position:
Date:

Department Head

Signature:
Name:
Position:
Date:

IFAD Funds Procurement Plan (PP) for Non-Consultants Services for !8 months

Prepared on:

Project Name & ID: Climate Resilience Community Development (CRCD) Project	Implementing Agency: LGED
Loan No.:	

Duration: April 2018 - September 2019

In USD'000

SNo	Description	Selection Method	Lump Sum or Time Based	Estimate amount in NPR thousand	Prej/ Post Review	Plan vs Actual	Request for Expression of Interest		Terms of Reference		Short List		Plan vs Actual	Request for Proposal		Bid Proposed		Bid Evaluations Technical (T) and Financial (F)					Plan vs Actual	Contract Finalization		
							Date Published	Closing Date	Date Proposed	Date No-Objection	Date Proposed	Date No-Objection		Date Proposed	Date No-Objection	Invitation Date	Submission/Closing Date	Submission Evaluation Report (T)	No-objection Evaluation Report (T)	Opening Financial (F) Proposal	Submission Evaluation Report Technical(T) and Financial (F)	No-objection Evaluation Report Technical(T) and		Contract Amount	Contract Award	Contract Signature
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1	Vehicle Maintenance	SSS	Lump Sum	21.00		P							P										P	21	1-Sep-18	1-Sep-18
						A							A										A			
	Total Cost			21.00																						

Note:

Prepared by

Signature:
Name:
Position:
Date:

Project Director

Signature:
Name:
Position: Project Coordinator
Date:

Department Head

Signature:
Name:
Position:
Date:

IFAD Funds Procurement Plan (PP) for Works for 18 months

Prepared on:

Project Name & ID: Climate Resilience Cor	Implementing Agency: LGED
Loan No.:	

Duration: April 2018 to September 2019

In USD'000

Sno	Description	Lot number	Basic Data						Plan vs. Actual	Bis Documents		Bidding Period		Bid Evaluation		Contract Finanlizatio			Procurement Agency	Ref. to AWPB
			Issue # of invitation for bids	Lumisum or bill of quantities	Procurement Method	Estimated Amount in USD million	Pre or post qualification	Prior or Post Review		Date Proposed	Date No-objection	Bid Invitation date	Bid closing-opening	Bid Evaluation Report	No-objectionn	Contract amount in USD million	Date Contract Award	Date Contract Signature		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
1	Rural roads			BOQ	NCB	1469						1-Aug-18	20-Aug-18	1-Sep-18	15-Sep-18	1469	16-Sep-18	20/09/2018	LGED	II
				A																
2	Rehabilitation of Roads			BOQ	NCB	103						1-Aug-18	20-Aug-18	1-Sep-18	15-Sep-18	103	16-Sep-18	20/09/2018	LGED	II
				A																
3	Cross Drainage			BOQ	DW	670				1-Aug-18	15-Aug-18					670	1-Sep-18	05/09/2018	LGED	II
				A																
4	Road Maintenance			BOQ	DW	29				1-Aug-18	15-Aug-18					29	1-Sep-18	05/09/2018	LGED	II
				A																
5	Market Development			BOQ	DW	678				1-Aug-18	15-Aug-18					678	1-Sep-18	05/09/2018	LGED	II
				A																
6	Construction of Shelter			BOQ	NCB	469						1-Aug-18	20-Aug-18	1-Sep-18	15-Sep-18	469	16-Sep-18	20/09/2018	LGED	II
				A																
	Total Cost					3418										3418				

Prepared by

Signature:
Name:
Position:
Date:

Project Director

Signature:
Name:
Position: Project Director
Date:

IFAD Funds Procurement Plan (PP) for Goods for 18 months

Prepared on:

PPROJECT: CLIMATE RESILIENCE COMMUNITY DEVELOPMENT (CR	Implementing Agency: LGED

Duration: April 2018 to September 2019

0

In USD'000

Sno	Description	Lot Number	Basic Data				Plan vs. Actual	Bid Documents		Bidding Period		Bid Evaluation report		Contract Finalization			Procurement Agency	Ref. to AWPB
			Issue # of Invitation for bid	Estimate amount in NPR thousand	Procurement Method	Pre or Post review		Date Proposed	Date No-objection	Bid invitation date	Bid closing-opening	Bid Evaluation report	No-objection	Contract amount	Date contract award	Date contract signature		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17		
1	Vehicles	1	1	205.00	NCB		P	1-Jun-18	15-Jun-18	15-Jun-18	20-Jun-18	15-Jul-18	31-Jul-18	205	1-Aug-18	5-Aug-18	LGED	I
							A											
2	Machinery and Equipment	2	2	190.00	NCB		P	1-Jun-18	15-Jun-18	15-Jun-18	20-Jun-18	15-Jul-18	31-Jul-18	205	1-Aug-18	5-Aug-18	LGED	I
							A											
3	LCS Training Resource Persons, Materials Venue Comp 1.1			10.00	DG		P	1-Jun-18						10		10-Jun-18		I
							A											
4	Training Resource Persons, Materials Venue Comp 1.2			100.00	DG		P	1-Jun-18						100		10-Jun-18		I
							A											
5	LCS Graduation			230.00	DG		P	1-Jun-19						230		15-Jun-19		I
							A											
	Total Cost			735.00														

Note:

Prepared by

Signature:
Name:
Position:
Date:

Project Director

Signature:
Name:
Position:
Date:

Appendix 9: PROVATi[3] Project cost and financing

1. This Working Paper describes the projected project costs and financing for the CRCD project, based on the information collected during the course of the mission's discussions with LGED. The FAO/World Bank COSTAB version 32 was used to calculate the total Project costs and proposed financing schedules, procurement and expenditure accounts[95].

2. **Key assumptions:** Key assumptions used in the preparation of the project costs and financing plans are as follow: (i) exchange rate at (Bangladesh Taka) BDT 82 per USD that is set at the second quarter of 2018; (ii) domestic inflation rate at 5.5%[96] and foreign inflation rate at 2% and both domestic and foreign inflation rates compounded at mid-year; (iii) no physical contingencies applied but price contingencies at 5.5% overall, 5% for salaries and allowances, civil works, equipment, machinery etc; (iv) unit costs input in domestic currency values (BDT); (v) cost tables are presented in fiscal year, i.e. July to June and this is in line with the Annual Plan for the project starting from July 2018; (vi) Financing rules used are: 70% by IFAD and balance 30% by GOB but IFAD grant fund of USD 1 million at 100%; (vii) the project period is set at six years but fall in seven fiscal years starting from July 2018.

3. **Taxes:** All unit costs included taxes and these were: overall 10%, civil works at 6%, TA, studies, training at 15%, and all office equipment such as computers, printers, furniture and salaries[97] at 10%.

4. **Project life:** The Project is designed for a SIX-year implementation and structured in three technical components and one management and coordination component shown in Table-1 below.

Table-1: PROVATi Project Detailed Cost Tables

Component	Sub-components	Cost Table No
1. Climate resilient infrastructure and community shelters		
	1.1 Climate change risk assessment	1.1
	1.2 Climate resilient rural roads	1 2
	1.3 Climate resilient rural market development	1.3
	1.4 Climate resilient community flood shelters cum schools	1.4
	1.5 Training on climate resilient infrastructure design	1.5
2. Resilient communities through employment and early flood warning		
	2.1 Capacity building of LCS members & livelihoods improvement	2.1
	2.2 Vocational training for off-farm employment	2.2
	2.3 Research and development of local flood information and dissemination	2.3
	2.4 Practical policy reviews	2.4
3. Project Management		
	3.1 Project management and technical support	3.1

5. **Expenditure, procurement, disbursement:** Following are the costab accounts categories that are grouped and presented in accordance with IFAD guidelines. These are listed in Table-2 below.

Table-3: Procurement, Disbursement and Expenditure Accounts

[95] Costab file reference: "bang_PROVATI.tab"
[96] Source: Bangladesh Bureau of Statistics, Dhaka and ieconomic.com/Bangladesh.
[97] Taxes on salaries are deducted at sources as follows: no taxes up to BDT 250,000, 10% on incomes between 250,000 and 400,000; 15% on incomes between 400,000 and 500,000; 20% on incomes between 500,000 and 600,000 BDT and 25% above.

Procurement Accounts (PA)	Disbursement Accounts (DA)	Expenditure Accounts (EA)
Works_PA	Works_DA	Works_EA
Equipment & materials_PA	Equipment & materials_DA	Equipment & materials_EA
Training_PA	Training_DA	Training_EA
TA and studies_PA	TA and studies_DA	TA and studies_EA
Vehicles_PA	Vehicles_DA	Vehicles_EA
Workshops_PA	Workshops_DA	Workshops_EA
Maintenance_PA	Maintenance_DA	Maintenance_EA
Office operating costs_PA	Office operating costs_DA	Office operating costs_EA
Salaries and allowances_PA	Salaries and allowances_DA	Salaries and allowances_EA

6. **Unit costs:** Unit costs have been input in Bangladesh Taka (BDT). Cost estimates are based on updated unit costs the mission received from the LGED in Dhaka. For some items of expenditures a lump sum allocation has been applied so as to give flexibility in procurement or for the implementation of such activity/task. *These unit costs are therefore, subject to changes and revision at the time of preparing annual work plan and budgets (AWPB).*

7. **Project component costs:** Project investments are organized into TWO technical components and ONE management component. Total Project Costs are presented in Table-3 below.

Bangladesh
PROVATi Final Design

Components Project Cost Summary	(BDT '000)			(US$ '000)			% Foreign Exchange	% Total Base Costs
	Local	Foreign	Total	Local	Foreign	Total		
A. Climate Resilient Infrastructure and Community Shelters								
1. Climate change risks assessment for building climate resilient infrastructure	19,379	-	19,379	236	-	236	-	-
2. Climate resilient rural roads	3,745,805	-	3,745,805	45,681	-	45,681	-	59
3. Climate resilient rural market development	1,139,067	-	1,139,067	13,891	-	13,891	-	18
4. Climate resilient community shelter cum school	222,131	-	222,131	2,709	-	2,709	-	4
5. Training on climate resilient infrastructure design	6,150	-	6,150	75	-	75	-	-
Subtotal Climate Resilient Infrastructure and Community Shelters	5,132,532	-	5,132,532	62,592	-	62,592	-	81
B. Resilient Communities through Employment and Early Flood Warning								
1. Capacity building of LCS members and Livelihoods Improvement	195,980	-	195,980	2,390	-	2,390	-	3
2. Vocational training for off-farm employment	371,153	-	371,153	4,526	-	4,526	-	6
3. Research and development of flood information and dissemination system	190,877	-	190,877	2,328	-	2,328	-	3
4. Practical policy reviews	85,360	-	85,360	1,041	-	1,041	-	1
Subtotal Resilient Communities through Employment and Early Flood Warning	843,370	-	843,370	10,285	-	10,285	-	13
C. Project Management & technical support								
1. Project Management	344,901	-	344,901	4,206	-	4,206	-	5
Subtotal Project Management & technical support	344,901	-	344,901	4,206	-	4,206	-	5
Total BASELINE COSTS	6,320,802	-	6,320,802	77,083	-	77,083	-	100
Physical Contingencies	256	-	256	3	-	3	-	-
Price Contingencies	1,254,002	-	1,254,002	15,293	-	15,293	-	20
Total PROJECT COSTS	7,575,061	-	7,575,061	92,379	-	92,379	-	120

8. Project Costs by Expenditure Categories are presented in Appendix 1. Civil works category represents the single largest Project expenditure category at (68.7%), followed by training (12%), TA and studies (8.7%), office operating expenses and salaries and allowances (5.9%), maintenance at 2% etc.

9. Disbursement accounts, derived from the expenditure accounts described above, provide the basis for determining the financing plan for the Project.

10. **Project component financing:** The financiers for the Project are IFAD (70%) and Government of Bangladesh (30%). No participation by the beneficiaries is fore-seen.

Table-4 Financing Plan by Components for the period

Bangladesh
PROVATi Final Design
Components by Financiers

(US$ '000)	IFAD		GoB		IFAD Grant		Total		Local (Excl. Taxes)	Duties & Taxes
	Amount	%	Amount	%	Amount	%	Amount	%		
A. Climate Resilient Infrastructure and Community Shelters										
1. Climate change risks assessment for building climate resilient infrastructure	-	-	-	-	252	100.0	252	0.3	252	-
2. Climate resilient rural roads	38,321	70.0	16,423	30.0	-	-	54,745	59.3	51,478	3,267
3. Climate resilient rural market development	11,699	70.0	5,014	30.0	-	-	16,712	18.1	14,464	2,248
4. Climate resilient community shelter cum school	2,155	70.0	924	30.0	-	-	3,079	3.3	2,894	185
5. Training on climate resilient infrastructure design	58	70.0	25	30.0	-	-	83	0.1	75	8
Subtotal Climate Resilient Infrastructure and Community Shelters	52,233	69.8	22,386	29.9	252	0.3	74,871	81.0	69,163	5,708
B. Resilient Communities through Employment and Early Flood Warning										
1. Capacity building of LCS members and Livelihoods Improvement	2,137	70.0	916	30.0	-	-	3,052	3.3	2,747	305
2. Vocational training for off-farm employment	3,944	70.0	1,690	30.0	-	-	5,635	6.1	5,071	563
3. Research and development of flood information and dissemination system	1,706	64.8	731	27.8	197	7.5	2,634	2.9	2,390	244
4. Practical policy reviews	203	18.6	87	8.0	801	73.5	1,090	1.2	1,061	29
Subtotal Resilient Communities through Employment and Early Flood Warning	7,990	64.4	3,424	27.6	998	8.0	12,412	13.4	11,270	1,141
C. Project Management & technical support										
1. Project Management	3,025	59.4	2,071	40.6	-	-	5,096	5.5	4,663	433
Total PROJECT COSTS	63,248	68.5	27,880	30.2	1,250	1.4	92,379	100.0	85,097	7,282

11. **Procurement procedures:** Procurement of goods, works and consultancy services under the project will follow Public Procurement Regulations of Bangladesh (PPRB) which are aligned with IFAD Procurement Guidelines. Broad categories of procurement envisaged under the project include: (i) local, national competitive biddings, (ii) local shopping, (iii) direct contract, (iv) community participation in procurement such the LCSs, (v) local consulting services for technical assistance, etc. All procurement of works, goods and services in the project will follow the approved Procurement Plan for the programme year.

12. **Proposed allocations**: Suggested allocations of Loan Proceeds: The Table below sets forth the Categories of Eligible Expenditures to be financed by IFAD loan and Grant:

Bangladesh
PROVATi Final Design
Disbursement Accounts by Financiers

(US$ '000)	IFAD		GoB		IFAD Grant		Total	
	Amount	%	Amount	%	Amount	%	Amount	%
1. Works	44,426	70.0	19,040	30.0	-	-	63,466	68.7
2. Equipment & materials	624	68.9	267	29.5	14	1.6	906	1.0
3. Training	7,744	68.5	3,325	29.4	234	2.1	11,304	12.2
4. Technical assistance & studies	5,171	64.1	2,216	27.5	679	8.4	8,066	8.7
6. Vehicles	326	70.0	140	30.0	-	-	466	0.5
7. Workshop	494	59.7	212	25.6	122	14.7	827	0.9
8. Maintenance	1,339	70.0	574	30.0	-	-	1,913	2.1
9. Office operating costs	1,681	69.8	721	29.9	8	0.3	2,410	2.6
10. Salary and allowances	1,443	47.8	1,386	45.9	193	6.4	3,022	3.3
Total PROJECT COSTS	63,248	68.5	27,880	30.2	1,250	1.4	92,379	100.0

Appendix 10: Economic and Financial Analysis

Financial Analysis

13. **Approach and methodology**: Cost-benefit analysis method was used for carrying out the economic and financial analysis of PROVATi[3]. All incremental investment costs were adjusted to current prices using the prevailing exchange rates and incremental benefits were estimated based on actual physical outputs and likely chances of building up of incremental benefits during the project life period. Prices were collected for all inputs and outputs as prevailing at nearby markets and adjusted to farm-gate prices using standard conversion factor. Using available data, both primary and secondary, type production models for household production, non-farm production, increased household production, reduction in transport costs, increased lease rentals and toll collection, etc were developed: from these production models, area or activity or farm models developed and aggregated subproject models and finally project model with the of use of FARMOD. Outcome of PROVATi[3] EFA at Designstage is briefly described below. various typesaccessing“”with project situation while average household size is between 4 and 5%.In all, there are 637,20090 Unions[98]. And

14. **Key assumptions**: The benefiting households take effective advantage of new and improved facilities provided under the project in improving their productivity and enhancing incomes. Other key assumptions of EFA are (i) by improving the market information systems, organising the sellers and producers groups and providing marketing support and other attendant facilities such road improvement the households are able to realise increased prices for their produce; (ii) there is scope for improving the road connectivity and access to markets and thus ensuring better prices to the farmers; (iii) improved facilities at markets trigger increased arrival and sales of commodities; (iv) improved road connectivity provides better access to markets and reduces transport costs effectively; (v) traders and sellers willing to pay enhanced tolls and lease payments; (vi) LCSs take interest in road maintenance and as well as in building markets spaces; (vii) only incremental net incomes likely to be accrued to the project have been taken in to account, etc and (viii) these models are constructed with a view to aggregating costs and benefits.

15. **Production models**:result shows.

16. **Farm, area and activity models**: Using indicative activity production models, Farm and Activity Models were prepared using FARMOD software: three models for road improvement benefits and two models for market improvement benefits. These models were designed to pattern the landholdings and livelihood options and resource availability of the target group in the project area. The models broadly illustrate the PROVATi[3] expected impact on the incomes and the households and the beneficiaries adopting and/or adapting both on-farm and non-farm technology options. These are described below. Income and return per households is presented in Annex-3.1, WP-10. Income and return per households is presented in Annex-3.2, WP-10 **households** Income and returns per model are shown in Annex-3.3, WP-10 throughout Income and returns of a unit model is provided in Annex-3.4, WP-10.throughout Income and returns of a unit model is provided in Annex-3.5, WP-10..1 510326

,400--116%1,401,800Household incremental production 1/	85,000	54,400	-	-	1.56	56%	146,273
12138,550---1,575,355Large market activity model 2/	10,707,780	-	-	-	-	-	74,890,268
Small market4,540,100----- 31,718,444Someand 57 non-farm households							

[98] Source: Population and Housing Census 2011, BBS, MoP, Dhaka

each large market has 100 regular shops and 1000 shops on haat days with annual 10,500 ton-commodities3/ each small market has 50 regular shops and 300 shops on haat days with annual 4,500 ton-km of commodities

Financial analysis and household incomes: Financial analysis was carried out for 5 activity models and summary results are presented in Table-1 in Appendix-10: (i) household production model comprising 85 households shows an NPV of BDT 1.4 million and 1.56 BCR; (ii) household incremental model shows an NPV of BDT 0.146 million; (iii) the non-farm household models comprising 57 households show an NPV of BDT 1.57 million; (iv) a large market model shows an NPV of BDT 74.89 million and (v) that of a small market shows BDT 31.72 million. Average accrual of household incomes at full development stage is estimated at BDT 3,500 per annum

17. Other notional benefits: The households are also benefited from a number of other interventions provided by the project. These include vocational training on non-farm employment to some 37,500 households, LCS empowerment benefits to 8,500 households, 15 flood-shelters, etc. For want of detailed information with regard to their economic benefits, no assessments were made. At notional level a sum of BDT 100/households covering 303,000 households has been included under overall project benefits. Similarly no tangible benefits accruing to households benefited by local flood warning system has been estimated.

Economic Analysis

. and notional benefits from vocational trainingThe[99] 0 0 3,534 9,519 17,442 24,453 26,562
benefits streamsanalysis. 172,6341.54
A10.2 2,6342,1481,6621,8841,13517%14%13%14%12%1.541.401.281.391.23131,865
1.3854%35 householdsbase case 17%. and303 90 Unions falling
under.3 a/: farm hh005,27014,19526,01036,46539,610Road improvement benefits: non-farm hh
070,700161,600232,300303,000303,000(Vocational, Notional) 101522,5003037,50037,500(LCS empowerment, Notional) 1/02,1254,2505,1008,5008,5008,500Total02,12570,700161,600232,3003033031/ Other notional benefits, such as benefits of early local flood warning systems are yet to be quantified

18. **Benefits:** The immediate benefits from the project are (i) increased access to market through improved connectivity triggering improved production, (ii) marginal shifts in cropping patterns in response to market signals, (iii) an increase in the cropping intensity resulting in enhanced production, (iv) overall reduction in transport costs[100] due to smooth roads and also significant time-saving[101]. This response is expressed as increased household incomes. Some of the LCS members would be able to invest a portion of their wages in sustainable income generating activities but these have not been quantified. Similarly benefits accruing to local flood warning systems have also not been quantified. Road and market improvement will also trigger increased traffic volumes[102].

Risks	Risk description	Probability of occurrence	Mitigation measures in programme design	Comparative sensitivity analysis result (Proxy)

[99] Based on 20 year bond rate in Bangladesh
[100] Transport cost of a unit ton-km on earth road is nearly double the rate for BC road
[101] Smooth road is justified because rickshaws are used widely hauling small parcels in short distances. Smooth roads reduce the drudgery of rickshaw-pullers significantly.
[102] A GTZ studies (AADT) carried out in Bangladesh indicated that traffic volumes increased by 57% on regular days and 140% during haat days, good number of road side shops emerged, revenue collection increased by 100%, incomes of the poor increased by 47%, transport costs reduced by over 60% and volume of goods increased by 24%. Source: GTZ RIIP for Poverty Reduction www.adbi.org

Risks	Risk description	Probability of occurrence	Mitigation measures in programme design	Comparative sensitivity analysis result (Proxy)
Institutional	Delay in technology transfer/lack of quality planting materials slowing down the uptake rates and production	Medium	With improved road access and market development, these issues will be adequately addressed	Benefits lag by 2 years: IRR= 13% NPV= 1,865 BCR=1.38
	Lack of financial capacity to invest in agriculture and other land-related works	Medium	Improved connectivity provides enhanced access to finance and encourages farmers to increase investments on-farm in response to favourable market signals	Decline in benefits by 20%: IRR=12% NPV= 1,135 BCR= 1.23
Market	Inadequate profit margins due to poor access, lack of transport and of market information Lack of capacities of the farmers to negotiate fair deals with private investors	High to medium	Market information, improved technology advice, and market linkages. Improvement of local markets and rural roads; training producers; Provision of market infrastructure and facilities;	Decline in benefits and increases in cost by 10%: IRR= 12% NPV= 1,398 BCR= 1.26
	Lower market prices for commodities	Medium	Diversified production and improved market information; production of off-season vegetables	
Policy	Lack of commitment to investing in the welfare development and slowing down funds flow in particular for O&M of completed infrastructure	Medium to high	Facilities for O&M provided; climate resilient roads and markets supported	Benefits down and cost increases by 15%: IRR=10% NPV= 780 BCR=1.14
Others	Remoteness and difficulty of access during flood and rainy season	High	Promotion of products that combine high farmer margin for small volumes and are easy to transport	Benefits down by 25%: IRR=10% NPV= 760 BCR=1.16
	Climate change risks of delayed rainfall, abnormal rainfall, flooding, cyclones, etc	High to Medium	Training on climate change risks and crop diversification	

EFA FRAMEWORK TEMPLATE

Bangladesh: Climate Resilient Community Development Project-Preparation

A)

FINANCIAL ANALYSIS	Rural roads	Markets					
	Net incremental benefits of Farm and Activity subproject models in 000 BDT						
PY1		0		0			
PY2		0					
PY3		23,200		152,200			
PY4		63,323		365,700			
PY5		118,743		518,000			
PY6		170,023		670,200			
PY7		189,978		670,200			
PY8		194,308		707,700			
PY9		195,440		760,200			
PY10		195,440		797,700			
PY11		195,440		835,200			
PY12		195,440		835,200			
PY13		195,440		835,200			
PY14		195,440		835,200			
PY15		195,440		835,200			
PY16		195,440		835,200			
PY17		195,440		835,200			
PY18		195,440		835,200			
PY19		195,440		835,200			
PY20		195,440		835,200			
NPV (BDT, 000)	0	1,330,090	0	5,557,314	0	0	0
NPV (USD 000)	0.0	16,420.9	0.0	68,608.8	0.0	0.0	0.0
FIRR					#NUM!		#NUM!

B)

PROJECT COSTS AND INDICATORS FOR LOGFRAME						
TOTAL PROJECT COSTS (in million USD)		**91.70**	Base costs	77.81	PMU	8.48
Number of Beneficiaries	**303,000** Households	Road hh	Market hh	LCS hh	Voc hh	shop-owners
		66,172	303,000	8,500	37,500	8,750
Cost per beneficiary (IFAD resources= $64.5 million)	**213** USD/ household		Outreach	303,000	**Adoption rates**	**vary**

Components	Cost USD M	Outcomes	Indicators
Rural infrastructure	73.89	xx km of & 150 markets improved	reduced transport costs; increased production
Community empowerment	7.08	LCS graduation; vocational training	empowered communities
Climate change research	2.25	Local level flood warning	assets protected
Project management	8.48	scheduled implementation	timely disbursement
TOTAL PROJECT COSTS (in million USD)	91.70		

C)

	MAIN ASSUMPTIONS & SHADOW PRICES[1]				
FINANCIAL	**Output**	Incremental value (%)	Price (in BDT)	**Input prices**	Price (BDT)
	Farm produce	20%	25/kg	Fertilizer, average, per kg	18/kg
	Non-farm produce	10%	25/kg	Pesticides, average, per lit	500/lit
	Cost-reduction	-50.0%	200/ton-km	Animal hiring, per day	400/day
	Toll collection	75.0%	2.5/shop/day	Rural wage rate, pers_day	150/day
	Lease values	moderate increases			
	traffic volumes	50.0%			
ECONOMIC	Official Exchange rate,October	81		Discount rate (opportunity cost of capital)	7.5%
	Shadow Exchange rate b/	96		Long term bond rate	7.5%
	Standard Conversion Factor	1.19		Output conversion factor a/	0.9
	Labour Conversion factor	0.8		Input Conversion factor a/	0.85

[1] All prices expressed in BDT Currency.

a/ estimated from data generated from farmod
b/ arrived at using export and import values* OER

D)

BENEFICIARIES, PHASING BY INTERVENTION AND ADOPTION RATES									
Project year →	1	2	3	4	5	6	7	Total	
Interventions									Adoption rates
hh benefited by rural roads	0	0	8,790	23,660	43,350	60,775	66,172		
(paddy, maize, mustard, soybean etc)		0	5,274	14,196	26,010	36,465	39,703	39,703	60%
hh benefited by roads, non-farm	0	0	8,790	23,660	43,350	60,775	66,172		
(all types, in particular high value crops)	0	0	3,516	9,464	17,340	24,310	26,469	26,469	40%
hh benefited by rural markets	0								
(producers and sellers)	0	0	70,700	161,600	232,300	303,000	303,000	303,000	100%
LCS graduation	0								
(community empowerment)	0	2,125	4,250	5,100	8,500	8,500	8,500	8,500	
Vocational training on off-farm									
(livelihoods improvement)	0	0	15,000	22,500	30,000	37,500	37,500	37,500	
		0	0	0	0	0	0		
Total # of participating households	0	2,125	70,700	161,600	232,300	303,000	303,000	303,000	
									0%

E)

ECONOMIC ANALYSIS	NET INCREMENTAL BENEFITS (BDT)								NET INCREMENTAL COSTS (BDT)			
Project year	Rural roads	Markets	Notional benefits				Shops_WOP	Total Incremental benefits	Economic investment Costs	Economic recurrent Costs	Total Incremental Costs	Cash Flow (million BDT)
1	0.0	0.0	0.0					*0.0*	108.4	0.0	*108.4*	**-108.4**
2	0.0	0.0	0.0					*0.0*	743.4	0.0	*743.4*	**-743.4**
3	38.0	137.2	0.0					*175.2*	1,116.3	16.2	*1,132.5*	**-957.3**
4	104.8	329.7	7.1					*441.6*	1,328.7	45.1	*1,373.8*	**-932.2**
5	198.7	467.0	16.2					*681.9*	1,222.8	86.8	*1,309.6*	**-627.7**
6	287.5	604.2	23.2					*914.9*	467.6	127.0	*594.6*	**320.3**
7	325.5	604.2	30.3					*960.0*	63.9	146.0	*209.9*	**750.1**
8	336.4	638.0	30.3					*1004.7*		152.5	*152.5*	**852.2**
9	339.2	685.2	30.3					*1054.7*		154.2	*154.2*	**900.5**
10	339.2	719.0	30.3					*1088.5*		154.2	*154.2*	**934.3**
11	339.2	752.7	30.3					*1122.2*		154.2	*154.2*	**968.0**
12	339.2	752.7	30.3					*1122.2*		154.2	*154.2*	**968.0**
13	339.2	752.7	30.3					*1122.2*		154.2	*154.2*	**968.0**
14	339.2	752.7	30.3					*1122.2*		154.2	*154.2*	**968.0**
15	339.2	752.7	30.3					*1122.2*		154.2	*154.2*	**968.0**
16	339.2	752.7	30.3					*1122.2*		154.2	*154.2*	**968.0**
17	339.2	752.7	30.3					*1122.2*		154.2	*154.2*	**968.0**
18	339.2	752.7	30.3					*1122.2*		154.2	*154.2*	**968.0**
19	339.2	752.7	30.3					*1122.2*		154.2	*154.2*	**968.0**
20	339.2	752.7	30.3					*1122.2*		154.2	*154.2*	**968.0**
NPV at 7.5% ('million)	**2,634**											
BCR	**1.54**											
EIRR	**17%**											

Current Bond rate is applied as Discount rate

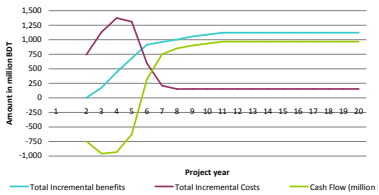
7,497 4,863

F)

SENSITIVITY ANALYSIS (SA)				
	Δ%	Link with the risk matrix	IRR	NPV 1/
Basecase scenario			17%	2,634
Project benefits	-10%		14%	1,884
Project costs	10%			
Project benefits	10%		12%	1,398
2 years lag in benefits			13%	1,865
Project benefits	-20%	climate risks, floods, high rainfall, droughts	12%	1,135
Input prices	10%	lack of policy commitment	12%	1,398

1/ NPV is in million BDTdiscounted at 7.5%

G)



A)		Rural roads		Markets					
FINANCIAL ANALYSIS		Net incremental benefits of Farm and Activity subproject models in 000 BDT							
	PY1		0		0				
	PY2		0		-				
	PY3		23,200		152,200				
	PY4		63,323		365,700				
	PY5		118,743		518,000				
	PY6		170,023		670,200				
	PY7		189,978		670,200				
	PY8		194,308		707,700				
	PY9		195,440		760,200				
	PY10		195,440		797,700				
	PY11		195,440		835,200				
	PY12		195,440		835,200				
	PY13		195,440		835,200				
	PY14		195,440		835,200				
	PY15		195,440		835,200				
	PY16		195,440		835,200				
	PY17		195,440		835,200				
	PY18		195,440		835,200				
	PY19		195,440		835,200				
	PY20		195,440		835,200				
NPV (BDT, 000)		0	1,330,090	0	5,557,314	0	0	0	
NPV (USD 000)		0.0	16,420.9	0.0	68,608.8	0.0	0.0	0.0	
FIRR						#NUM!		#NUM!	

B)

PROJECT COSTS AND INDICATORS FOR LOGFRAME						
TOTAL PROJECT COSTS (in million USD)		**91.70**	Base costs	77.81	PMU	8.48
Number of Beneficiaries	**303,000** Households	Road hh	Market hh	LCS hh	Voc hh	shop-owners
		66,172	303,000	8,500	37,500	8,750
Cost per beneficiary (IFAD resources= $64.5 million)	**213** USD/ household		Outreach	303,000	**Adoption rates**	**vary**

Components	Cost USD M	Outcomes	Indicators
Rural infrastructure	73.89	xx km of & 150 markets improved	reduced transport costs; increased production
Community empowerment	7.08	LCS graduation; vocational training	empowered communities
Climate change research	2.25	Local level flood warning	assets protected
Project management	8.48	scheduled implementation	timely disbursement
TOTAL PROJECT COSTS (in million USD)	91.70		

C)	MAIN ASSUMPTIONS & SHADOW PRICES[1]					
FINANCIAL	**Output**	Incremental value (%)	Price (in BDT)	**Input prices**	Price (BDT)	
	Farm produce	20%	25/kg	Fertilizer, average, per kg	18/kg	
	Non-farm produce	10%	25/kg	Pesticides, average, per lit	500/lit	
	Cost-reduction	-50.0%	200/ton-km	Animal hiring, per day	400/day	
	Toll collection	75.0%	2.5/shop/day	Rural wage rate, pers_day	150/day	
	Lease values	moderate increases				
	traffic volumes	50.0%				
ECONOMIC	Official Exchange rate,October	81		Discount rate (opportunity cost of capital)	7.5%	
	Shadow Exchange rate b/	96		Long term bond rate	7.5%	
	Standard Conversion Factor	1.19		Output conversion factor a/	0.9	
	Labour Conversion factor	0.8		Input Conversion factor a/	0.85	

[1] All prices expressed in BDT Currency.

a/ estimated from data generated from farmod
b/ arrived at using export and import values* OER

D)

BENEFICIARIES, PHASING BY INTERVENTION AND ADOPTION RATES

Project year → / Interventions	1	2	3	4	5	6	7	Total	Adoption rates
hh benefited by rural roads	0	0	8,790	23,660	43,350	60,775	66,172		
(paddy, maize, mustard, soybean etc)		0	5,274	14,196	26,010	36,465	39,703	39,703	60%
hh benefited by roads, non-farm	0	0	8,790	23,660	43,350	60,775	66,172		
(all types, in particular high value crops)	0	0	3,516	9,464	17,340	24,310	26,469	26,469	40%
hh benefited by rural markets	0								
(producers and sellers)	0	0	70,700	161,600	232,300	303,000	303,000	303,000	100%
LCS graduation	0								
(community empowerment)	0	2,125	4,250	5,100	8,500	8,500	8,500	8,500	
Vocational training on off-farm									
(livelihoods improvement)	0	0	15,000	22,500	30,000	37,500	37,500	37,500	
		0	0	0	0	0	0		
Total # of participating households	0	2,125	70,700	161,600	232,300	303,000	303,000	303,000	
									0%

ECONOMIC ANALYSIS

E)	NET INCREMENTAL BENEFITS (BDT)								NET INCREMENTAL COSTS (BDT)			
Project year	Rural roads	Markets	Notional benefits				Shops_WOP	Total Incremental benefits	Economic investment Costs	Economic recurrent Costs	Total Incremental Costs	Cash Flow (million BDT)
1	0.0	0.0	0.0					*0.0*	108.4	0.0	*108.4*	**-108.4**
2	0.0	0.0	0.0					*0.0*	743.4	0.0	*743.4*	**-743.4**
3	38.0	137.2	0.0					*175.2*	1,116.3	16.2	*1,132.5*	**-957.3**
4	104.8	329.7	7.1					*441.6*	1,328.7	45.1	*1,373.8*	**-932.2**
5	198.7	467.0	16.2					*681.9*	1,222.8	86.8	*1,309.6*	**-627.7**
6	287.5	604.2	23.2					*914.9*	467.6	127.0	*594.6*	**320.3**
7	325.5	604.2	30.3					*960.0*	63.9	146.0	*209.9*	**750.1**
8	336.4	638.0	30.3					*1004.7*		152.5	*152.5*	**852.2**
9	339.2	685.2	30.3					*1054.7*		154.2	*154.2*	**900.5**
10	339.2	719.0	30.3					*1088.5*		154.2	*154.2*	**934.3**
11	339.2	752.7	30.3					*1122.2*		154.2	*154.2*	**968.0**
12	339.2	752.7	30.3					*1122.2*		154.2	*154.2*	**968.0**
13	339.2	752.7	30.3					*1122.2*		154.2	*154.2*	**968.0**
14	339.2	752.7	30.3					*1122.2*		154.2	*154.2*	**968.0**
15	339.2	752.7	30.3					*1122.2*		154.2	*154.2*	**968.0**
16	339.2	752.7	30.3					*1122.2*		154.2	*154.2*	**968.0**
17	339.2	752.7	30.3					*1122.2*		154.2	*154.2*	**968.0**
18	339.2	752.7	30.3					*1122.2*		154.2	*154.2*	**968.0**
19	339.2	752.7	30.3					*1122.2*		154.2	*154.2*	**968.0**
20	339.2	752.7	30.3					*1122.2*		154.2	*154.2*	**968.0**

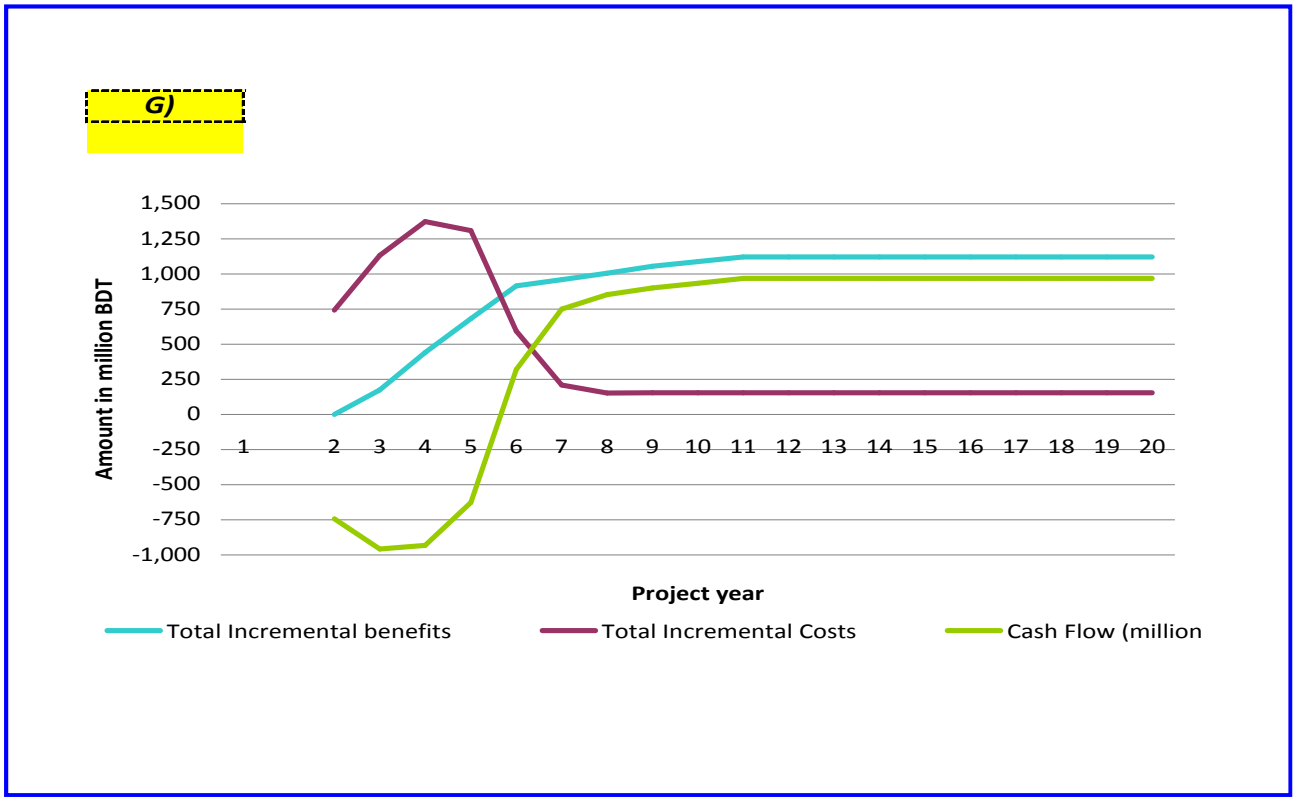
NPV at 7.5% ('million)	**2,634**
BCR	**1.54**
EIRR	**17%**

Current Bond rate is applied as Discount rate

7,497 4,863

F)

SENSITIVITY ANALYSIS (SA)				
	Δ%	**Link with the risk matrix**	**IRR**	**NPV 1/**
Basecase scenario			17%	2,634
Project benefits	-10%		14%	1,884
Project costs	10%			
Project benefits	10%		12%	1,398
2 years lag in benefits			13%	1,865
Project benefits	-20%	climate risks, floods, high rainfall, droughts	12%	1,135
Input prices	10%	lack of policy commitment	12%	1,398
1/ NPV is in million BDTdiscounted at 7.5%				


G)
1,500
1,250
1,000
750
500
250
0
-250
-500
-750
-1,000
Amount in million BDT
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
Project year
Total Incremental benefits
Total Incremental Costs
Cash Flow (million

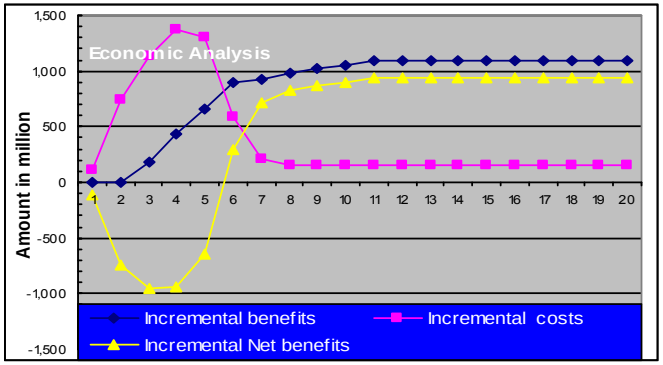
ECONOMIC ANALYSIS

Country:	Bangladesh	Discount rate:DR	**0.075**	8%
Project:	**Climate Resilient Community Development Project CRCD**			
(amount in million BDT)				

	Project Year																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Incremental benefits																				
Incremental benefits	0.0	0.0	175.3	441.6	681.9	914.9	960.0	1004.6	1054.7	1088.4	1122.2	1122.2	1122.2	1122.2	1122.2	1122.2	1122.2	1122.2	1122.2	1122.2
Total Incremental benefits	0.0	0.0	175.3	441.6	681.9	914.9	960.0	1004.6	1054.7	1088.4	1122.2	1122.2	1122.2	1122.2	1122.2	1122.2	1122.2	1122.2	1122.2	1122.2
Incremental costs																				
Investment costs	108.4	743.4	1116.3	1328.7	1222.8	467.6	63.9													
Operating costs, inputs	0.0	0.0	16.2	45.1	86.8	127.0	146.0	152.5	154.2	154.2	154.2	154.2	154.2	154.2	154.2	154.2	154.2	154.2	154.2	154.2
Incremental costs	108.4	743.4	1132.5	1373.8	1309.6	594.6	209.9	152.5	154.2	154.2	154.2	154.2	154.2	154.2	154.2	154.2	154.2	154.2	154.2	154.2
Incremental net benefits	-108.4	-743.4	-957.2	-932.2	-627.7	320.3	750.1	852.1	900.5	934.2	968.0	968.0	968.0	968.0	968.0	968.0	968.0	968.0	968.0	968.0

Basecase results discounted:		7.5%
NPV of benefit streams discounted at	7.5%	7,497
NPV of costs stream discounted at	7.5%	4,863
NPV of project discounted at	7.5%	2,634
BCR- discounted benefits & costs at	7.5%	1.54
IRR		17%

Benefits lagged by 2 year DR at	7.5%	
NPV of benefit streams discounted at	7.5%	6,728
NPV of costs stream discounted at	7.5%	4,863
NPV of project discounted at	7.5%	1,865
BCR- discounted benefits & costs at	7.5%	1.38
IRR		13%



Results of Sensitivity Analysis:

		Costs increased by				Benefits down by				Both cost increase & benefits down			
Project Performance indicators		10%	15%	20%	25%	10%	15%	20%	25%	10%	15%	20%	25%
NPV of at discount rate of	7.5%	2,148	1,905	1,662	1,418	1,884	1,510	1,135	760	1,398	780	162	-456
BCR at discount rate of	7.5%	1.40	1.34	1.28	1.23	1.39	1.31	1.23	1.16	1.26	1.14	1.03	0.93
IRR		14%	13%	13%	12%	14%	13%	12%	10%	12%	10%	8%	6%

Switching Value Analysis:

Switching Value:	Appraisal	Switching value	% change
Total Benefits at 7.5% DR	7,497	4,863	-35
Total Costs at 7.5% DR	4,863	7,497	54

Appendix 11: Draft PROVATi^3 project implementation manual

Following is a table of content and draft content for the PROVATi^3 PIM; It will be up-date at project start-up by the project directorate.

PROJECT IMPLEMENTATION PLAN

1. PROJECT DESCRIPTION

1.1. Introduction

The concept of the PROVATi^3 Project (Promoting Resilience of Vulnerable through Access to Infrastructure, Improved Skills and Information) had been endorsed by the Government of Bangladesh (GoB) in December 2016 and by the International Fund for Agricultural Development (IFAD)'s senior management in February 2017. An initial design mission was mobilized during 6-29 March, 2017. The PDR presents the detail design features of the project prepared by a final design mission fielded during 15-28 July 2017. This is one of the two projects designed in 2017 under IFAD COSOP 2012-18. The project concept and design builds on past successful projects implemented by LGED, particularly the Coastal Climate Change Resilient Infrastructure Project (CCRIP) project and replicates good practices. Several innovative features have been incorporated in the area of climate-proofing infrastructure, economic empowerment of ultra-poor people working on construction and maintenance through continued guidance towards income generation activities (IGA), improved maintenance of structures for long-term sustainability, vocational skills-training (VST) for on- and off-farm employment, local flood information and dissemination at village level, project management and monitoring, and knowledge management for wider mainstreaming of good practices. Improved resilience of the population in a flood vulnerable and extremely poor area is the central theme of the project.

The PROVATi^3 project reflects a deep commitment of GoB and IFAD to reduce extreme poverty. Although Bangladesh is now considered at the lower end of a middle-income country (MIC), mass poverty persists, and extreme poverty is pervasive in various parts of the country. The situation is aggravated due to adverse impacts of climate variability and change. The project districts are some of the poorest and most vulnerable districts in the country. The rural population in project area, especially char dwellers, the poor and the small producers, face several constraints: a) poor transport and market infrastructure that limits access to larger markets, increases cost of production through higher input and transportation costs, and lowers farm-gate prices due to remoteness; b) over dependence on agriculture and daily agricultural labour with very limited opportunities for off-farm sources of income; and c) vulnerability to the effects of climate change, such as increased frequency of extreme weather events, which in consequence damage standing crops, livestock and other assets. Hence, the project is grounded on strong justification of reduction of extreme poverty, enhancing preparedness against annual floods and adverse impacts of climate change, mitigating measures against loss due to climate change, promoting diversification into off-farm income, and creating a platform for further economic and social development by catalysing new investments in agriculture, non-farm businesses and improving access to social services including locally-relevant people-centric flood early warnings.

1.2. Project Goal and Objectives

The **goal** of the project is to establish 'sustainable livelihoods for poor households and smallholders in selected 25 Upazilas of the Brahmaputra-Teesta flood plain area of six North-central districts of Bangladesh'. The **development objective** is to 'enhance resilience of population of 25 selected flood-prone Upazilas *through resilient infrastructure*

development, resilience building at community level, off-farm employment creation through vocational training, and flood/climate adaptation research and early-warning dissemination'.

In the above contexts of poverty and vulnerability, the PROVATi^3 project will:

(a) Build climate resilient markets and village/union roads by (a) assessing impacts of climate change on the Brahmaputra-Teesta river system, (b) connecting the infrastructure (markets and linked road networks) with the farms/households and bigger markets that will not only ensure all year mobility but also facilitate new investments in agriculture and non-farm businesses, and access to social services, (c) build a few flood shelter-cum-schools (primary level) so that flood vulnerable communities in *char*-lands can safe their lives and productive assets during high floods;

(b) Improve the capacity of the poor and ultra-poor households to prepare for climate shocks and build more resilient livelihoods by a) enabling male and female workers of labor contracting societies (LCS) to learn and adopt income generating activities (IGA) which are less vulnerable to climate-driven shocks, thereby making their livelihoods insensitive to climatic stresses and gradually moving out of poverty through adoption of such IGAs; b) create more off-farm employment opportunities through vocational training for youth; c) developing accurate local early inundation and flood forecasting systems.

1.3. Project Scope

The project comprises two technical components and project management:

d) ***Component 1: Climate Resilient Infrastructure and Community Shelters***: The Outcome of Component 1 is '*Climate resilient infrastructure and community shelters built, and used*'. It is divided into five sub-components, namely: (1) climate change/flood preparedness research for building climate resilient infrastructure; (2) climate resilient rural communication infrastructure; (3) climate resilient rural market development; (4) climate resilient community shelter cum school; and (5) training on climate/flood-proof resilient infrastructure design.

e) ***Component 2: Resilient communities through employment and early flood warning:*** The outcome of this component is 'Building resilience of com-munities through access to flood information (early warning), economic self-reliance and policy support. It has four sub-components: (1) Capacity building of LCS members' and livelihood development; (2) skill development of youth for employment; (3) development of accurate local inundation and flood warning system; and (4) practical policy actions.

f) ***Component 3 - Project implementation and coordination:*** The project implementation will be led by the Local Government Engineering Department (LGED) of the Ministry of Local Government Rural Development and Cooperatives (MLGRDC). LGED will partner with Department of Disaster Management (DDM) and Bangladesh University of Engineering and Technology (BUET) on people-centric fine tuning of flood early warning and research, respectively. Overall coordination will be through an Inter-Ministerial Steering Committee, chaired by the Secretary of the Local Government Division of MLGRDC and represented by relevant line ministries

including the Ministry of Disaster Management and Relief (MDMR), and agencies including the Economic Relations Division (ERD) of the Ministry of Finance (MOF).

The PROVATi[3] project is estimated to have an overall cost of US$ 92.324 million of which IFAD will be providing USD 63.25 million as loan and USD 1.25 million as grant and GOB will be funding USD 27.851 million. The financing ratio is 70% IFAD and 30% GOB. Four major costs allocations are as follows: (a) Component 1: USD 70.114 million (75.9%); (b) Component 2: USD 12.764 million (13.8%); and (c) Component 3: Project Management: USD 9.446 million (10.2%). Further review of costs will be done during final design mission.

The project is planned six (6) years beginning April 2018.

1.4. Project Location

The project will be implemented in six districts (Gaibandha, Kurigram, Rangpur, Nilphamari, Lalmonirhat, and Jamalpur) with main focus in the worst poverty stricken districts – Jamalpur, Kurigram and Gaibandha - of Bangladesh. Major parts of these districts are flood prone due to convergences of the Brahmaputra (the Jamuna river) and Teesta rivers. Within the six districts the project will implement development activities in 25 poorer and vulnerable Upazilas. The project infrastructure will be primarily built in 90 unions, which are mostly char and low-lying, and worst poverty stricken areas within the 25 Upazilas. However, for local flood forecasting (see Project Components below) 19 Upazilas (174 unions) of Kurigram, Gaibandha and Jamalpur districts, which are affected by monsoon floods of the Brahmaputra river, have been selected.

1.5. Project Beneficiaries

Overall population of 90 project Unions is 2.6 million (637,000 HHs). The project covers some 303,000 households (approximately 45% of the total population) from 90 Unions within the 25 target Upazilas. Target beneficiaries include the poor women and men[103], marginal and small farmers, traders and shop owners in the markets, micro-entrepreneurs and other local private and government institutions. The infrastructure and flood information system will benefit overall population of the project areas. The direct beneficiaries will include households that profit from at least 330 km of improved rural roads, households benefitting from 135 improved small and large markets, and 15,000 households benefitting from Labour Contracting Society[104] (LCS) economic advancement through IGA and skills enhancement of 30,000 youth through vocational training.

2. PURPOSE OF MANUAL

This Project Implementation Manual (PIM) provides guidelines for the implementation of the Climate Resilience Community Development Project - PROVATi³. The PIM is to be read in conjunction with the main Project Design Report (PDR), its Working Papers and Annexes.

[103] A significant proportion of them are young men and women, within the age group of 18 and 35.

[104] *Labour Contracting Societies* (LCS) are widely used in Bangladesh for infrastructure construction and maintenance of roads. Crews of 15 to 30 ultra-poor, often consisting of 70% or more women, work collectively for 1-2 years to construct simple structures and/or to maintain infrastructure such as roads. LCS are provided with training and supervised by technical staff to ensure quality structures. LCS groups are contractually involved through a legal mandate.

Any changes proposed as a result of such a review will, however, require the concurrence of IFAD before such a change is included as an approved project implementation procedure or approach.

3. INSTITUTIONAL ARRANGEMENT

3.1. Lead Project Agency

The Government of Bangladesh, represented by the Economic Relations Division (ERD) of the Ministry of Finance, is the Borrower of the loan. The Local Government Engineering Department (LGED) under the Local Government Division (LGD) of the Ministry of Local Government, Rural Development, and Cooperative is the lead implementing agency, with the overall responsibility for the implementation of the PROVATI^3 project. LGED will appoint a senior Executive Engineer as the Project Director, who will also be the ex-officio member-secretary of the Inter-Ministerial Project Steering Committee.

3.1.1 The Department of Disaster Management (DDM) under the Ministry of Disaster Management and Relief (MDMR), will lead the implementation of the sub-component 2.3 and collaborate with the Bangladesh University of Engineering and Technology (BUET). The design of the information system will be based on existing good practices (DDM pilot project in 4 unions in collaboration with the Regional Integrated Multi-Hazard Early Warning System (RIMES), which can be scaled up under this project). This system will be implemented in 19 Upazilas in Kurigram, Gaibandha, and Jamalpur districts. These 19 Upazilas have 174 unions of which 69 unions are considered as char and island char. An appropriate targeting techniques will be applied to identify the worst flood affected unions to bring them under the system. The necessary research and development service is available from RIMES, IWM and IWFM/BUET. An MOU will be signed between the project (LGED) and DDM for transfer of funds as per annual plan to be developed by DDM.

3.1.2 The research activities under sub-components 1.1 and 2.3 will be conducted by the Institute of Water and Flood Management (IWFM) of the Bangladesh University of Engineering and Technology (BUET), the most reputed public university in the country. IWFM is also a partner university of the IFAD-funded HILIP/CALIP project it is developing flash flood forecasting model for Haor region. The project will provide USD 0.25 million as grant fund to IWFM to conduct the researches. It is expected that selected faculty members and a number of graduate students will be conducting the research works. IWFM will submit three full research proposals including objective, methodology, potential results, timeline, dissemination plan, and detail costs along with its in-kind contribution during final design mission. An MOU will be signed between the project and IWFM/BUET to transfer funds and review progress of these research activities.

3.1.3 For an efficient and effective implementation of sub-component 2.2, the mission found a two-stage approach as appropriate. Phase 1 (Inception Phase, may continue for first 2 years) will have two major streams of activities – a) pilot different implementation models (skill training followed by apprenticeship) for a few skills with some selected collaborators (skill providers) in few locations, and b) continuous market exploration for new skill development opportunities based on market demand. The second phase (Scale-up Phase) will capitalize on the learning of the first phase and scale up to the entire project area with successful implementation models.

The vocational skills training program will be outsourced to appropriate providers. The mission identified a number of such potential providers that includes government run training institutions, third party/non-government organizations and also private providers. The PMU will float open tender describing the requirements and select appropriate provider through a competitive process. As observed, government run vocational training institutions (such as TTC, Vocational Schools) have presence mainly up to district level, offer limited number of courses and are not fully staffed in terms of the number of instructors. In addition, in many occasions these schools have institutional barriers to customize training courses per the needs of the target population. On the other hand, a number of third party/non-government organizations have been identified that generally possess experience and can provide such skills training, with the ability to extend their services up to the Union level. Once the PMU floats the tender, it will select the training provider who can meet the requirements in a most competitive manner. However, per assessment by the PMU of the capacity of the potential service providers, multiple providers can be selected. The project will have close monitoring of the performance of the provider/s through a monitoring system developed.

3.2. Project Steering Committee (PSC)

The project will be under the overall guidance of an Inter-Ministerial Project Steering Committee (PSC) headed by the Secretary, Local Government Division, Ministry of Local Government Rural Development and Cooperatives. Its members would include representatives from the Ministry of Disaster Management (DDM), Ministry of Finance (ERD), Ministry of Planning, Ministry of Water Resources (BWDB), Ministry of Land, etc. IFAD will also be member of the PSC. The committee will meet twice a year to review the progress of project implementation. The Committee may also co-opt other members and implementing partners of key sub-components..

3.2.1 *Functions of PSC*: The PSC would have the primary responsibility of guiding the project implementation activities and in all matters of policy regarding the project. Specifically, the PSC would:

(vi) ensure that project activities are in compliance with Government's policies;
(vii) ensure that project resources are being used to achieve project objectives;
(viii) ensure that project interventions are coordinated with other development programmes and projects;
(ix) Suggest revisions and take important policy decisions; and
(x) Oversee and monitor the systematic implementation of the project and recommend changes where necessary in coordination with IFAD.

3.3. Project Directorate (PD)

A Project Management Unit (PMU) will be set up at the LGED headquarters in Dhaka with a Project Director who will assume overall responsibility for project management of PROVATi^3. He/she will be assisted by technical staff, specialists and TA team project assistance team (PAT) and requisite support staff. A list of project staff is given in Appendix x.

The PMU will have the following tasks: a) Project start up and launching; b) develop annual plan as per PDR; c) Implementation of the plan in collaboration with District XEN offices and Upazila Engineer's offices; d) supervise, ensure quality and time progress of project activities; e) Approve all finances of the project; f) Keep records of all financial transactions

using IFAD approved software; f) conduct all M&E and KM related works; g) produce program and financial reports; h) Coordinate with Government and IFAD; i) host all IFAD missions; and h) suggest necessary changes in the project activities and or approach as the project is implemented.

Technical Assistance Team: The PMU will be assisted by a Technical Assistance (TA) team with expertise in engineering design and supervision, climate resilience, livelihoods/employment, finance, social inclusion and gender development, participatory approaches, environmental and climate assessment, monitoring and evaluation, and local governance. The TA team will be led by senior team leader with expertise in procurement.

3.4. Regional Offices

Three Regional Offices will be established in Rangpur, Kurigram and Jamalpur and will have the following specific responsibilities: a) Conduct and coordinate all LCS training activities under Component 1.2; b) Manage and supervise NGOs and training providers under Component 2.1 and 2.2 respectively; c) Assist PMU (Livelihoods Specialist) to select NGO-MFIs and training providers at the district and Upazilas level; d) Select trainees in collaboration with Upazila LCS cum Livelihoods officer; e) Ensure quality of vocational training; f) Coordinate with potential employers for the trainees; f) Supervise quality and progress of all construction works under Component 1; g) Coordinate with XEN Office and attend all review meetings; h) Coordinate with PMU in Dhaka.

District Office and District Coordination Unit (DCU): Component 1.1, 1.2 and 1.3 will be implemented by LGED District and Upazila Office as per design of the PMU. The XEN offices and Upazila Engineer Office will have PROVATi^3 dedicated technical, accounts and support staff members. The XEN will appoint contractors for the construction of Union/Village roads and flood shelters, and LCS groups for construction of markets. He/she will be responsible for tendering, disbursement to contractors and LCS groups, supervision of works with the help of PROVATi^3 staff members, and timely completion of project activities. 20. In each LGED district, a Project Implementation Unit (PIU) will be in charge of the fiduciary functions within its jurisdiction, and will be composed at least of two accountants: one funded by GoB funds and one funded by IFAD's loan.

The project will coordinate with relevant line agencies and local government institutions in the district, Upazila and Union level. Special attention will be given to coordination with office of the UNO and Union Parishad (Chair) as both are directly involved with market management. The UNO leases out markets every year and Union Parishad Chairman is Chairman of all Market Management Committees (MMCs). Monthly review meeting will be held at XEN Office to review progress of project activities.

3.5. Upazila and Union Offices

Upazila and Union Offices: Upazila Engineer Office will be responsible for the actual supervision of the construction works. The Upazila staff will have the responsibility for implementing and monitoring all project activities of Component 1.1, 1.2 and 1.3. He/she will be assisted by Upazila LCS cum Livelihoods officer to train LCS groups, monitor market development and monitor progress Component 2.1 and 2.2.

3.6. Joint Technical Assistance Delivery Mechanism/Project Assistance Team

Under the project management component, PROVATi³ will invest in enhancing GOB's capacity by supporting the establishment of a joint Country Programme Support (CPS) and/or a Project Assistance Team (PAT). In addition the policy work under component 2.4, PROVATi³ will invest in enhancing LGED's already strong capacity by supporting the establishment of a joint Project Assistance Team (PAT) at LGED or ERD. The potential tasks are the following: facilitate cross-learning with other on-going IFAD projects implementing similar activities to accelerate start-up; support knowledge generation and sharing across IFAD financed project implemented by LGED and other IFAD partners more general, including annual KM events; support on-going IFAD financed project in preparation of project completion, MTR and design; support weak performing project through staff-sharing and technical assistance in respective areas. The staffing of the PAT is to be finalised, as is the reporting line. The CPS will not add any hierarchical layers in the project, but work as facilitators and support staff, to enhance functionality of PROVATi³ and links with other projects. This is a measure to move towards more programmatic approaches of implementation.

The CPS Mechanism aims at providing Project Management Units (starting with LGED-implemented projects) with demand-driven support services in areas of common interest, with a view to improve project performance and strengthen coherence and coordination between the projects. It has four specific objectives:

- Harmonising approaches and procedures across projects and ensuring their alignment on national and IFAD procedures;
- Sharing knowledge generated by the projects, between the projects, with Implementing Agents and other IFAD partners nationally and internationally;
- Strengthening the capacities of project teams in areas of common interest; and
- Making economies of scale by pooling resources to the benefit of a group of projects – initially those that are LGED-implemented and potentially all IFAD-financed projects at a later stage.

The PAT will provide technical support services in three key areas that have been identified jointly with Project Directors and project staff: M&E, Knowledge Management and Communication, and Financial Management. However, the design of this mechanism is flexible enough to respond to project needs in other technical areas as they arise and jointly identified by IFAD financed projects. Further details are provided in the working paper.

In the first year of implementation (2018-2019), the PAT team will be composed of the following staff one full-time M&E Specialist; one-full time KM and Communication Specialist; and one full-time FM Specialist. These specialists will report to the Project Director of PROVATi^3. PROVATi^3 will award annually renewable contracts to the PAT staff contingent on confirmed demand by the Project Directors and satisfactory performance. The PAT will be obligated to work in collaboration with relevant LGED units (i.e. M&E Unit, CreLIC, and Audit Cell under the Administration Unit, etc.), and this will be reflected in their AWPB. The team will be based in LGED, which will provide office accommodation, or at ERD. Short-term specialists as needed will be hired to address technical issues of common interest jointly identified by project directors. Furthermore, the PAT will support the climate change unit, to be established at LGED, and collaborate with WFP for improved mapping of poverty and under-nutrition.

By the end of the second year, an independent review will be organised by IFAD to assess the relevance, effectiveness, efficiency and impact of this CPS Mechanism. If found positive, expansion to other, non LGED-implemented IFAD-financed projects will be considered.

In the first year of the project, the cost associated with the staff and work of the PAT will be borne by PROVATI^3 grant resources. At the end of the first year, project directors and the CPO will jointly assess the mechanism, based on a review of achievements against expected outputs. If found useful, the second-year budget will be shared between IFAD financed LGED projects, with PROVATI^3 bearing 33% of the cost.

5. COMPONENT/ SUB-COMPONENT

5.1. Component 1: Climate Resilient Infrastructure

The Outcome of Component-1 is climate resilient infrastructure and community shelters are built, used and maintained. It is divided into five sub-components, namely: (1) climate change/flood preparedness research for building climate resilient infrastructure; (2) climate resilient rural communication infrastructure; (3) Climate resilient rural market development; (4) climate resilient community shelter cum school; and (5) Training on climate/flood-proof resilient infrastructure design.

5.1.1 Research on climate change impacts in the Teesta-Brahmaputra floodplains

Assessing impacts of flood

This component is a research study by IWFM/BUET which has long experience on regional climate modelling in collaboration with different climate modelling centres like Hadley Centre of the Met office in UK, National Centre for Atmospheric Research (NCAR) in USA, International Centre for Theoretical Physics (ITCP) in Italy, Bjerknes Centre for Climate Research in Norway and Swedish Hydro-Meteoroidal Centre (SMHI) in Sweden. This research will focus on the assessment of the changes of the flood flows and peak flood considering the impact of climate change. This study will have the following major components- i) Setup of the semi-distributed hydrological model, SWAT for Teesta, Dharala and Brahmaputra river basins, ii) Calibration and validation of the model for the historic periods, iii) Bias correction of the dynamic downscaled regional climate model outputs for the extreme scenarios, RCP 8.5, iv) Simulation of the SWAT model for the historic and future periods as required for designing of the infrastructures development (e.g., roads, markets, ghats and cyclone shelters) of this project, v) food frequency analysis of the peak flood level for designing the rural infrastructures of this project.

Flood inundation modelling will be conducted over the study area using 2D hydrodynamic models such as HEC-RAS 2D or Delft3D. Changes of the flood inundation patterns over the study area will help to estimate the possible changes of the design crest level of the roads and other infrastructures. Two-dimensional hydrodynamic model will be setup, calibrate and validate using the observed data. High resolution DEM will be purchased under this project

which will be used to generate baseline topography of the study area and input to the 2D model. Flood inundation model will provide the maximum depth of flooding based on historic floods and also for the future period considering the impact of climate change. Flood inundation model will use the output of the SWAT model over the Brahmaputra basin to derive the possible maximum food inundation for the future. Finally, model results will be used in designing the rural infrastructures of this project.

Determination of flood risk zones by the application of satellite information

A better understanding of risk zones which are vulnerable to flood disasters can be evolved from the detailed studies of the changing patterns of flow due to climate change. Information of the change of river flows and changes of the inundation patterns in the future are the important input for the identification of vulnerable areas. Flood risk maps provide useful information about places that may be at risk from flooding. The critical steps will be taken to develop food and erosion risks zone are as flows-

Step 1: Determination of the flood inundation and flood hazard maps for various return period using 2D flood inundation modelling.

Step-2: Developing depth versus damage functions of the infrastructures for floods in different return periods.

Step-3: Determination of the river bank erosion prone areas using historic satellite image analysis.

Step-4: Preparing multi hazard risks map by combining the possible future flood inundation maps with river bank erosion maps.

Assessing impacts of erosion

Every year sever erosion and deposition occur in the Teesta, Dharala and Brahmaputra rivers which are the major three rivers within the study area. It is important to understand the highly erosion prone areas where construction of rural infrastructures will be vulnerable. Historical satellite images can be effectively applied to evaluate the characteristic features of channel shifting and to estimate erosion prone areas. Erosion prone areas of the study area will be identified through analysis of Landsat Thematic Mapper (TM) and Landsat 8 images which are freely available. Shift of the bank lines of the major rivers of the project will be conducted through spatial analysis tools such are ArcGIS or ILWIS. Finally, maps of the critical and erosion prone areas will be prepared for the study area.

Activities and schedule for the research on climate change impacts

Major activities and schedule of this subcomponent are listed in the Table 1. This research component will be completed within the first year of the project. Results of this component will be assisting design of the climate resilient infrastructures of the project.

Table 5.1.12 Schedule of the major activities of Sub-component 1.1.

Activities	Months											
	1	2	3	4	5	6	7	8	9	10	11	12
Assessment of the Impact of Climate Change on the Teesta-Brahmaputra River System												
Setup of the semi-distributed hydrological model, SWAT for Teesta, Dharala and Brahmaputra river basins												
Calibration and validation of the model for the historic periods												
Bias correction of the dynamic downscaled regional climate												

Activities	Months
model outputs for the extreme scenarios, RCP 8.5,	
Simulation of the SWAT model for the historic and future periods as required for designing of the infrastructures of this project	
Food frequency analysis of the peak flood level for designing the rural infrastructures of this project.	
Setup of 2D models (HEC-RAS 2D or Delft3D) over the study area using high resolution DEM	
Calibration and validation of 2D model using historic data	
Simulation of 2D model using the boundary flow data of SWAT for present and future design periods	
Assessment of erosion and accretion of land/char due to meandering of rivers	
Downloading and processing of time series Landsat images over the study area	
Image analysis for determining the river bank erosion and deposition prone areas	
Planform analysis of the three major rivers: Teesta, Brahmaputra and Dharala river	
Determination of flood risk zones by applying satellite information, past flood history, potential impact of climate change on river flows of each project Upazila.	
Determination of the flood inundation and flood hazard maps for various return period using 2D flood inundation modelling.	
Developing depth versus damage functions of the infrastructures for floods in different return periods.	
Developing spatial maps of the river bank erosion prone areas using historic satellite image analysis.	
Preparing multi hazard risks map by combining the possible future flood inundation maps with river bank erosion maps.	
Publications and dissemination	
Publications in peer-reviewed journals and conferences	
Final workshop	
Final Report	

5.1.2 Tendering for infrastructure

During implementation stage the Upazila Engineer (UE) and the Sub-Assistant Engineer of the project Union will together visit the proposed project sites to ascertain the technical viability and to confirm the exact infrastructure location together with representatives of the Union Parishad. The UE will report back to the XEN and PMO on the viability of the selected infrastructure. On the basis of the report submitted by the UE, the PMO management will give formal approval for carrying out the project preparation including; technical survey, design, quantities and cost estimates. These activities shall include the following:

- Technical Survey: SAE conducts a detailed survey of the project under the guidance of an UE. Strength of the existing embankment formation level and subgrade for embankment widening particularly at passing area should be assessed by using DCP. Hydrological studies should be undertaken by hydrologist. Surveyor will determine the existing crest level RL (reduced level) along the road alignment.

- Design and Estimates: After completing the survey the DSC Design Engineer will design the project, prepare survey report, necessary drawings, and quantities & cost estimates. A project file will be prepared and submitted to the Project Director. Because of the nature of the coastal area the design process has to be flexible. The optimum design and construction method has to be selected based on the local conditions. The design should be simple and follow standard specifications provided in the LGED design manual, where possible. Quantities and cost estimates should be based on the standard specifications and the LGED Schedule of Rates. Each item will be separately estimated and costed. Man-days of the skilled and unskilled labour will also be determined and labour cost estimated on the basis of the Schedule of Rates. The design and estimates should be discussed with the Union Parishad representatives in their general body meeting.
- DSC Design Engineer will submit the design along with recommendations to the Quality Control Engineer and Project Director for approval. The design document of each infrastructure item will be expected to be accurate and detailed enough to serve as a baseline for subsequent impact assessment.
- The project sites selected by the Final Design Mission will not be changed unless otherwise required for technical reasons, but not without consent of the PMO. The PMO may vary the lengths and types of road for each Upazila depending on needs and physical circumstances and location of roads.

The specific tendering and implementation modalities are:

(a) Tender procedure

- LGED District office will initiate the tender procedure.
- LGED will complete the tender procedure and make the final selection, following the Public Procurement Rules 2003 and Project Procurement Guidelines, and make sure it is consistent with IFAD Procurement Guidelines.
- In case the value of the contract with the contractor that wins the tender is 10% or more higher than the estimated costs as estimated by the LGED during design, permission has to be obtained from the PD before the contract can be awarded.

(b) Execution of work

- LGED District office will be wholly responsible for the construction and financial management and will be bound to complete the works specified in the Annual Work Plan.
- LGED Upazila staff will supervise the execution of work and control the quality, with support from the LGED District staff. Construction sites have to be visited at least once a week by LGED engineers (SAE), they will check the quality of work and ensure adherence to the design specifications.
- In addition to the supervision by the LGED, works will also be monitored by Implementation Monitoring Committees (IMC).
- Testing of materials will be required following existing LGED guidelines.
- Reimbursement claims for works which did not pass a test or for which tests are not finalized will be rejected by LGED.
- Variations in costs during implementation have to be discussed and need concurrence from the Project Management Office.

(c) Post work measurements

- Post work measurements will be conducted as per standard LGED procedures to verify that the works have been carried out as per design and specifications.

(d) Reimbursement claims

- Reimbursement claims can be submitted for fully or partly completed works as per design and specifications; for partly completed works reimbursement claims can only be submitted for measurable parts.
- Reimbursement claims have to be accompanied by tender notice, comparative statement, contract document, work order, invoices plus name and address of the contractor, approval of revised contract value, if any, by the competent authorities.
- After scrutinizing the request for reimbursement the XEN will recommend payment if the quality of the works is acceptable and the quantities as claimed are in conformity with the actual situation.

(e) Rejection or partial approval of claims

- In case of any mistake or disagreement or if a structure is as yet incomplete or partially defective, the XEN can reject a part of the reimbursement claim, deduct the disputed items from the claim and recommend the remaining part for payment.
- If the work is defective to a degree that the objective of the structure will not be met, XEN will refrain from recommendation for reimbursement.
- If construction can be proven to be not defective, but not all procedures have been followed in a proper manner, the matter will be decided in a meeting of the XEN and the Project Director.

The transport infrastructures implemented by contractors recruited by LGED/XEN office in each project districts following routine LGED contracting procedures. The building of the paved BC road and associated drainage structures will be done by contractors, selected through the National Open Tender Method of procurement. In cases where no eligible contractor can be found to construct the road, a LCS may be formed instead. The main responsibility of project supervision will remain with the PMO. LGED XEN office is in charge of preparation of tender documents for Market Development (physical) and Transport Infrastructural works. After an independent evaluation of bidders and awarding of contracts, supervision staff is assigned to supervise the implementation of contractors. The staff in charge must be fully independent and be given adequate allowances to function independently. They should be provided with transport (motorbikes + fuel), a small digital camera, technical equipment, allowances to stay at sites, do routine supervision and make surprise visits. They should report their findings of contractors' performance and call on XEN office to intervene as needed according to prevailing procedures.

5.1.3 Operational manual for LCS

Introduction

Labour Contracting Society (LCS) is considered as a landmark in targeting poverty reduction by direct involvement of the poor in infrastructural activities. Since mid 1980s LCS has been engaged by LGED in different rural infrastructural works. Climate Resilience Community Development Project (PROVATi³) under its different components has been using LCS for many infrastructural activities. It is highly benefiting the poor as well as the development works with achieving quality results. This guideline has mainly been prepared for community

infrastructural activities under PROVATi³ following the Manual of 2004 produced by LGED, which agrees with the PPR of 2008 for poverty alleviation under Direct Procurement Method (3 of rule 76) to contract local communities.

Aims and Objectives of LCS

The ultimate aim of the LCS is to assist the poor to overcome the poverty through increased income. The objectives of introducing LCS in different infrastructural activities are:

- Creating scope of employment for the poor and thereby generating the income
- Ensuring direct involvement of local people in development activities and developing their sense of ownership
- Developing the skill and capacity of local poor through training for effective involvement in small scale infrastructural component of PROVATi³
- Eliminating intermediaries and increasing income of the poor laborers
- Widening the scope of employment for the poor indigent women
- Ensuring fair wages for the laborers
- Encouraging local community to work with gender equity
- Ensuring income for the poor during the slack period of employment
- Empowering the poor men and women and put them in a process to get involved in broader sector of work.

Scope of work by the LCS

- Rural Community Infrastructure - Community road, Development of Village markets, Village Protection works, Market Protection works, earth works/road alignment work.
- Rural Concrete Block Road
- Small dam for irrigation
- Earth Work (canal excavation and re-excavation)
- Road maintenance

Information Campaign

Before works start in the area of a new Upazila, workshops should be held including the UP Chairperson together with female members of the Union Parishads. In these workshops information shall be given on Women in Development issues in general and in relation with the LCS work as well as the implementation system of the component including procedures and functions of LCS. The concerned Upazila Engineer in case of communication infrastructure, or LCS Organizer, with assistance of the Sub-Assistant Engineer in case of community infrastructure, will facilitate the workshop. Based on the number of groups required, a number of villages in the vicinity of the work site are defined as the primary target for recruitment of LCS workers.

The concerned UE / Sub-Assistant Engineer and LCS Organizer, UPC shall pay joint visit to local Union Parishad offices for dissemination of information of the schemes and for requesting the cooperation of UP Chairman/members in recruiting members to the LCS.

The concerned UE / Sub-Assistant Engineer and LCS Organizer, UPC together with a UP member (preferable female) shall visit the selected villages and inform the villagers about the objectives and activities of PROVATi³ the LCS system and criteria for selection of LCS

members. In those informal gatherings they will also announce the date for next visits to the villages when potential groups have to come forward.

On the scheduled date the concerned UE / Sub-Assistant Engineer and LCS Organizer, UPC shall visit the villages together with a UP member to prepare a preliminary list of labourers. The UE or Sub-Assistant Engineer and LCS Organizer, UPC has to secure that all the selected labourers are physically capable of carrying out the proposed work. Door to door visits might be necessary to verify the group members' socio-economic status. The information shall be registered and filed with the District offices for later use.

Type of LCS and Financial limit

There are two types of LCSs. One for construction work and another for maintenance work. Both construction and maintenance type of work will be implemented by LCS following LGED current practice. The maximum financial limit for earthwork is Tk. 10.00 lac and that of for other construction work is Tk.35.00 lac and Tk. 10 lac for maintenance work. But the amount may be increased depending on the size and volume of work.

Preparation of estimate and approval

Based on the requirement, scheme estimate will be prepared jointly by concerned project staff and UE office, LGED following LGED current procedure and be forwarded to the Project Director, PROVATi³ through respective XEN for approval.

Selection Criteria

The aim is to form LCSs with at least 50% women. LCS members shall fulfill the following minimum criteria:

- Be unemployed, poor and living in the vicinity of the work site
- Source of income is mainly from their physical labor
- Do not possess more than 0.5 acre of land including their homesteads
- Be adult and fit for works.

Within the group of people meeting above criteria, preference will be given to:

- Have-nots and distressed women (widow, divorcee or destitute, or living with paralyzed /unemployed husband); and
- Unemployed, have-nots or distressed women-men living within 2km of the scheme areas.

Formation of LCS

A Labour Contracting Society (LCS) is a group of adult persons having homogeneity in respect of gender, physical strength, skill and socio-economic status, who come from a household of landless labourers or share croppers and who depend on manual labour as their main source of income. The number of members in an LCS will depend on nature of works to be carried out within a given time frame.

For selection of LCS, following steps may be followed:

(a) Wide publicity in the work areas shall have to be made for the selection of LCS. The field level officer of the LGED and project including the Chairman and or the members of the Union Council will be involved for this publicity to form LCS.

(b) The field level officer of the LGED / project shall select the requisite number of LCS labours on the basis of selection criteria. The villages adjacent to the scheme areas are to be identified for selection of labours with the purpose of including them as the LCS members. For this purpose, list of helpless/distressed persons living in the scheme areas shall have to be collected from the Union Parishad. The inventory or lists of the helpless/distressed persons of the scheme areas including the existing LCS members shall be prepared in accordance with ***Annex-1*** with the help of the field level officer of the project/Community Organizer of LGED.

(c) Field level officer of the LGED / project shall prepare one list on the basis of the inventory and the interviews taken and in accordance with the selection criteria will send the said list to the concerned selection Committee for finalization. But in any case, if LCS members are not found due to unknown reason/s within any project areas, labor can be recruited from any areas following selection criteria. A person convicted by any court or by any social arbitration will not be allowed to be a member of LCS.

(d) To finalize LCS group, a committee will be formed with the following members:

Upazila Engineer	: Conveyor
One representative of the Union Parishad (Male)	: Member
One representative of the Union Parisha (Female)	: Member
Sub-Assistant Engineer, LGED (concerned Upazila)	: Member
Field level officer of the project	: Member
LCS Organizer (Project)	: Member Secretary

(e) On finalizing the selection of LCS group, the Upazila Engineer will send a copy of the list along with the resolution of the meeting to the Executive Engineer, LGED for approval and will endorse a copy of it to the Chairman of the Union Parishad.

(f) After getting approval of the scheme including the fund from the Project Director, PROVATi³ the LCS will start work immediately. The Executive Engineer, LGED will forward that to the concerned Upazila Engineer (UE), LGED, Community Infrastructure Coordinator and SAE of the project for onward action.

(g) Female LCS Group can be formed well ahead of work start, while formation of male group may be take place closer to the starting date. Each group shall select one Chairperson and one Secretary.

(h) Each and every LCS group shall have one Chairperson and one Secretary who will be elected/ selected by the LCS members. The Chairperson and the Secretary shall have the ability to read and write and able to maintain the books of records of the LCS.

(i) An extensive Orientation on the Scheme will be initiated by Upazila Engineer (UE), LGED in co-ordination with UPC and concerned Sub-Assistant Engineer (SAE) of the project for LCS group on the scheme plan, its time period, budget and the rate of labor wages and other facilities along with the responsibilities of the LCS.

Size of LCS group

The number of LCS members forming one LCS group will be between 10 to 30 depending on the volume and type of works, the experience of the labourers, and supervision capacity of the UE's office/ UPU and timeframe for the works. Depending on works category, the group size may be as follows:

Hat/bazaar shed & Basic structure	: 20-30
Women shop's unit	: 10-20
Concrete block road	: 20-30
RCC road	: 20-30
Road maintenance	: 20-30
Earth work	: 20-30
Pipe culvert and small box culvert	: 10-15

Training to LCS

All LCS members will be trained on specific work following respective training module. The training will be for one or two day for each LCS. Project rules shall be followed for arranging training, maintaining norms and to provide facilities.

LCS Contract Award

The XEN will award a contract to the LCS without any tender but the estimated amount should be approved by the Project Director/concerned authority. No security money will be taken from LCS group. A contract agreement to undertake the work shall be signed by concerned XEN, LGED on behalf of the project and the Chairman and the Secretary of the LCS on behalf of the LCS group using the contract agreement on a non judicial stamp of Tk. 300.00 for the works as mentioned in the Scope of work above. After signing of the contract agreement (Annex – 3), XEN shall issue a letter to the LCS Group for work to proceed.

Maintenance of registers and records by LCS

The following registers and records shall be maintained by LCS group:

- Site Order Book
- Daily Attendance Register (Annex-9)
- LCS Accounts Book for recording bank transaction, payment distribution among LCS members and other expenditure

The Upazila Engineer / LCS Organizer will provide all books and registers to LCS

Procurement of materials by a LCS Group

LCS group will be responsible for procurement and payment of materials (Annex-16) and they will be assisted by the UE/CIC/SAE. The UE / CIC (DMU) being satisfied with laboratory test will approve the materials. Test fees shall be deducted from LCS bill during payment.

The group will be responsible for keeping records of materials and guarding at site. Accounts will be checked on a regular basis by LGED or project field level staff.

Disbursement of fund, maintain books of account and reporting

For all schemes to be implemented through LCS, the Project Director shall disburse funds to a joint account of concerned district XEN and DPC after having fund request (Annex – 17)

from them. The XEN/DPC shall jointly disburse funds to the LCS against each scheme as per approved allocation.

After the schemes have been formally approved and signed with LCS, the initial advances are to be made as per agreement. The XEN/DPC shall pay the LCS by account payee check with account number and name of the bank and never be paid in cash.

XEN/DPC should maintain books of accounts according to the project accounting system. Copy of the monthly cash /bank book sheets along with bank statement should be sent to the Project Director by the 7th of the following month. Necessary training will be arranged for the accountants on project book keeping. For audit purpose authenticate transactions, all bills, vouchers, files, estimates, agreements, measurement books (MBs) and all relevant documents, the DPC/CIC shall preserve. The UEs shall also preserve the photocopies of account and related documents available for any audits.

Roles and Responsibilities of the LCS

(a) Roles of LCS Members

- Maintaining the rules of the LCS group
- Accomplishing the assigned work in time and with quality
- Participating in training organized by PROVATi³ on the scheme

(b) Roles of the Chairperson

- Signing the contract agreement with the concerned XEN, jointly with the Secretary
- Giving physical labor with other laborers at similar wage
- Distributing the work to LCS members
- Resolving the problem, if any, arisen in work. Inform the scheme supervisor.

(c) Roles of the Secretary

- Signing the contract with the concerned XEN, jointly with Chairperson
- Accomplishing the responsibilities according to the contract
- Supplying labor (Men and Women) with similar wages
- Leading the LCS team to accomplish the scheme within the timeframe
- Coordinating the work among LCS members
- Keeping regular contact with UE, LGED and Project SAE, Upazila Project Coordinator and informing him/her about any problems
- Preparing documents for bill, making payment to LCS members and keeping all records/accounts of LCS.

Supply of tools and construction equipment

The XEN/DMU will provide the LCS with necessary construction equipment. LCS will pay hire charges accordingly. Hand tools except *durmus* shall be provided by the LCS or if that is not possible, be provided by the XEN/DMU. Costs related to the purchase of hand tools will be deducted from the running bills of the LCS. Project will provide *durmus* to LCS without any hire charge. After completion of work LCS shall return all *durmus* to UE.

Payment procedures for LCS

i) Earthwork

Payment shall be made in four instalments. The first instalment is 25% of the contract amount shall be paid as an advance (Annex-4). The 2nd instalment is 25% of the work amount and shall be paid after 40% physical work done (Annex-5). The 3rd instalment is 25%

of the work amount and shall be paid after 80% physical work done (Annex-5). The 4th installment is 25% of the work amount and shall be paid through a final bill after 100% completion of the work with satisfactory test results (Annex-5). It shall be checked and certified by the UE / CIC before having approval from the concerned XEN.

ii) Concrete Block Work, Pipe Casting and Culvert Installation

In case of concrete block work, pipe casting and culvert installation and other material procuring work payment shall be made in 3 (three) installments. The payment of 50% advance for 1st installment shall be made in such a way that fund is available for mobilization of groups, purchase and carrying materials to the site. The 2nd installment, which shall be 30% of the balance, shall be paid after 60% of the work is done with satisfactory test results. The remaining balance shall be paid through a final bill after 100% completion of work. It shall be checked and certified by the SAE-UMU, CIC-DMU & UE-LGED and will be paid after having approval from the concerned XEN.

Only VAT, IT, Test fees, hire charge of equipment and cost of salvage materials (if any) shall be deducted from the running and final bills as per Govt. prevailing rule. The UE/CIC shall ensure the supply of adequate fund requisition forms to the LCS. All advance payments shall be made available within seven days after presentation of the fund requisition form (Annex-4). The XEN/CIC shall acknowledge the receipt of the fund requisition form, one copy to be kept by the LCS group as a proof of submission. For that purpose the LCS shall prepare the documents in triplicate.

iii) Hat Bazar Basic Infrastructure, Sheds, and Women's Shop Unit

Payment of hat bazar basic infrastructure, shed and women market unit construction may be as that of pavement construction.

iv) Final Payments

The LCS group shall apply for the final bill to the XEN, LGED after completion of the work with satisfactory test results. Final measurement will be taken after having concurrence from Project Director. The SAEs (LGED & Project jointly) with the assistance of Work Assistant of PROVATi³ in presence of UE/CIC including Chairperson and Secretary of the concerned LCS shall take measurements, prepare and sign the final bill within 15 days from the date of receiving the application and sent the final bill along with measurement book, site order book, laboratory test report and the scheme completion certificate to the XEN for onward submission to the Project Director for final disbursement of fund for payment to the LCS. After deducting VAT, IT, Test fees and hire charge of equipment and cost of salvaged materials (if any) from the final bills, the balance shall have to be paid to the LCS.

v) Bank Account for LCS, Withdrawal of Money and Distribution

The LCS must have a bank account in the name of respective LCS group. The Chairman and the Secretary should jointly operate the LCS account. Name, location of the bank and the account number etc.(Annex – 14) must be submitted to XEN, LGED/ DMU with a copy to concerned UE before any advance is released. All payments should be through account payee check by mentioning account number.

The Community/LCS Organizer will guide the LCS group to open a bank account in the bank. At the time of opening a bank account the group will make a resolution in such a way that the Chairman and the Secretary of the group cannot draw money from the bank without request letter from the UE along with UPC accompanied with the cheque. The group will

inform the bank Manager about it and submit a copy of resolution to the bank at the time of account opening. The LCS group must inform the UE, LGED/ LCS Organizer and draw money in her /his presence from the bank for purchasing materials as well as for distributing money among themselves. LGED or project staff will assist the Chairman and the Secretary of the LCS to distribute the money according to their attendance of work.

Supervision

A regular supervision will be carried out by the concerned UE, LGED, UPC, SAE, PROVATi³. UE, LGED will take lead to employ officials at different sites. The XEN of the district should be well informed. The XEN and DPC should visit the sites before each bill patment.

UE, LGED and Project SAE will visit the site regularly and check the quality of work, and if found any deviation from the approved specifications of work, the UE, LGED and project SAE should mitigate and that will be brought to the notice of concerned XEN, LGED for decision. UE, LGED and project SAE including Work Assistant will regularly verify the attendance book of LCS and assess the progress of work. An overall proactive roles shall be played by the concerned supervisory staff towards the LCS and encourage them to complete the work in time with quality and quantity.

A) Supervision – Communication Infrastructure Component

i. The Upazila Engineer (UE)

The UE is responsible for the supervision of LCS work done on the communication infrastructure component of PROVATi³, quality control and measurement of all works etc. executed by the LCS (if any) and will keep written instructions in the Site Order Book. The UE will also be responsible for setting out/layout of all LCS works. The work will also be monitored by IMC as mentioned in the IMC guide line.

The UE shall supply a site order book to each LCS group, which shall be available at the work sites during construction. All site visits shall be recorded in the site order book. The UE, with the assistance of SAEs (LGED & Project), will be responsible for motivation, mobilization, and for resolving social problems with the assistance of UP Chairman & Member during execution of LCS schemes. They will encourage the groups for timely completion and ensure the timely payment and will monitor the attendance records through the Attendance Register.

ii. Technical Assistance given by the District LGED

The District LGED staff will cooperate closely with Upazila LGED staff with Assistant Engineer assistance, in supervision, quality control, measurement of works etc. to ensure implementation in line with LGED standards and guidelines for infrastructure works good governance and accountability.

The Assistant Engineer shall, at its own initiative or upon a request from the XEN or UE, visit and inspect at any time any works which is funded by IFAD under the component. Visits by the Assistant Engineer should be done jointly with the XEN/UE if possible. Based on the nature and importance of findings during a site visit, the Assistant Engineer shall either verbally or in writing request the XEN/UE on the finding, possible consequences and possible solutions. A visit by the Assistant Engineer does in no way remove the responsibility of the XEN/UE.

iii. Site Order Book, Attendance Register, Concrete Pour Form and Reinforcement Check Slip

LGED will issue the Site Order Book to the LCS groups, in which shall be written the name of the scheme, contract number, and contract value, date of issue of work order, schedule time for completion and planned date of completion. The book shall have numbered pages.

The LCS groups (if any) shall also be issued an Attendance Register by LGED with numbered pages and including the information as listed above. Supervisory staff shall write their findings and necessary instructions to the LCS in the site order book. For LCS contract bill (if any) submission, the Attendance Register and Site order book together with the Job Completion Certificate, laboratory test reports shall be enclosed.

Major casting needs prior approval from the XEN.

B) Supervision – Community Infrastructure Component:

i. The Sub-Assistant Engineer (SAE)

The SAE, UMU is responsible for the quality control and measurement of all works etc. executed by the LCS under the community infrastructure component of PROVATi³, and will keep written instructions in the Site Order Book. The SAE will also be responsible for setting out/layout of all LCS works. The work will also be monitored by IMC as mentioned in the IMC guide-line.

ii. The LCS Organizer (LO)

The LO is responsible for supervision of the LCSs under the community infrastructure component. In addition the LO shall supply a site order book to each LCS group, which shall be available at the work sites during construction. All site visits shall be recorded in the site order book. The LO, with the assistance of the SAE, will be responsible for motivation, mobilization, and for resolving social problems with the assistance of UP Chairman & Member during execution of LCS schemes. They will encourage the groups for timely completion and ensure the timely payment and will monitor the attendance records through the Attendance Register.

iii. Technical Assistance given by the District Management Unit (DMU)

The District PROVATi³ staff will cooperate closely with Upazila PROVATi³ staff with Assistant Engineer (DMU), in supervision, quality control, measurement of works etc. to ensure implementation in line with LGED standards and guidelines for infrastructure works good governance and accountability.

The Assistant Engineer (DMU) shall, at its own initiative or upon a request from the SAE or LO, visit and inspect at any time any works which is funded by IFAD under the component. Visits by the Assistant Engineer (DMU) should be done jointly with the SAE/LO. Based on the nature and importance of findings during a site visit, the Assistant Engineer (DMU) shall either verbally or in writing request the SAE/LO on the finding, possible consequences and possible solutions.

A visit by the Assistant Engineer (DMU) does in no way remove the responsibility of the SAE/LO.

iv) Site Order Book, Attendance Register, Concrete Pour Form and Reinforcement Check Slip

UE will issue the Site Order Book to the LCS groups, in which shall be written the name of the scheme, contract number, and contract value, date of issue of work order, schedule time for completion and planned date of completion. The book shall have numbered pages.

The LCS groups shall also be issued an Attendance Register by UMU with numbered pages and including the information as listed above. If any member of LCS falls sick, the LCS can recruit new member from the listed labor informing the concerned UE, LGED and project SAE. However it is expected that if any member from the sick household found fit and interested to work in LCS, he/she should be given priority to join LCS, no mater if his/her name was not listed in inventory. But as soon as he/she joins the LCS her/his name shall be included in the labor inventory.

Supervisory staff shall write their findings and necessary instructions to the LCS in the site order book. For LCS contract bill submission, the Attendance Register and Site order book together with the Job Completion Certificate, laboratory test reports shall be enclosed.

Sample specimen of Signboard

Prior to starting the work a signboard of a specific size (1100mm x 700mm) shall be fixed near to the working area with some specific information. A sample of a signboard is given below:

Name of the project:……..

Name of the Scheme:…….

Location of the scheme:……..

LCS contract Number: ……. Contract value (including Vat and IT): ……..

Name of the LCS Chairman:…….Secretary……..

Starting date of the scheme: ……..Completion date of the scheme:…….

Description of the scheme	Unit	Volume	Rate (Tk)	Total (Tk)

Deviation events for contract termination

a) Stopping of works by the LCS and/or without the approval of the Employer;

b) Instructions given by the Employer to the LCS for temporary suspension of works due to non-implementation of works in accordance with the Agreement and failure to comply with the issued instructions within 14 days;

c) Issuance of notice by the Employer on contract defaulting arising from the inability of the LCS to rectify any defects of the work and failure on the part of the LCS to correct the defects with the specified time limit at the cost of LCS account.

d) Delay in completion of works by the LCS without any valid ground

e) Non-payment of bills to the LCS without any valid ground within one month from the date of recommendation made by the concerned Upazila Engineer;

f) Payment of wages by the Chairperson and Secretary of the LCS to the female and male labours at different rates for the same work;

g) Formation of LCS group by violating the guidelines on LCS formation.

Time Extension & Liquidation Damage

If the contract work is not completed in time, left incomplete or the quality of the work is not satisfactory, LCS shall be obliged to refund the total payment made against the work. However, for valid reasons the working period can be extended (Annex-18) but not more than 40% of scheduled time or 3 months. Violation of due completion of work will be compensated by Liquidation Damage (Annex-19) as per PPR 2008.

List of Works to be carried out by LCS

a) Community Roads, Small Rural Markets

b) Village & Market Protection works and Land Raising

c) Road Maintenance

Quality Control

The Upazila level staffs are responsible for the quality control testing. They will be assisted by the district level project engineers in carrying out their duties. Testing shall be done according to the test frequency followed by LGED. The LCS shall inform the UE / SAE when the samples for tests are to be taken, and the UE / SAE shall immediately send the request to the XEN, LGED with a copy to QCE.

Additional tests can be requested at the discretion of the UE / SAE. Such tests shall not be paid by the LCS, unless unspecified materials or works are found. Samples of materials shall be clearly marked with the name of the LCS, the date and place for collection. Samples of materials collected by the LCS will not be accepted for testing. Sampling and Laboratory testing will be done jointly by the LGED and Sub-Assistant Engineer (UPU). A joint test report with comments shall be prepared and distributed to the QCE, XEN/CIC, UE/SAE, LCS. Certain tests that can be done in the field by the supervisor and which are outside the scheduled tests as per the Contract documents are not to be paid for by the Contractor or LCS.

Field testing equipment required for these tests and necessary training of the supervisor will be provided by the District laboratory. The UE/SAE will be required to visit the constructions sites at least once per week, and a representative, either an engineer or work assistant, from the LGED/project will have to be present at all crucial construction stages. These stages include:

- Checking of compaction of sub grade before installation of pavement of road
- Testing of quality of concrete blocks before installation of blocks
- Casting of reinforced cement concrete.

The SAE will be required to report to the CIC at 7 / 15 days interval on the progress and

quality (Annex -7) of all construction work under his supervision. Similarly CIC has to report to the DPC/QCE at 15 / 30 days interval on the progress and quality (Annex -8) of all construction work in his District. Laboratory Test Chart (Annex – 13) to be included with the payment certificate.

The Quality Control Engineer at the PMU is the ultimate responsible person for the quality of all work done by LCSs.

5.1.4 Conducting training of professional engineers on climate resilient infrastructure

The PMU will organize training of about 60 professional engineers who are currently employed predominantly in LGED and engaged in infrastructure development throughout the floodplains of Bangladesh and engineers of other institutions engaged in similar activities (for example, professional engineers serving Roads and Highways Department, Facilities Department of Ministry of Education, Public Works Department, etc.). The training will be conducted in two or three batches at the LGED headquarters in Dhaka.

The training will primarily be conducted by experts of BUET, having thorough knowledge on change in circumstances in the floodplains under climate change and potential changes in the infrastructure design criteria. The PMU will identify such experts/faculty members of BUET and make arrangement so that they may take structured sessions in specific date and time. The resource persons engaged in the training process will prepare session plans and course materials in the form of a manual, which will be finalized before the commencement of the first training. The PMU, under the leadership of the PD, will send out invitation letters to trainees, arrange logistics, distribute hand-outs and the said training manual, and arrange certificates for the trainees.

5.2. Component 2: Resilient communities through skills enhancement and livelihood mentoring

The outcome of this component is building resilience of communities through access to locally-relevant information and early warning on flood, economic self-reliance and policy support. It has four sub-components: (1) capacity building of LCS members and livelihood development; (2) promotion of appropriate vocational skills for employment generation; (3) development of accurate local flood warning and dissemination system and its seamless dissemination; and (4) practical policy actions.

5.2.1 Building capacity of LCS for economic and social empowerment

5.2.2 Vocational skills enhancement training of youth

Introduction: While the PDR provides the overall concept and implementation approach of this subcomponent, this document elaborates it further for better understanding. Here, the project personnel at all level (PMU, Regional, District and Upazila) will find guidance for smooth implementation of project activities. The document will provide a step-by-step sequencing of activities to be undertaken.

Innovation and strategy: Before going into detailing out of activities, it is important for respective project personnel to understand the innovation and the implementation strategy of this subcomponent. This project is not about simply providing vocational skills to target

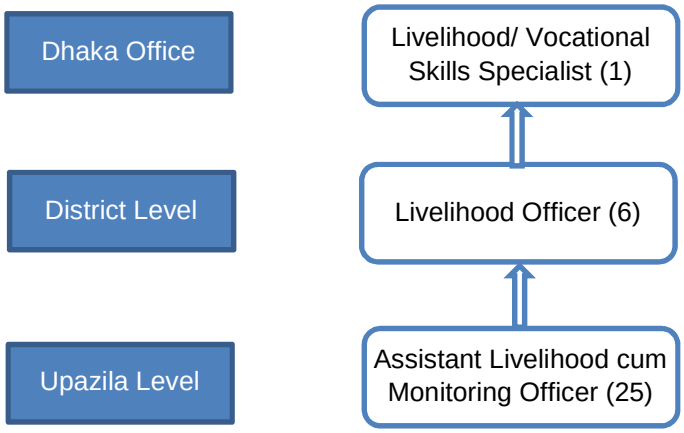
population but making the skills training effective and thereafter translated into job creation. Experience from other similar skills promotion projects and also market insights show that graduates from formal training institutions find difficulties to get absorbed in the job market. The main reason, as viewed by the employers, is the disconnect between classroom lecture and real-life problems. While there will be attempts to make the training modules practical and hands-on as much as possible, the real innovation of this project is to bridge the gap between class-room training and job market need - each graduate will be placed under an employer as intern/apprentice (if not direct job placement) for at least a month following the formal training. Regarding implementation, the project will have a two-pronged strategy for this subcomponent.

a. Engaging professional training providers: It will engage professional skills training providers to provide training to target population instead of the project being the provider. This strategy will allow the project to make the best use of resources in an effective and efficient manner.
b. Adopting a two-phase approach: Phase 1 (Inception Phase for 1-2 years) will offer few courses with highest demand in all project Upazila through limited number of batches (one batch per Upazila) while Phase 2 (Scale-up Phase for the rest of the period) will capitalize on the learnings of Phase 1 and expand thereafter.

Step-by-step sequencing: The overall project activities is better described by phases. Part of Phase 1 will be spent in initiation, staffing and kick-off of project activities. Phase 2 will eventually speed up project activities.

Phase 1 – Inception phase activities

Staffing: The very first activity of the project is to recruit appropriate staff for this subcomponent. This subcomponent will be headed by one Livelihoods/Vocational Skills Specialist based in Dhaka Office with frequent field visit. At the field level, each district will have one Livelihood Officer and each Upazila one Assistant Livelihood cum Monitoring Officer. The job description of each of these personnel[105] are affixed under Appendix I. Below diagram shows the line of reporting.



[105] These personnel will also perform jobs assigned under Subcomponent 2.1 and hence those should be added with respective job descriptions

Job market assessment: The PDR has identified prospective vocational skills within construction sector and beyond, which have high market demand. The PDR also identified a few potential training providers. However, market is ever changing and so is its demand. By the time the project starts its implementation activities, there will be nearly one-year time passed from the design mission. Therefore, the subcomponent will seek expert service from a competent market research firm (to be selected through competitive bidding process) to identify the most potential vocational skills to promote by the project. Terms of Reference (ToR)[106] for this study is affixed under Appendix II. Key outputs expected from the study are:

c. List, ranking and rationale of most potential vocational skills for the target population – in the context of Upazila, district, regional and national job market (and beyond)
d. Existing vocational skill based occupations segregated by gender, age
e. Mapping of existing, potential training providers with capacity, track record

Most potential skills identified: The study outputs will help the team identify most promising skills. As this Phase creates the provision to learn and improve, the team will pick four skills to promote. The team does not necessarily need to pick the top four skills from the study report as it may disallow the engagement of women. For example, if the study identifies top four skills which engage mainly men (such as construction related jobs), sticking to the ranking may miss out women's skill development. A good balance, therefore, would be to pick the top four skills which includes at least one having high women engagement or has potential to engage.

Potential training provider identified: The outputs of the study will also help the team receive a good understanding of the supply side of the vocational skills training provision. This is critical as the success of this subcomponent will largely depend on the right selection of training providers. It is important to note that these training providers (forthcoming sections will elaborate this further) will not only provide skills training but also select trainees and place them under internship/apprenticeship with support from the project team.

Role of the project team during job market assessment: Though the selected market research firm will conduct the study, the project team has important role to play during this time. Exploration of high-demand vocational skills in the job market and potential employers is a constant job for all livelihood team members to assist the training providers to perform their job. During the study, each team member has specific job to perform. Apart from regular job described in respective Job Description (JD), Livelihood/Vocational Skills Specialist, Livelihood Officers, Assistant Livelihood cum Monitoring Officers will accompany the consultant/firm during field investigation in respective areas. This will help build connection/network with potential employers as well as to get accustomed with consultative market research approach. This, in turn, will help them constantly explore the market opportunities beyond the study period. During this period, Assistant Livelihood cum Monitoring Officers at Upazila level will also make rapport and connections with local people and institutions such as Union Parishad, other government agencies, MMCs/trade associations, NGO/MFIs, local elite people, LCS groups etc. through regular visits and develop a good understanding of the local economy also.

Training participant selection criteria and benefits package: The PDR has already described the basic selection criteria for training participants. They will be unemployed young adults

[106] Livelihood Specialist will update it as per need before advertisement

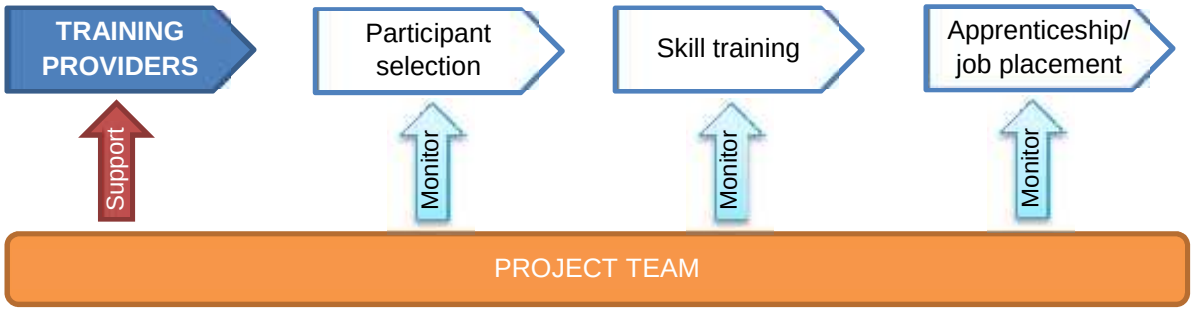
(age 18-35) from poor/near-poor families who are willing to a) invest time and efforts to complete the courses (persons who are already gainfully employed should be excluded as they may ask for income compensation); b) pay travel and other incidental expenses for attending the training courses; c) work as apprentice (paid/unpaid) after completion of training; and d) undertake profession related to their training. During the job market assessment, the project team will have sufficient exposure to the project locations and target people and therefore, can modify/extend the selection criteria if deemed appropriate. The project may pay full or partial cost of training for the participants. The poor participants such as LCS members or their family members will qualify for fully project-paid training courses. Besides, if the trainees are from the extremely poor families such as LCS members' families or families of similar income level, the project may consider payment of travel and accommodation expenses, in case of residential training courses. During the job market assessment period, the project team will gather sufficient information to develop the benefit packages appropriate for different target groups – whether to pay full or partial training fees, any allowance for travel and accommodation etc. Livelihood/Vocational Skills Training Specialist, with assistance from his/her team members, will develop a detail policy for participant selection and benefits package before rolling out the training activities.

Floating of RFPs/signing contracts/MoUs with training providers: Having the job market assessment conducted, and participants selection criteria and benefits package finalized, the project team will seek services from training providers. The training providers will provide services in three major areas – a) selection of participants as per criteria, b) conduction of skills training, and c) place under employer following the training as apprentice/intern or direct job placement while the project team will monitor training providers' performances under the areas mentioned above. However, the role of the project team will not be policing rather to support them where possible, such as finding appropriate participants and employers. To find the appropriate training provider/s, the project will float open tender for proposals. Request for Proposal (RFP) for this is affixed under Appendix III. As mentioned before, this Phase will act as a testing and learning phase and therefore, the project will implement in a smaller scale – four most potential skills, one batch for each skill in all 25 Upazila, around 25-30 participants per batch. Based on the proposals received and reviewed, the project will select the most competent and cost-efficient providers. However, training provider mapping in job market assessment report, by now, provides a good understanding about appropriate training providers. There might be some training providers, who may not participate in competitive bidding (such as government training institutions, or any other institutions) but project team may find them appropriate for certain skill/s training. In such cases, the project team, the Livelihood/Vocational Skills Training Specialist in particular, would negotiate with the provider/s to sign a Memorandum of Understanding (MoU) through which the project can receive required services. Provider/s selected through RFP will sign contract with the project and be responsible to deliver all three services i.e. a) selection of participants, b) conduction of training and c) apprenticeship/job placement while in case of MoUs, the project may need to negotiate with the provider whether all these three services will be provided. If not, the project team may need to do part of the jobs. For example, if the project signs MoU with a government training institute and the institute does not agree to do the participants selection, the project will do this job.

Multiple arrangements are possible to reach 3,000 participants– a) one organization is contracted based on its proposal score (capacity, strength, cost etc) to carry out the job for all four most potential skills in all 25 Upazilas; b) more than one organization are contracted, and skills and/or Upazilas are divided among them based on their proposal score; c) both

contract/s and MoU/s are signed to divide skills and/or Upazila based on proposal score and negotiation with the other party/s of MoU; d) One MoU covering all four skills in all 25 Upazilas based on negotiation; e) more than one MoU to split skills and/or Upazilas based on negotiation. The overall selection depends on the proposals received through RFP and also project's rationale and justification on the need of signing MoUs with specific institutions. Another contractual possibility exists. If such a skill is identified where there are no institutional training providers, the project may need to arrange the training and hire individuals as trainer. For example, to impart skills on pre-fabricated house, the project may need to bring trainer from Munshiganj (near Dhaka district). In this case, the trainer will provide only skill training and the project will have to select participants and also arrange apprenticeship/job placement (support from the trainer may be sought).

Performance measurement of providers and capturing lessons: Upon awarding contracts and/or signing MoUs with training providers, the project team's main role would be to monitor their performance at all three levels – a) participant selection, b) training conduction and c) apprenticeship/job placement. One key job of the project team during this period will be to capture learning - be it a success story or a failure case, to improve the implementation design, particularly for scale-up Phase. The Livelihood/Vocational Skills Specialist will prepare a monitoring template in this regard with the support from the M&E specialist and use the template to monitor the training provider's performance through Assistant Livelihood cum Monitoring Officers.



Cross-learning workshop: In the last quarter of Year 2, when the implementation of Phase 1 training activities will come to end, a cross-learning workshop will be arranged in one of the regional offices where the whole livelihood team will gather. Livelihood/Vocational Skills Specialist will moderate the two-day long workshop. All the participants will share their learning, success and failure stories from Phase 1. The moderator will facilitate the workshop in such a way so that the participants do not feel shy in sharing failure stories. It is to recall - failure is the pillar of success. The output of the workshop will be a set of guiding principles to improve the implementation model for Phase 2. Though the first cross-learning workshop is critical to improve the implementation design for Phase 2, such workshop will continue to take place at the end of 3rd, 4th and 5th year of the project.

Phase 1 evaluation study: In the same quarter, after the cross-learning workshop has been conducted and well-recorded, the project will seek external views about the performance of Phase 1 and its results and also to capture the job market changes since the job market assessment done in Year 1. Through a competitive bidding process, a market research firm

will be recruited. The firm will be provided with the cross-learning workshop report as an input to dig down further. Terms of Reference for this study is affixed under Appendix IV.

Scale-up Strategy for Phase 2: Towards end of Year 2, when both Phase 1 evaluation study report and cross-learning workshop report are in hand, the project team will start working on developing the scale-up strategy for Phase 2. While all depends on the outputs and results of Phase 1, probable areas for fine-tuning the model of Phase 1 – adjusting/improving participant selection criteria (more number of filters), adopting more effective training modules (duration, lecturing approach, connection with real-life problems etc.), selection of skills (some may drop and some new may add), improving selection of training providers (local presence versus outsiders, strength on specific skills etc), improving apprenticeship model (based on which worked and why, which did not work and why not) etc.

	Phase 1 – Inception Phase timeline								
	Year	**1**				**2**			
	Quarter	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**
	Project initiation and staffing								
	Job market assessment								
	Identification of most potential skills and training providers								
	Detail policy developed for participant selection and benefits package								
	Floating RFPs, signing contracts/MoUs with training providers								
	Performance measurement of training providers in selection of participants, conduction of training followed by apprenticeship/job placement								
	Cross-learning workshop								
	Phase 1 evaluation study								
	Scale-up strategy for Phase 2								

Phase 2 – Scale-up phase activities

Floating of RFPs/signing contracts/MoUs with training providers: Having the implementation strategy for scale-up phase developed, the project team will float open tender for proposals like it did in Phase 1. Request for Proposal (RFP) for this is affixed under Appendix V. The RFP affixed is prepared in a general fashion. Based on the learning from Phase 1, it may have several changes. For example, if it is found that training providers who have local presence are more effective in terms of reaching project objective (job creation), the RFP should add a clause that the training provider must have presence in the area where it is proposing for. Also, by now the project has identified the champions (best performers) who would obviously receive a better score in the evaluation process. Unlike in Phase 1, the project will announce all the high-demand vocational skills identified and recommended by the Evaluation Study of Phase 1. Based on the proposals received and reviewed, the team will select the most competent and cost-efficient providers. There could be contracts and/or MoUs to recruit training providers as like as in Phase 1. Evaluation of Phase 1 study should also indicate which kind of arrangement yielded better results, if that occurred. The project should act accordingly. For instance, if contracts worked better for certain types of skills, project should not go for MoUs for the same skills if qualified contractors are available.

Broadly, RFPs or MoUs at this stage must have clear reflection of the learning from Phase 1 to avoid the same challenges faced before.

Performance measurement of providers and capturing lessons: The Livelihood/Vocational Skills Specialist will update the monitoring template with the support from the M&E specialist based on the lessons gathered in Phase 1. Assistant Livelihood cum Monitoring Officers will use this template to monitor the training provider's performance on a regular basis.

Cross-learning workshop: As explained under Phase 1, these cross-learning workshops will be arranged towards the end of 3rd, 4th and 5th year of the project. Livelihood/Vocational Skills Specialist will moderate this two-day long workshop where all the members of livelihood team will gather to share their learning, success and failure stories. These cross-learning workshops will help the team constantly improve the performance of the project.

	Phase 2 – Scale-up Phase timeline												
	Year	**3**				**4**				**5**				**6**
	Quarter	**Q 1**	**Q 2**	**Q 3**	**Q 4**	**Q 1**	**Q 2**	**Q 3**	**Q 4**	**Q 1**	**Q 2**	**Q 3**	**Q 4**	
	Floating RFPs, signing contracts/MoUs with training providers													
	Performance measurement of training providers in selection of participants, conduction of training followed by apprenticeship/job placement													
	Cross-learning workshop													
	Reserved time to achieve target													

5.2.3 Development of accurate local flood warning and dissemination

Selection of Upazila for Community based early warning systems

Community based early warning system will be developed for the unions which are vulnerable to floods. The first step is to select the appropriate unions of the 3 districts that have been identified in the PDR. DDM has recently completed multi-hazard risk and vulnerability assessment under 2007 Cyclone Emergency Response and Recovery Project (ECRRP). Additionally, FFWC generates flood maps during the monsoon period (see Figure 2). The risk assessment data and the flood maps of recent and severe flooding years can be used to identify the potential Unions under this component. Therefore, the technical partner of DDM in this project can select the flood vulnerable Unions under the selected Upazilas for implementation of the system.

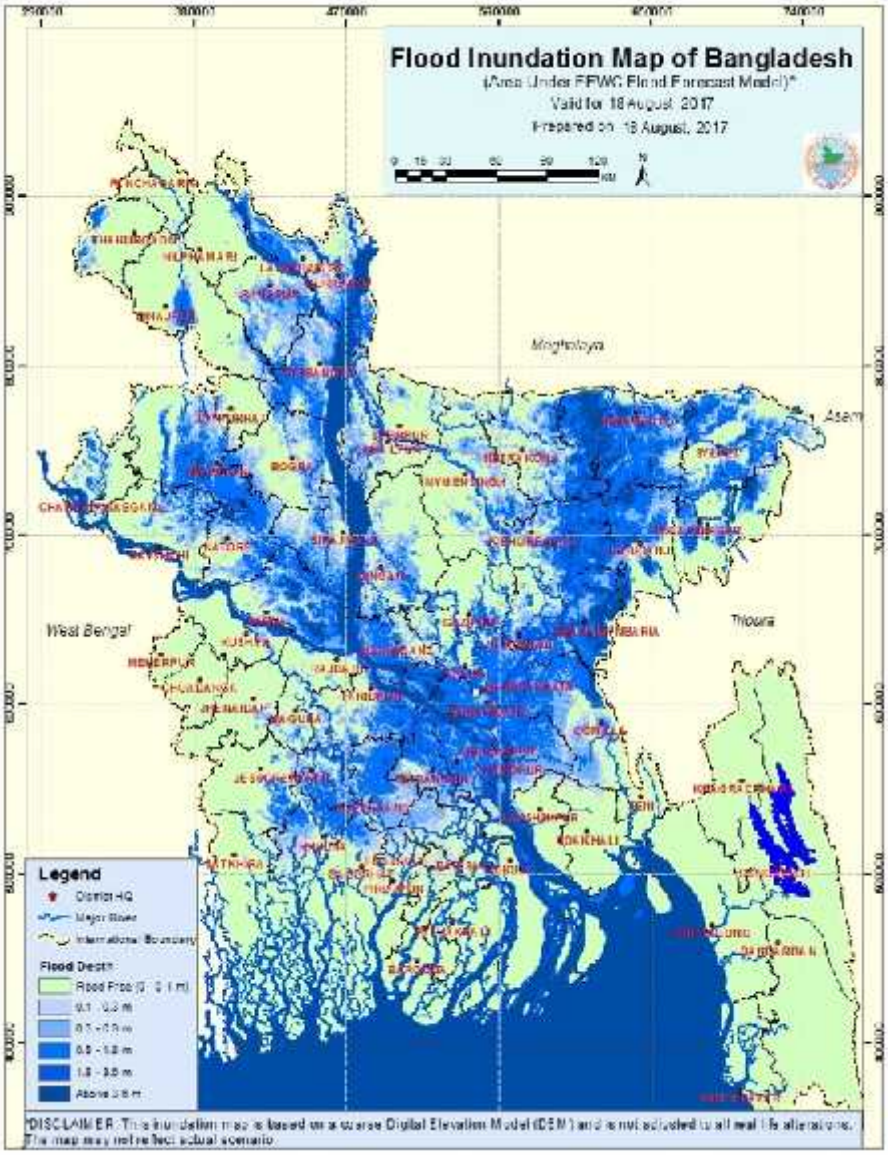


Figure 11 Flood inundation map of Bangladesh on 18 August 2017. Water levels in Teesta, Dharla and Brahmaputra rive have crossed the record high water levels during the 2018 floods (Source: FFFWC, BWDB).

Technical Approach for developing localized flood early warning systems

Hydrological Data Collection**.** Hydrological data will be collected from BWDB which will provide an initial assessment of Hydrological condition and flooding pattern of the project area. Several localized manual staff gauges will be installed for water level monitoring. Ground based GPS survey will be conducted to add referencing to the localized gauges. Training will be provided to the community gauge readers for managing staff gauges and data collection. Daily water level data will be collected using mobile and web based services which will assists to generate time series hydrographs.

Develop Localized forecast & Warning. Consistency of data will be checked and a correlation between local and mainstream gauges will be developed. Concrete inundation monitoring gauges will be installed. Survey will be conducted to collect geospatial terrain

data. Open source GIS based tool will be applied for developing for flood inundation mapping.

Communication & Dissemination. Web-based database for the Disaster Management Committees will be developed. Voice message broadcasting system for DMIC will be developed for disseminating community based flood early warnings. Capacity of the existing IVR will be enhanced. DMIC Data Centre will be renovated, enhanced by providing additional computing resources. A dissemination studio will be established.

Monitoring & Evaluation. Flood inundation will be monitored to develop matrices for warning based preparedness action. Software will be developed for linking existing risk data with early warning. Performance of early warning and community response will be evaluated using ICT tools. A rapid assessment tool will be developed to create linkage with DMC database.

Implementation Plan

Major activities of this sub-component 2.3 are - i) Capacity Buildings of Disaster Management Professionals, ii) Enhancing Technical Capacities with Computing Resources and Renovation of Disaster Management Information Centre, iii) Data Collection for Flood Monitoring & Forecasting, iv) Determine Baseline & Enhance Local Risk Knowledge, v) Develop new tools for tailor made forecasts, warning information and assessment, vi) Communication and Dissemination Early Warning, vii) Local Level Capacity Building & Community Feedback on EW, and viii) Meetings and Workshops. Under each of the activity, there will be a number of sub-activities which are listed in detail in Appendix 1.

This project will be overseen by DDM who will be responsible for the overall management and coordination of the project, integrate the system within DMIC and adopt it in the core functionalities. The technical partner would directly provide technical support to DDM and create a linkage with FFWC for generation and dissemination of localized flood early warning. Details of the annual implementation plan of this sub-component 2.3 has been provided in Appendix 2.

DDM would also take part in monitoring and evaluation in the field and assign staff on demand for capacity building activities. At the local level, the Upazila Disaster Management committee (UzDMC), Union Disaster Management Committee (UDMC), Union Digital Center (UDC) entrepreneurs. Detailed monitoring and evaluation methods are presented in Appendix 3.

Capacity building training will be provided to the professionals of Disaster Management Department for enhancing their technical capacities of community based early warning dissemination systems and flood risks management. Disaster Management Information Center of DDM will be renovated. Technology developed under the project will be transferred and hosted them at the DMICs. The capacity of the DDM/DMIC officials will be enhanced as well as necessary computing and hardware resources support should be provided. Training will be provided for data collection for flood Monitoring & Forecasting. Details of various types of capacity building training of this project has been listed in Appendix 4.

Terms of Reference of the Staffs of Sub-Component is presented in Appendix 5.

5.3. Project management

6. PLANNING, MONITORING AND EVALUATION

6.1. Annual Planning Process

The PMU will carry out annual planning exercises under the leadership of the PD. The exercise will be in the form of annually organized workshops held at district level and culminated in the LGED headquarters. Such workshops will be bottom-up and inclusive, involving representations from Upazila, District, and regional offices as well as the PMU personnel, key partners (such as DDM, BUET, WFP, private sector/NGOs involved as service providers), Key GOB agencies (such as ERD), other LGED project personnel, etc. These planning exercises will take note of success stories, analyze pitfalls (if any), and discuss way forward, in addition to set annual goals as per indicators set out in the log-frame. These events will provide an opportunity for project staff, key stakeholders and selected project beneficiaries to review project performance and to recommend improvements for incorporation during future implementation of the project.

6.2 Project Orientation and Review

6.2.1 Sharing of PDR and technical documents with project staff members. It is critically important that all project staff members, especially specialists and officers are given the PDR and technical papers (working papers) at the very beginning of the project. It is be responsibility of the Project Director to ensure that these documents are widely shared and senior officials familiarize them thoroughly with these documents. PIM should also be clearly understood by senior staff members.

6.2.2 Orientation meetings for all PROVATi^3 project staff. All PROVATi^3 project staff members will receive a two-day orientation training at the start of the project. The objective of the training will be to development a clear understanding of project objectives, project components, implementation methodologies of each component/activity, financial arrangements, monitoring and evaluation requirements, LCS activities etc. Special emphasis will be given on Component 2, that is, LCS empowerment and vocational training, two of the most innovative activities of this project. This orientation will also discuss about IFAD procedures and requirements.

6.2.3 District orientation meetings. The project will organize six meetings, one in each district, with XEN and LGED district officials, all Upazila engineers in attendance. The objective is also to explain the objectives, activities, process of implementation, finances, M&E and KM of the project. It will also be important to explain how the project activities match with LGED's institutional set up as well as additional staff members of the project. Besides, Upazila Engineers must have the understanding of engineering detailed features of all infrastructures of the project.

6.2.4 District monthly review meetings: Regular review meetings will be held over the project period to discuss progress, resolve operational problems and ensure quality and timeliness of project implementation. All district and Upazila PROVATi^3 staff members, XEN and Upazila engineers will attend these meetings. It will be an important supervision and monitoring tool for the project.

6.3 Capacity Building Initiatives

6.3.1 Staff capacity building. For capacity building of project staff several training courses on LCS management, MMC management, LCS empowerment and selection of trainees for vocational training program, accounting and procurement have been planned. All such hands-on training will help project staff members to internalize project activities and procedure and help maintain quality and timely completion of project activities. There will be training on TOMPRO accounting and project management software.

6.3.2 LCS group formation and training. The staff development training will include detail discussion on formation of LCS groups, selection criteria, training on construction and social issues, use of protective gears and constructions tools, LCS construction work management including payment system, supervision and monitoring works of KNG-MFIs to be recruited for LCS empowerment etc. The main participants for this training will LCS cum Livelihoods officers who will be working at the Upazilas.

6.3.3 Training on vocational training courses. The LCS cum livelihoods officers will also receive training on management of component 2.2. The focus will be selection of trainees, selection process, selection of trades, quality control of vocational training courses, monitoring of courses, establishing linkage with employers etc.

Poverty and gender issues. All staff of the project will undergo a training on poverty and issues in PY1 and a follow-up training to ensure appropriate project implementation. The training will focus on why gender awareness makes a difference in project execution, how gender mainstreaming makes development projects more successful and what tools are available for use in making gender mainstreaming work. The PD will arrange for the workshop in collaboration with IFAD.

6.4 Annual Work Plan and Budget (AWPB)

The AWPB will represent the key planning document for the Project. It will serve as the instrument for identifying and integrating management priorities for implementation, forecasting procurement requirements and facilitate the mobilization of staff and resources when needed. It will act as the management tool to control costs and assess achievements. A draft AWPB will be prepared for discussion using the schedules and format recommended by IFAD. PROVATI3 will integrate government and IFAD planning processes. Annual planning for projects implemented by LGED is based on the Governments process for its overall Annual Development Plan. In the last quarter of the financial year (March to June) the project will draw up an Annual Work Plan (AWP). This plan will outline the activities and budget for each project year as set out in the Development Project Proforma (the Government's Project Document) but may also include works carried over from the previous AWP. Steps are as follow:

(c) A draft AWPB will be prepared for discussion using the schedules and format recommended by IFAD;

(d) Although annual in scope, the AWPB will be disaggregated into quarterly segments for monitoring purposes;

(e) The AWPB will be submitted to IFAD for its no-objection no later than 60 days before the beginning of the relevant Project Year;

(f) This AWPB will be incorporated into the government's overall revised ADP.

(g) If required, the PMU may propose adjustments in the AWPB during the relevant Project Year, which will become effective upon approval by and IFAD.

6.5. Monitoring, Evaluation Studies and Knowledge Management

ME/MIS: PROVATi³ will have a comprehensive M&E system to generate management information and provide LGED and IFAD with evidence of results and impact against log-frame indicators and IFAD's Results and Impact Management System (RIMS). The PMU will include a Monitoring Evaluation and Knowledge Management (MEK) specialist based at PMU. He/she will be responsible for baseline and RIMS surveys, annual outcome surveys and collection of regular monitoring data, as well as project reporting, MIS and knowledge management.

M&E Specialist will review the Project Log-frame and develop a plan for monitoring each of the key indicators listed in the Log-frame. An indicative list to guide project staff on the data to be collected for each log-frame indicator, method of collection, frequency and responsibility for collection will be developed and given in the PIM (final design mission). The Monitoring and Evaluation tasks will involve the following elements:

(a) **Activity monitoring**: Project implementation offices (Upazila, District and Region) will generate monthly reports on activities and outputs, which will be collated by the PMU in a consolidated report. Reporting will show progress relative to annual and project targets disaggregated by gender, where appropriate. With over three-quarters of project expenditure on civil works, monitoring of construction contracts will be a key element of such activity monitoring and CCRIP/LGED has a well-established process for such monitoring involving a series of contract milestones. This will need to cover contracts implemented by Labour Contracting Societies (LCS) as well as by contractors.

(b) **Process monitoring:** The project will monitor the functioning of institutions established and supported by the project. This includes Labour Contracting Societies (LCS), Marketing Management Committees (MMCs), selected NGO-MFIs and vocational training providers. Each of these has their own role and structure and need different monitoring approach. However, there are some common themes such as targeting of membership, selection of leaders, decision process and financial management. The CCRIP project has developed manuals for LCS management and MMC, which may be further revised and finally used by PROVATi^3.

(c) Outcome monitoring will gather information on outcome and objective level log-frame indicators. A series short studies will be done to see impacts on LCS, impact of road construction on traffic, impact of market development on livelihoods, management of MMCs and flood shelters etc., LCS empowerment, impact of vocational training etc. In particular outcome monitoring will aim to collect evidence of impacts of improvements in physical infrastructure to changes in farm production, expansion of business, availability of inputs, new investments in the markets, wage employment, etc., resulting in increased sales, which in turn will result in increased income and improved food security, reduction in vulnerability, leading finally to reduced poverty.

(d) Impact monitoring will gather information on IFAD's anchor indicators regarding asset ownership and reduction in child malnutrition and other 2nd level indicators given in IFAD's Results & Impact Management System. RIMS data will be gathered from a sample of the population of the project area as a whole, and so include households

who are only direct beneficiaries of the project. The scheduled RIMS surveys will be complemented with indicators from the Women's Empowerment in Agriculture Index following the same setting and timeframe. Additional indicators will relate the anchor indicators to the results of project interventions and thus enable a degree of attribution of change. The project will report on RIMS Level 1 indicators of project outputs and activities on an annual basis. After the MTR, ratings for the effectiveness and sustainability of each component will be included. These ratings will be justified by evidence from indicators of project outcomes. The impact monitoring will include the following studies:

- ***Baseline Survey (BLS)***: The MEK will arrange for outsourcing the Baseline Survey as soon as possible after the initiation of the Project to a competent agency experienced in conducting household surveys. This survey will cover selected project unions. The indicators to be monitored will be selected from the project log-frame and will include RIMS indicators as well as other indicators specified in the log-frame. The methodology for this will be agreed with IFAD.
- ***Participatory beneficiary assessments*** will be undertaken periodically by contracted NGOs/service providers to obtain the feedback of beneficiaries and record any changes whether positive or negative, in the lives of the beneficiaries due to project interventions. The assessment will include the members of the LCS, trainees of vocational training programs, MMCs and traders, and poor households impacted by the community and communication infrastructure. A structured report will be prepared to record the findings. The MEK will supervise the activities and keep archives of the outputs for report generation and sharing towards knowledge management & outreach.
- ***Special studies*** will be undertaken from time to time to examine certain aspects of project implementation. Again, the MEK will take lead, engage field level personnel for data collection, analyze data and compile reports.
- ***Mid-term evaluation survey*** will be conducted in the fourth year of the project. The survey report will provide the first detailed opportunity to check the project achievements towards its goal and objectives and examines the need for any amendments to the implementation arrangements, expected outputs or outcomes. The MEK, in consultation with the PD and the TL, will engage a Team of reviewers and take part in the survey and subsequent reporting.
- At the end of the project a ***completion evaluation*** will be conducted, as an input into the ***Project Completion Report (PCR)*** through a formal survey undertaken by a neutral agency (with no previous involvement in project implementation) to examine the overall progress and direction of the project.
- At the start of the project, the PMU will create geo-reference – and validate- the locations of all the markets, cyclone shelters and roads in a web based application like Google earth. In this map, it will clarify the type of market that has been upgraded.

Link to KM: The project will plan early on how to use ME data for knowledge generation and sharing. Data is not simply generated for compliance, but should be used to improve implementation, as well as assess implementation and design features and recommend improvements/adjustment, where need arises.

Under sub-component 2.3, DDM will monitor progress of the project activities and report to IFAD through PMU/LGED. This activity has the most important findings to be shared with wider stakeholders about the effectiveness of local flood information system.

IWFM will produce research reports and disseminate through technical seminars to disseminate its research results to wider audiences.

Multi-Dimensional Poverty Assessment Tool (MPAT)

6.6 Data for evidence based policy recommendations

The project will use its data to generate recommendations on how to further improve implementation of rural development projects in Bangladesh. This is partly explained under the treatment measurements suggested for sub-component 2.1, which will help proving which modalities of LCS will work under what conditions. Similar options will be explored during implementation. The appraisal mission shall – in coordination with LGED ME experts – plan the design of ME/MIS and surveys to allow appropriate evidence generation through systematic data collection. The project might not be able to measure attribution, but at least contribution/correlations through quantitative analysis, and or systematic reviews and analytical narratives (qualitative).

Partnership: In addition, a partnership with leading research institutions is to be explored to facilitate data analysis and assessment in due time.

Some M&E activities would be contracted to external agencies. This includes the monitoring of the RIMS anchor indicators which would be contracted to an agency experienced in collection of anthropometric data. MTR and final impact studies will be outsourced. Short studies and case studies will be conducted by the M&E section.

6.7 Reporting

The PMU will design a reporting system to track the project physical, financial performance and emerging impact:

- A consolidated Physical and Financial **Monthly Progress Report (MPR)** will be prepared by the PMU which will consolidate all the physical progress made on each of the five project components. This report will also report on overall expenditures on the Project under each component.
- **A Quarterly Progress Reports (QPR)** will be prepared, which consolidates the monthly reports of the past three months adding any additional financial, procurement, training and TA and physical progress on all five project components.
- An Annual Project Progress Report (APR) will be prepared within one month of the end of the Project Year to cover the entire financial year. These reports will be presented to PSC and IFAD.
- The PMU will develop specific reporting formats for each component of the project and train project staff in their use and consolidation.
- The Upazila and Regional offices will regularly identify success stories or failures and report these for inclusion in the reports.

7. FINANCIAL MANAGEMENT

The government of Bangladesh, represented by the Economic Relations Division (ERD) of the Ministry of Finance, is the Borrower of the loan and recipient of the grant. The Local Government Engineering Department (LGED) of the Ministry of Local Government, Rural Development & Cooperative is the Implementing Agency (IA), under which a PMU will be established for the day-to-day financial management activities of the project, including accounting, reporting, and coordinating audit processes. The project financial arrangements will be consistent with ongoing projects implemented by LGED (HILIP-CALIP and CCRIP,).

PROVATI[3] is a project integrated in the government administration of Bangladesh and designed to promote the use of existing government structures at the central, district, and sub-district (Upazila) levels. The project is structured with one PMU at the central level, with overall Financial Management responsibility, including the consolidation of the financial information produced by the Project Implementation Units (PIUs) located at LGED´s offices in the districts of implementation. Is expected that the PIUs as well as the PMU, use an automated accounting system to implement the project.

There will be three Regional Offices (RO) located in the LGED offices in the districts of Rangpur, Kurigram and Jamalpur. In terms of FM, the RO won't be considered a cost centre, but it will serve as a link to provide FM training to the different PIUs of the districts. The role of the Upazila office will be limited to prepare and submit accurate supporting documentation for the approval and consecutive disbursement of PIUs.

7.1. Book of Accounts

The accounting policies and procedures of the project will be governed by International Accounting Standards and the existing Government (GoB) system. The PMU will maintain an adequate FM system across all levels of implementation, to provide accurate and timely financial information to IFAD and to the GoB.

PROVATi[3] will procure and adopt an accounting system package conforming international standards during start-up. The accounting software will also be used by the PIUs of the districts. The project will guarantee the availability of resources to conduct periodic training on the use of the accounting software to strengthen the capacity at the district level.

As there has been positive results from the use on an accounting software by LGED which has been recalibrated to meet the accounting and reporting requirement for both government and IFAD, LGED should ensure consistency in using the same software for PROVATI which would provide LGED and the Project better value for money. This ensure the initial investment of LGED in acquiring and reconfiguration of the accounting software is not lost.

7.2. Designated Account/Project Account

LGED will open a designated account (DA), to be initiated in the central bank of Bangladesh under SAFE arrangements.

7.3. Funds Flow/Disbursement

Funds for PROVATi[3] will flow to a Designated Account (DA). The DA will be operated by the PMU in accordance with imprest fund arrangements. The PMU will maintain a project account in local currency to implement project activities and to transfer funds to PIUs and implementing partners. The PIUs and implementing partners will also maintain operational accounts in local currency in commercial banks to receive funds from the DA in accordance with the AWPB, periodic fund requirements and MOUs. Disbursement procedures and other

instructions will be detailed in the Letter to the Borrower (LTB), which will be issued when the financing becomes effective.

The PMU will be responsible for transferring project funds to the operating accounts at PIUs on the basis of three month estimated expenditure and approved work plans. These transfers will be treated as advances at the PMU, with monthly reporting on the use of funds. These accounts will appear as unreconciled items on the financial statements until they have been accounted for and liquidated.

7.4. Statement of Expenditure (SOE)

7.5. Disbursement Procedures

A start-up advance may be provided once the financing agreement has become effective, to facilitate implementation readiness activity, pending satisfaction of the disbursement conditions specified in the Financing Agreement. The ceiling of the start-up will be agreed upon at negotiations based on a realistic plan.

Transfers to entities implementing PROVATi^3 activities, will be governed by legal agreements (MoUs or contracts). The Government counterpart funds will be provided in line with the GOB MOF and Treasury existing financial regulations and procedures. Any contribution received for the project from other donors will be under a Cooperating Inter-Agency Agreement with IFAD. Transfers to entities will be treated as advances, with monthly reporting on the use of funds, and these accounts will appear as unreconciled items on the financial statements until they have been accounted for and liquidated.

The disbursement of the grant from IFAD financing will flow to a second DA in the Central Bank of Bangladesh under SAFE arrangements. The DA will be operated by the PMU, and transfers through a project account in local currency will be made to implementing partners, such as the World Food Programme (WFP) for the maps and pilot activities, BUET for climate change risks assessment and DDM for community based flood preparedness system and other emerging technical studies and activities.

7.6. Withdrawal Application

7.7. Staffing

The PMU will be responsible for implementing all operational fiduciary functions across the project. The Finance Unit at the PMU will be composed of six full-time staff: two funded by GoB funds (one Accountant and one Accounting Assistant) and three funded by IFAD's loan (one Finance Manager and two Finance Assistants).

Every Project Implementation Unit (PIU) located at the district level will be in charge of the fiduciary functions within its jurisdiction, and will be composed at least of two accountants: one funded by GoB funds and one funded by IFAD's loan. An additional Finance Assistant is expected to be funded by IFAD's loan in the case of larger districts.

The duties, responsibilities, lines of supervision, and limits of authority of finance staff will be defined in their ToRs and will be documented in the PROVATi^3 finance manual.

7.8. Assets Management

The PU will procure project fixed assets, maintain register books, clearly identify procured goods with unique markings, legibly imprinted on the good itself, maintain such assets including occasional repairing and maintenance, as needed. A register book will have to be maintained in order to keep memory of incidents on each of the fixed assets so that subsequent management becomes easy. The PMU, with the help of Upazila, District and Regional Offices, will manage fixed assets.

7.9. Reporting

The PMU will be responsible for consolidating the financial information from the districts to prepare semi-annual and annual (audited) Financial Reports (FRs) for all relevant parties. The FRs will be consistent with International Accounting Standards and the project's Finance Manual. Semi-annual Financial Reports with accurate and updated financial information will be prepared by PMU for submission to IFAD within 45 days from the end of each semester.

Financial Reports, prepared by component and by category of expenditure, will be produced directly from the accounting system of the project, and not from any other stand-alone manual or electronic system. The PMU will need to have the capacity to record GoB contributions, as well as in-kind contributions of private companies and beneficiaries, if necessary.

7.10. Internal Control

PROVATi^3 will be required to establish adequate internal controls and procedures in the PIM and in the Financial Manual to guarantee: (a) operations are being conducted effectively and efficiently; (b) financial and operational reporting is reliable; (c) applicable laws and regulations are being complied with, and (d) assets and records are safeguarded.

At a minimum, the procedures should include the following measures: (a) Reliable personnel with clear responsibilities and adequate segregation of duties; (b) Adequate financial records management system with complete audit trail; (c) Physical safeguard, including use of safe, locks, guards, limited access, and access by authorized persons to provide security for project assets; (d) Independent check, with procedures made subject to random independent reviews.

7.11. Internal Audit

Internal auditing will be carried out by the Internal Audit Unit of LGED in accordance with an auditing plan and reports to be submitted to the relevant parties. Internal auditing will be carried out by the Internal Audit Unit of LGED in accordance with a specific auditing plan and reports to be submitted to the relevant parties. Going beyond the financial aspects and transactions, the internal audit will be expected to be carried out under the following key internal audit functions: (i) ascertaining whether the system of internal checks and controls operating within the organization for preventing errors and fraud is effective in design as well as in operation; (ii) ascertaining reliability of accounting and other records as well as seeing that accounting methods provide the information necessary for preparation of correct financial statements; (iii) ascertaining the extent to which the project entity's assets are safeguarded from any unauthorized use or losses; (iv) ascertaining whether administrative and financial regulations of the government and IFAD's requirements are followed; and (v) ascertaining the effectiveness of the system of internal control adopted in preventing, as well as detecting waste, idle capacity and extravagance.

7.12. External Audit

The Foreign Aided Projects Audit Directorate (FAPAD) of the Office of the Comptroller & Auditor General (OC&CAG) of Bangladesh will conduct an audit of the project's annual financial statements within six months of the end of the fiscal year. The audit will be carried out on a yearly basis and in compliance with International Standards on Auditing and the IFAD Guidelines on Project Audits. According to the performance of the project and in addition to the FAPAD audit, it may be possible that IFAD requests the project to be audited by an external audit firm.

External auditors will be required to express three audit opinions on the project financial statements, operation of the designated account and on the certified Statements of Expenditure (SOEs). In addition, a detailed management letter containing the assessment of the internal controls, audit findings, update on previous audit observations, compliance with IFAD Financing Agreement covenants and suggestions for improvement will be prepared and submitted together with the audit report.

8. PROCUREMENT

Procurement of goods, works and services financed from resources provided or administered by IFAD will be undertaken in accordance with IFAD's Procurement Guidelines and Handbook (dated September 2010, or as amended from time to time). In all cases whereby procurement is packaged along with goods, works and services financed by ADB, the procurement would be undertaken in conformity with ADB's Procurement Guidelines (2010, as amended from time to time) and ADB's Guidelines on the Use of Consultants (2010, as amended from time to time).

International Competitive Bidding (ICB) shall be undertaken in accordance with the rules and regulation for ICB as established by the World Bank in line with the provisions of the IFAD Procurement Guidelines. Goods and Civil works and goods procured using NCB will follow the Public Procurement Act, 2006 and Public Procurement Rules, 2008 of the Government of Bangladesh. All procurement to be financed by IFAD proceeds require the details of the procurement, types of procurement methods, the need for pre or post-qualification, estimated cost, prior or post review requirements to be respectively included in the Procurement Plan to be submitted by the Implementing Agencies. IFAD's approval of the procurement plan is mandatory and any changes or modifications must be communicated and approved by IFAD.

National Competitive Bidding. The procedures to be followed for national competitive bidding shall be those set forth for the National Open Tendering Method in the Government's *Public Procurement Rules, 2008* (as updated and issued pursuant to the Bangladesh *Public Procurement Act, 2006*) with the clarifications and modifications described in the following paragraphs required for compliance with the provisions of the Procurement Guidelines.

- Anti-Corruption. Definitions of corrupt, fraudulent, collusive and coercive practices shall reflect the latest IFAD Board-approved Anti-Corruption Policy definitions of these terms and related additional provisions (such as conflict of interest, etc.). IFAD shall jointly apply and extend debarment and sanctions

- Location of Bid Submission**. S**ubmission of bids to 'primary' and 'secondary' locations, or 'multiple droppings' of bids, shall not be required or allowed. Advertisements and bidding documents shall specify only one location for delivery of bids.
- Rejection of All Bids and Rebidding. Bids shall not be rejected and new bids solicited without IFAD's prior concurrence.
- Member Country Restrictions. No restriction applicable to IFAD resources, unless procurement is packaged along with goods, works and services financed by ADB, in which case the procurement would be undertaken in conformity with ADB's Procurement Guidelines and ADB's Guidelines on the Use of Consultants
- Lottery. A lottery system shall not be used to determine a successful bidder, including for the purpose of resolving deadlocks.
- Qualification Requirements. A successful bidder must be determined by an assessment process that shall include the application of qualification requirements to all bids or the lost responsive bidder.

8.1. Staffing and Capacity Development

As implementing agency for CRCD, LGED has considerable expertise and experience in this area. However, to further strengthen procurement processes, it is proposed that a Procurement Specialist supports the project with a number of short inputs, especially at the start-up phase. Terms of Reference of the IFAD Procurement Specialist is provided below.

8.2. Procurement Methods

The application of different methods of procurement for goods, works and services will be in accordance with the methods of procurement for goods, works and services (non-consulting) as established and approved in the Procurement Plan.

IFAD will undertake to review the provisions for the procurement of goods, works and services to ensure that the procurement process is carried out in conformity with its Procurement Guidelines.

For the purposes of IFAD's Procurement Guidelines, the following procurement decisions shall be subject to prior review by the IFAD for the award of any contract for goods, equipment, materials, works, consultancy and services under the Project:
Procurement of goods, materials and works

i. Prequalification documents and shortlist when prequalification is undertaken;
ii. Bid Documents for goods, materials and works;
iii. Evaluation Report and Recommendation for Award; and
iv. Contract and amendments.

Each AWPB must contain a Procurement Plan, which shall identify procedures which must be implemented by the Borrower/Recipient in order to ensure consistency with the IFAD Project Procurement Guidelines.

Any amendments to the Procurement Plan shall be subject to the Fund's 'no objection'.

8.3. Procurement of service from LCS

Civil works undertaken by the Labour Contracting Societies (LCS) which would be formed through a defined selection criteria, contracted directly by the CCRIP Project. The selection criteria and the operational and implementation arrangement for the LCS would be defined in the Project Administration Manual. While the LCS has been accessed as incapable of handling implementation, administration, financial management and procurement of the activities, the Project Implementation Manual (PIM) shall define the roles and responsibilities of the intermediaries who will assist the LCS in preforming the activities.

The contract detailed to be signed with the LCS, should ensure transfer liabilities and accountabilities to the intermediaries rather than maintaining these liabilities and accountability with the LCS. LGED should also explore options to use lump sum contract for LCS activities which can minimise the use of schedule rates. Lump sum contract for LCS activities would increase efficiency gains and minimising transaction cost currently attributed to lengthy procedural requirement for preparing the running bills.

Independent Quality Monitoring and Assessment would be introduced to minimise risk and ascertain periodic information on the progress of the schemes.

Procurement of materials and goods by the LCS for the civil works contracted would be undertaken in accordance with the provision of the IFAD Procurement Guidelines and shall be largely limited within the markets in each district. Any requirement for the Project to purchase specific goods from markets in outside of the district shall be justified and documented by the Project. This justification should provide details of materials and goods to be purchased and reasons for the purchase which included a comparative analysis of the cost of procuring the materials in markets outside the district where these activities are implemented.

IFAD shall introduce as part of fiduciary processes through its supervision mission or as separate mission, biennial reviews of the LCS contract performance with regards to the implementation of activities contracted which includes the accounting and procurement of goods and materials carried out by the LCS (with the assistance of the intermediaries). This review shall include the performance of the intermediaries.

8.4. Procurement of studies, survey, and other specialized services

Each contract for the selection of consultancy services, shall be selected in accordance with any one of the selection methods as per the IFAD Project Procurement Guidelines and its Project Procurement Handbook as listed below:

e. Quality and Cost Based Selection
f. Fixed Budget Selection
g. Least Cost Selection
h. Selection Based on Consultants Qualification

8.5. Recruitment of Contracted Position

Selection of individual consultants: Individual consultants are selected on the basis of their qualifications for the assignment of at least three candidates among those who have expressed interest in the assignment or have been approached directly by the PCU or Implementing Agencies. Individuals employed by the PCU, and the Implementing Agencies/Partners shall meet all relevant qualifications and shall be fully capable of carrying out the assignment. Capability is judged on the basis of academic background, experience and, as appropriate, knowledge of the local conditions, such as local language, culture, administrative system, and government organization.

Individual consultants or consultancy firms may be selected on a sole-source basis with due justification in exceptional cases such as: (a) tasks that are a continuation of previous work that the consultant has carried out and for which the consultant was selected competitively; (b) assignments lasting less than six months; (c) emergency situations resulting from natural disasters; and (d) when the individual consultant is the only consultant qualified for the assignment.

For the purposes of IFAD's Procurement Guidelines, the following procurement decisions shall be subject to prior review by the IFAD for the award of any contract for consultancy and services under the Project:

d. Procurement of consultancy services and services
   i. Prequalification documents and shortlist when prequalification is undertaken;
   ii. Request for Proposal;
   iii. Technical evaluation report;
   iv. Combined (technical and financial) evaluation report and the recommendation for award; and
   v. Contract and amendments.

e. Procurement of individuals consultants

   iv. The Terms of Reference of the Assignment
   v. The Evaluation Report and recommendation for selection
   vi. Contract and amendments

8.6. Working with private sector, NGOs and other service providers

For the implementation sub-components 2.1 and 2.2, it is inevitable that the PMU has to hire either private sector, or NGOs or other service providers to carry out specialized activities for which LGED does not have in-house trained human resources and adequate competence. However, many such activities are being implemented within the purview of previous projects such as HILIP/CALIP and CCRIP, where private sector/NGO/service providers have done more or less the same types of works under the guidance of the respective PMUs and PDs. PROVATi^3 will learn lessons from such experiences and emulate for successful implementation of sub-component 2.1 and 2.2.

For sub-component 2.1, since the initial selection of LCS (as per the criteria of LGED) till the post-construction LCS mentoring and livelihoods/IGA training, NGOs must be involved to facilitate the entire process. As indicated in the PDR (particularly Appendix-4 and Appendix-5) and the attached Working Paper, local NGOs with adequate experience to deal with LCS groups will be hired by the PMU through open bidding process.

For sub-component-2.2, a number of skills enhancement trainings will have to be organized in the target districts and Upazilas. Since these trainings will be trade-specific, experienced private sector and NGOs will be hired through an open bidding process in cooperation with the IFAD Country Office. For specialized trades and associated trainings, prominent national institutions (for example, BGMEA for garments-related training) based in the capital will be invited, whereas for other general type training (for example, tailoring, karchupi and block & batik), locally rooted training service providers and NGOs with adequate proven track record will be invited in the open bidding process. Each participating bidder will be asked to provide

for supplying training manuals which had been used in earlier training courses. The procurement process will be completely transparent, on the basis of criteria and verification of proof, and the selection process will involve both the PMU and the IFAD Country Office.

8.7. Procurement of works

All advance contracting and retroactive financing of resources provided or administered by IFAD regarded as an exception by the IFAD General Conditions must be clearly established (detailed cost and procurement packages) in the Project Design Document and approved by the IFAD and will be undertaken in conformity with provision of IFAD General Conditions and IFAD Procurement Guidelines and Procurement Handbook (2010, as amended from time to time). The issuance of invitations to bid under advance contracting and retroactive financing will be subject to IFAD prior review and no objection. The approval of advance contracting and retroactive financing does not commit IFAD to finance the Project.

Procurement of civil works should be undertaken in sizable bid packages ensuring road works are not split to accommodate contractors financial capacities to qualify for the bidding or to intentionally avoid seeking IFAD prior review. Any civil works which are to be split into small bid packages due to specific implementation consideration must to clearly established and highlighted in the procurement plan.

8.8. Review of Procurement Decisions

xxii. The Fund shall review and provide its no-objection to the Procurement Plan, which shall include as a minimum:

e. A brief description of each procurement activity to be undertaken during the period by each and every Project Party;
f. The estimated value of each procurement activity;
g. The method of procurement or selection to be adopted for each activity; and
h. An indication as to whether the Fund shall carry out prior or post review in respect of each and every procurement activity.

All procurement for goods, works and services financed from resources funded or administered by IFAD require bidding documents and the contracts to include a provision requiring suppliers, contractors and consultants to permit IFAD to inspect their accounts ,records and other documents relating to the bid submission and contract performance, and to have them audited by IFAD-appointed auditors.

8.9. Thresholds for prior review from the IFAD

8.10. Ex post review

8.11. Register of Contracts

9. TARGETING, GENDER AND YOUTH DIMENSIONS

9.1. Definition and Objectives

Anticorruption measures will include (a) undertake necessary measures to create and sustain a corruption-free environment for activities under the Project; (b) institute, maintain and ensure compliance with internal procedures and controls for activities under the Project, following international best practice standards for the purpose of preventing corruption, money laundering activities, and the financing of terrorists, and shall require all relevant ministries and agencies to refrain from engaging in any such activities; (c) comply with requirements of IFAD's Policy on Preventing Fraud and Corruption in Its Activities and Operations (2005, as amended to date); (d) ensure that the Good Governance Framework is implemented in a timely manner. is actively engaged to allow potential Project beneficiaries and other stakeholders to channel and address any complaints they may have on the implementation of the Project.

Appendix 12: Compliance with IFAD policies

1. **Introduction**: This appendix reviews the compliance of the PROVATI3 project design with the following IFAD policies and strategies: (i) Targeting and inclusion policy; ii) Gender sensitive design; (iii) Climate change strategy; (iv) Scaling up; (v) Land acquisition; vi) financial services; and (vii) Environmental and Social Review. The following sections provide a systematic analysis of each of these policies and strategies.

2. **Targeting policy.** The design mission has developed a full analysis on targeting and poverty issues (see Appendix 2). The project primarily targets the poorest districts (six districts in total) of the country, which are also vulnerable to annual floods and adverse impacts of climate change. The project further focuses on poverty by selecting flood affected 25 Upazilas and within those 90 unions, which are mostly char and low-lying. This geographical targeting ensured that the most of the benefits will go the poor area and poor population. The selection of the Brahmaputra-Teesta basin is based on the depth of poverty in this area and the opportunities for poverty reduction. Geographic targeting will allow the population of the project area to benefit from better infrastructure. Marginalized women and men will be included in the LCS. Women headed households are important target for LCS. Besides poor and near-poor families and women will receive high priority in vocational training courses. LCS members will be assisted to permanently come out of poverty.

3. It is understood that external shocks such as weather events, erosion may change wealth status of char dwellers. The whole project is designed to address this type of external vulnerability by building climate resilient infrastructure, flood shelter, promoting off-farm livelihoods so that weather events have minimum impact on family income and build resilience, and develop local flood forecasting system so that a large majority of char dwellers receive advance warning to protect their assets and make other important decisions.

4. The project target groups are very clear. Routine monitoring, including annual outcome surveys, will establish the degree to which people participating in project activities are from the poorer categories of the population.

5. Although LGED will be the lead implementer, and DDM and IWFM will be implementing Component 3 the project has been kept simple for ease of implementation. But the project will be collaborating with DFID funded PPEP project, will be collaborating with PKSF to assist LCS members to access financial services, and will indirectly benefit from a World Bank project that will enhance accuracy of river water flow data.

6. The project will widely share lessons, experience and success stories various KM products.

7. **Gender policy**. The design mission has prepared detailed analysis and report on poverty and gender issues. LCS members will have the opportunity to earn wage and profit from construction of markets and road maintenance. This will lead to formation of savings/capital. They will be further assisted to join NGO-MFIs in addition to skill development training. The road connectivity will improve women's mobility. Besides, vocational training will create additional opportunities for employment.

8. Women will have significant share in LCS work, at least 70% of LCS membership will women. At least 30% of vocational trainees will be female young adults.

9. There will be a Gender Action Plan for the project that will fall under the responsibility of a Gender Specialist in the PMU. All staff members will receive training on poverty and gender aspects. All log-frame indicators will be measured with gender-disaggregated data.

10. **Compliance with climate change issues**. The project is specifically designed for one of the most vulnerable area of the country where adverse effects of climate change is predicted to increase rainfall and discharge of river water. The project starts with assessing impact of climate change on the Brahmaputra-Teesta basin, determining river erosion/accretion zones, and assessing flood inundation with increased impact of climate change. These analyses will be fed input project implementation. All roads, markets and flood shelters will be climate resilient. There will be management system in place about the proper use of the shelter as

school during normal time and as shelter during severe floods where homestead of poor families may go under water.

11. The M&E system will gather information of all components and activities with focus on climate resilience. The design mission has produced a report on Climate Risk Analysis and Climate Change Adaptation (See Working Paper #4).

12. **Scaling up**. The project will be scaling up successful elements of MIDPCR, CDSPIV and CCRIP projects where it has been proven that development of village roads and markets leads to increase in production, farm price and ultimately household income reducing poverty. The road and market combination strengthens farm to market connection, strengthens supply chain and encourages new investments. In addition, practice of engaging LCS groups in construction of markets and small RCC roads will be further strengthen by incorporating good construction practices developed in CCRIP. The experience and success of application of vetiver in HILIP and CCRIP will be further expanded in this project. Slopes of all project built roads and project maintained earthen roads will be protected using vetiver grass.

13. **Land acquisition**. There will not be any land acquisition by the project to build roads, markets or flood shelters. All these infrastructure will be on public land. Therefore, there is no eviction or resettlement is foreseen. However, in some village markets there may be situations where some shops owners may need move their shops (wooden/tin built temporary shops) a few feet to make room for internal roads or drainage. This type of issues will be settled by the MMCs. The project has allocated resources to compensate such re-arrangements.

14. **Financial services**. The project will not be involved in providing any financial services. Rather it collaborate with PKSF, implementer of IFAD-funded PACE project, to assist LCS members joining PKSF partner NGO-MFIs to access financial services.

15. **Environmental and Social safeguards.** The design mission has conducted environmental and social safeguard reviews and appropriate actions have been mentioned in the PDR. LGED will conduct an environmental assessment as per GOB requirement.

Appendix 13: Contents of the Project Life File

1. **List of project files is as follows:**

   a. PCN approval aide memoire (Dec 2016)
   b. Stock-taking of lessons learnt (Dec 2016)
   c. PROVATi³ project concept note (Feb 2017)
   d. OSC issue paper (Feb 2017)
   e. Aide memoire of design mission (Mar 2017)
   f. Complementary documentation for design (Component 1.1, 1.2, 1.3, and 3.1) (May 2017)
   g. Aide memoir of appraisal mission (July 2017)
   h. Cost-tabs from appraisal mission (Oct 2017)
   i. QA minutes (Oct 2017)
   j. Full package of working papers (Oct 2017)
   k. Full Development Project Pro-forma (DPP) (Oct 2017)
   l. MTR report CCRIP (Sept 2017)
   m. LCS regulatory study/ stock-taking (Oct 2017)
   n. GoB comments on PDR (Oct 2017)
   o. WFP comments on PDR and IFAD replies (Nov 2017)
   p. Full PDR (Nov 2017)

Available on IFAD Xdesk page and provided to project management team at start-up.