Independent Office of Evaluation

IFAD
Investing in rural people

People's Republic of Bangladesh
Coastal Climate-Resilient Infrastructure Project

PROJECT PERFORMANCE EVALUATION

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Project Performance Evaluation

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Photos of activities supported by Coastal Climate-Resilient Infrastructure Project in the People's Republic of Bangladesh

Front cover: Market shade constructed with support from IFAD financing, Barisal Division.

Back cover: Satellite image of Tarali Bazar, Kaliganj, Satkhira District, after Cyclone Amphan. The evaluation made extensive use of satellite and digital imagery to evaluate the performance, quality and sustainability of infrastructure constructed under the project (left); A road financed by the project to connect Nil Dumur hat to Shyamnagar, Satkhira District (right).

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Preface

This report presents the findings of the project performance evaluation of the Coastal Climate-Resilient Infrastructure Project in the People's Republic of Bangladesh, undertaken by IFAD's Independent Office of Evaluation (IOE). The project brought together two infrastructure development projects, one to be financed by IFAD and the other by the Asian Development Bank and KfW Development Bank, under a parallel financing arrangement, and was implemented by the Local Government Engineering Department.

The project was implemented well and achieved the core objective of building infrastructure resilient to natural disasters and to climate change impacts in remote, vulnerable coastal areas of south-west Bangladesh. This is an important achievement given the increasingly severe effects of extreme climate events on the environment, lives and livelihoods of rural people in the project area. Improved road and market infrastructure resulted in better connected and vibrant rural communities and markets, and had a positive effect on household incomes. Yet the broader effects on agricultural production and livelihoods were limited in scale and scope, as a result of project design issues and limited coordination between development partners.

Involvement of poor women (and men) in the construction of project infrastructure, through labour-contracting societies, provided valuable short-term consumption support and enabled further engagement in productive activities. However, women's overall participation in markets remains low. A lack of sustained training for market management committees, difficulties accessing funding for market maintenance, and waste-management issues threaten the sustainability of improvements made to community markets.

While the project was in many ways a pioneer in climate resilience efforts, it also generated important lessons on livelihoods support, market management and gender, and on project design, coordination and policy-level support. New projects mainstreaming climate resilience offer opportunities to ensure that the good practices learned are capitalized on and will be more effectively shared.

The project performance evaluation was jointly led by Sally Smith and Roberto La Rovere, senior evaluation consultants, with contributions from national consultants Shaila Shahid, Rezaul Karim, Saiful Islam and Neamul Ahsan Khan, under the oversight of Fabrizio Felloni, IOE Deputy Director. Nurul Alam, external reviewer, and Johanna Pennarz, IOE Lead Evaluation Officer, provided valuable comments on the draft report. Close collaboration with IOE staff and consultants, Suppiramaniam Nanthikesan, Lead Evaluation Officer, Prashanth Kotturi, Evaluation Officer, and Nuri Niyazi, consultant, who were simultaneously conducting case studies based on the project for other ongoing evaluations, provided further useful inputs and generated synergies. Laura Morgia, IOE Evaluation Assistant, provided administrative support. Laure Vidaud, IOE Evaluation Assistant, supported the finalization of the report.

IOE is grateful to IFAD's Asia and the Pacific Division, notably to the IFAD Country Office in Bangladesh, to the Government of the People's Republic of Bangladesh, in particular the Local Government Engineering Department, and country stakeholders and partners for their insightful contributions at various stages of the process, and for the support they provided to the overall evaluation process.

I hope the results generated by this evaluation will be of use to help improve IFAD operations and activities in the People's Republic of Bangladesh for enhanced development effectiveness.

Indran A. Naidoo
Director
Independent Office of Evaluation of IFAD

Women buying vegetables at a market constructed with support from the project in Rahamatpur hat, Babuganj, Barisal Division.

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Currency equivalent, weights and measures

Currency equivalent

Currency unit = Bangladeshi Taka (BDT)

US$1.00 = BDT 84.94

Weights and measures

1 kilogram (kg)	=	2.204 pounds (lb)
1 000 kg	=	1 metric tonne (t)
1 kilometre (km)	=	0.62 miles
1 metre (m)	=	1.09 yards
1 square metre (m^2)	=	10.76 square feet (ft)
1 acre (ac)	=	0.405 ha
1 hectare (ha)	=	2.47 acres

Abbreviations and acronyms

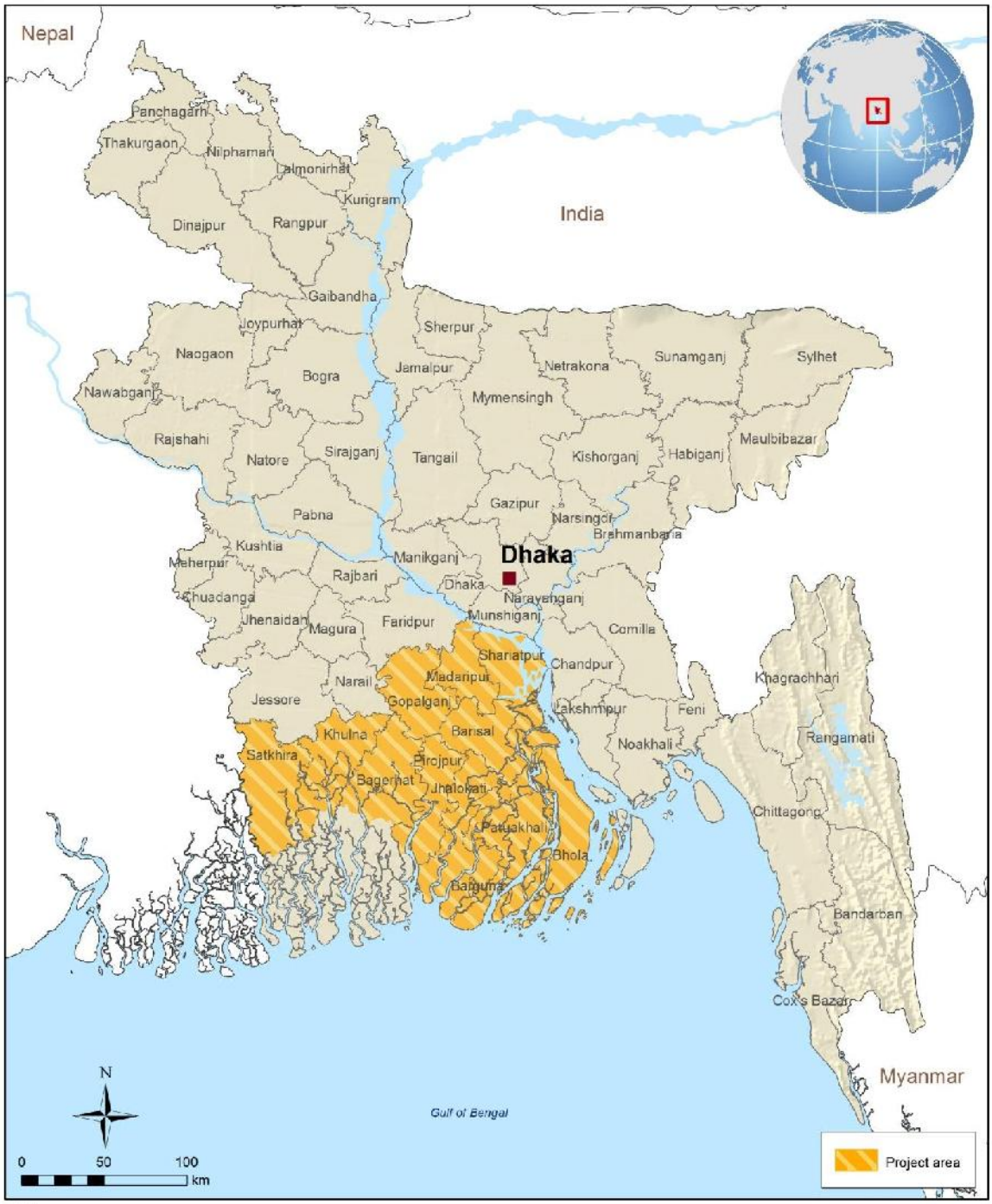
ADB	Asian Development Bank
APR	Asia and the Pacific Division of IFAD
BUET	Bangladesh University of Engineering and Technology
CCRIP	Coastal Climate-Resilient Infrastructure Project
CReLIC	Climate-Resilient Local Infrastructure Centre
COSOP	country strategic opportunities programme
EIRR	economic internal rate of return
GALS	Gender Action Learning System
GIS	geographic information system
IGA	income generating activity
IOE	Independent Office of Evaluation of IFAD
KfW	KfW Development Bank
LCS	labour contracting society
LGED	local government engineering department
M&E	monitoring and evaluation
MIDPCR	Market Infrastructure Development Project in Charland Regions
MMC	market management committee
MoLGRD&C	Ministry of Local Government, Rural Development and Cooperatives
MTR	mid-term review
PACE	Promoting Agricultural Commercialization and Enterprises Project
PCR	project completion report
PMO	project management office
PPE	project performance evaluation
PROVATi3	Promote Resilience of Vulnerable Through Access to Infrastructure, Improved Skills and Information
RIA	Research and Impact Assessment Division of IFAD
RIMS	Results and Impact Management System (IFAD)
RRI	Rural Radio Initiative

Map of the project area

People's Republic of Bangladesh

Coastal Climate Resilient Infrastructure Project

Project Performance Evaluation



The designations employed and the presentation of the material in this map do not imply the expression of any opinion whatsoever on the part of IFAD concerning the delimitation of the frontiers or boundaries, or the authorities thereof.

IFAD *Map compiled by IFAD* | 18-06-2013

Executive summary

A. Background

1. **Project background.** The Coastal Climate-Resilient Infrastructure Project (CCRIP) was implemented in 12 districts of south-west Bangladesh by the Local Government Engineering Department in the Ministry of Local Government, Rural Development and Cooperatives. CCRIP brought together two infrastructure development projects that were at the planning stage in 2012 – one to be financed by IFAD and the other by the Asian Development Bank (ADB) and KfW Development Bank (KfW), under a parallel financing arrangement. The project closed in December 2019 and had a total cost of US$154.1 million, of which IFAD's share was US$57 million.

2. CCRIP aimed to improve livelihoods for poor households, by building climate-resilient infrastructure in rural areas that are economically disadvantaged and highly vulnerable to natural disasters and climate change. IFAD resources were mostly used to improve the quality and management of markets and roads at union and village levels. ADB resources were directed towards improving upazila markets and roads, and KfW funds were used for cyclone shelters and building institutional capacity for climate-resilient infrastructure. It was expected that small and marginal farmers, small traders and micro-entrepreneurs, landless people and poor women would particularly benefit from the project, given the agriculture-based economy and livelihoods in selected upazilas, and the involvement of poor women and men in construction through labour contracting societies (LCS).

3. **Project performance evaluation objectives and methodology.** The objective of the evaluation was to provide an independent assessment of the results of IFAD-funded activities in CCRIP and to generate findings and recommendations for ongoing and future IFAD operations in Bangladesh. The evaluation involved an in-depth review of project documentation and interviews with Government, the Local Government Engineering Department (LGED), the project team, IFAD, co-financiers, partner organizations and other key informants nationally and internationally, as well as interviews and data collection with a range of stakeholders in nine independently selected project communities. Due to the COVID-19 pandemic, all interviews had to be conducted remotely. The potential limitations of this approach were offset by the collection of spatial data (through geographic information systems [GIS]) and digital imagery, photos and videos of project infrastructure, including for communities in areas that had been severely affected by Cyclone Amphan and subsequent widespread flooding in mid-2020, which enabled an additional assessment of the resilience of project infrastructure to extreme weather events.

B. Main findings

4. **Relevance.** CCRIP was aligned with national strategies and development priorities and with IFAD's country strategy and policies. The project design was appropriate, chiefly in terms of: targeting poor and climate risk-prone communities; addressing both the technical and management dimensions of climate-resilient infrastructure; and involving community members in infrastructure construction and management. However, coordination between the three financiers and with another IFAD-funded project in the same area (Promoting Agricultural Commercialization and Enterprises) was suboptimal, resulting in a lack of structured and holistic support for livelihoods and value chain development. Implementation was appropriate, given LGED's expertise and track record, but could have benefited from even greater involvement of local governance institutions and local NGOs.

5. **Effectiveness.** Output targets were mostly achieved or exceeded and an estimated 3.7 million people in CCRIP market catchment areas benefited. Infrastructure has been constructed to a relatively good standard and has largely withstood monsoon flooding and extreme weather events. Improvements in roads and markets have led to a significant increase in the numbers and activity of traders, producers, transport

providers and other enterprises, and vehicle operating costs and passenger fares have reduced. This has enabled year-round access to markets and services for producers and households in remote rural communities. Markets are being better managed as a result of establishing and training multi-stakeholder market management committees (MMCs). However, the quality of management also depends on the capacity and the commitment of committee members, and funding for market maintenance is often insufficient due to low market lease values and difficulties accessing funding from upazila administrations. Action research on vetiver grass for road-slope protection produced useful results that are being applied by LGED and elsewhere. Research on using biodigesters for sustainable waste management in markets shows potential but is not completed. A community radio initiative for mass communication of climate-related information did not develop a sustainable funding model and ended when the project closed.

6. **Efficiency.** Disbursement (98 per cent for IFAD funds), financial management and procurement were generally efficient and compliant, and the management structure was sound. The Economic Internal Rate of Return is estimated to be 35 per cent, which is high in both absolute and relative terms, partly thanks to cost sharing of human resources between IFAD, ADB and KfW. However, disbursements, supervision and reporting were conducted separately for each funder, which produced a heavy management burden and reduced the overall efficiency.

7. **Rural poverty impact.** CCRIP brought a moderate increase in incomes (11 per cent) in market catchment areas and a small reduction in food insecurity. The impact was greater for farming households, which are generally poorer, and was largely driven by increased sales of agricultural outputs in markets as the project did not have a significant impact on agricultural production. Employment through LCS provided short-term consumption support for 5,723 of the poorest households and enabled some investment in longer-term income generation. However, the project had little sustainable impact on social and human capital due to the short duration of training and a lack of follow-up support. MMCs were an important institutional development and the project produced useful policy reports on market leasing and the LCS model, but there were no substantive impacts on policy at the national level.

8. **Sustainability.** The technical sustainability of CCRIP infrastructure has proven to be satisfactory. The foundations for institutional and financial sustainability are also in place but are stronger for roads since road maintenance is a government priority and is under the remit of LGED, while market improvements are threatened by the absence of an ongoing training programme for MMCs and continued issues with funding for market maintenance. Some aspects of market management are already proving inadequate, notably waste management and maintenance of tubewells and toilets. The economic and social benefits for LCS members have been sustained to some extent.

9. **Innovation and scaling up.** CCRIP was innovative in being one of the first LGED projects to integrate climate resilience features in infrastructure and in developing a network of small, medium and large roads and markets as the basis for rural economic development. Other innovations include research on environmentally friendly technologies and testing new approaches to women's empowerment. There has been some scaling up of innovations and lessons learned in LGED, with more expected in future.

10. **Gender equality and women's empowerment.** CCRIP took a systematic approach to gender mainstreaming and targeted poor women for LCS employment and for allocation of shops in women's market sections. This brought significant benefits to some of the poorest and most vulnerable women in rural communities, but for the wider population of women, CCRIP had minimal impact on the barriers to their equal participation in markets and their empowerment.

11. **Environment and natural resource management.** Action research and additional measures adopted during construction and MMCs training were aimed at promoting environmentally friendly infrastructure development and management. However, insufficient action was taken to address and mitigate identified environmental concerns related to waste management in markets.

12. **Adaptation to climate change.** CCRIP undertook a range of activities to prepare rural communities and authorities for climate events and shocks. While the resilience of infrastructure was satisfactory overall, broader approaches to optimize climate resilience and to enhance the environmental benefits were not entirely developed, and the capacity that was developed may not remain after the project.

C. Conclusions

13. **CCRIP achieved its core objective of building infrastructure that is resilient to natural disasters and to the impacts of climate change in some of the most remote and vulnerable coastal areas of Bangladesh.** The fact that CCRIP was one of the first infrastructure projects implemented by LGED to incorporate climate resilience in infrastructure design adds to the significance of this achievement and the value of the project. Furthermore, this added value is more likely to be captured as a result of the recent establishment of a knowledge centre on climate-resilient infrastructure in LGED – the Climate-Resilient Local Infrastructure Centre (CReLIC).

14. **Improved road and market infrastructure resulted in more connected and vibrant rural communities and markets, which has brought moderate increases in household incomes in market catchment areas. However, the project did not lead to an increase in agricultural production.** Income effects are stronger among farming households than non-farming households, indicating pro-poor results. Income effects also vary depending on location and composition of livelihoods, which shows the importance of understanding the composition of household livelihood strategies when designing project interventions.

15. **Impacts on livelihoods were limited in scale and scope as a result of project design issues and limited coordination between development partners.** At the design stage as well as at the midterm review stage, it was recognized that a more holistic and integrated approach to livelihoods would produce stronger results and therefore the intention was for the Promoting Agricultural Commercialization and Enterprises Project (PACE) to provide complementary livelihood support to CCRIP beneficiaries. However, PACE was not designed with these considerations in mind, which undermined the potential for the sum of the two projects to be greater than the parts. Similarly, although joining the IFAD-funded project with the ADB/KfW-funded project delivered cost savings, more comprehensive cofinancing arrangements and coordination could have brought even greater efficiencies and value chain impacts.

16. **The LCS approach created valuable short-term employment opportunities for poor women and enabled their further engagement in labour markets, but overall the project had limited impact on women's participation in markets.** The LCS modality has been used by LGED in much the same manner since it was first introduced in the 1980s and needs updating, drawing on the LCS policy study carried out in 2017. CCRIP's experience of involving LCS in constructing women's market sections, and using the Gender Action Learning System to foster a more enabling environment for women's participation in markets, are examples of the kinds of add-ons to be integrated into the LCS model to achieve more transformative change for poor women.

17. **The management of community markets has improved but is challenged by ongoing difficulties in securing enough funding for operations and maintenance, a lack of ongoing training for MMCs, and systemic waste-management issues.** Although lease values have increased, they are still below

what is needed to sustain the quality of market services over time and there is often a lack of transparency around how leases are awarded. These issues require policy-level intervention, as they could undermine the significant investments made in improving market infrastructure.

18. **LGED performed well as the implementing agency, with efficient delivery. A broader range of partners may have helped to address challenges in market management and gender inequality.** Most project targets were achieved and there were no major delays. The Project Management Office was responsive to the recommendations of IFAD missions and demonstrated willingness to innovate and learn. There is a tendency for LGED projects to operate in silos, which historically undermined cross-learning. Going forward, CReLIC offers an opportunity to ensure that good practices and lessons from CCRIP and from other such projects are more effectively shared.

19. **COVID-19 poses risks to the sustainability of some CCRIP benefits.** The most immediate impact (with the pandemic still ongoing) is that markets are operational at a significantly reduced level due to the hygiene risks, and need to respect social distancing requirements which are affecting people's incomes and livelihoods. In the medium term, the negative impact on the Government's revenues means that budgets allocated to LGED for road maintenance may be reduced, in spite of the strong commitment to infrastructure maintenance within the Government and LGED.

D. Recommendations

20. **Recommendation 1. Investments in infrastructure should be accompanied by broader support for climate-resilient livelihoods tailored to the project area context, and include activities to enable value chain development and to enhance women's participation in labour markets.** Although this was (partially) recognized when CCRIP was designed, there were limited measures put in place to ensure that anticipated complementarities with other funding agencies and other IFAD-funded projects materialized and were optimized. In future, IFAD should design projects in such a way as to ensure that a holistic package of support is provided to targeted communities. This can be achieved either by funding the complete package within the project itself or ensuring good coordination with partner projects and agencies, and institutional accountability for delivery of anticipated linkages, efficiencies and results. The first step is to ensure that opportunities for, and potential barriers to, coordination are explored during the design process and are adequately reflected in project design. Partnerships with NGOs or other local organizations with recognized expertise in gender and social inclusion should also be included in project design, to develop and apply contextually relevant and effective approaches for addressing barriers to women's participation in markets.

21. **Recommendation 2. In infrastructure development projects, IFAD should ensure that conditions for mainstreaming a comprehensive and learning approach to climate resilience are in place.** This includes ensuring that climate science informs the design of climate resilience features, and that adequate focus is given to the "soft" side of infrastructure management as well as sustainability. In the case of Bangladesh, for LGED, this approach could be facilitated through CReLIC, so long as the focus of knowledge generation and learning is not narrowly defined. It is further recommended that IFAD engage proactively with CReLIC to co-fund training and research on areas of interest, for example related to testing and implementing technologies and systems for sustainable waste management in markets. Beyond CReLIC, IFAD should aim to support the development of a national climate-resilient infrastructure policy with different stakeholders and ministries, using the lessons learned from CCRIP and other such projects.

22. **Recommendation 3. IFAD should engage with central and local government to enable the development of a policy response and strategy to deal with systemic issues related to market leasing and market maintenance, and to ensure the long-term sustainability and viability of market infrastructure.** The project performance evaluation findings related to market leasing and funding of market maintenance are not new; indeed, they informed the design of CCRIP and the focus that was placed on establishing and building the capacity of MMCs and requiring local authorities to commit to allocate funds for market maintenance prior to developing markets. The 2017 CCRIP policy study on market leasing provided further evidence on the nature and extensiveness of these issues. Although CCRIP has shown that engaging with local authorities and building the capacity of MMCs can improve the situation, a more sustained and systematic approach coming from the Government is needed. On the one hand, this means taking steps to enforce Government regulations on market management and on the allocation of lease values for market maintenance. On the other hand, it involves developing an ongoing training programme for MMCs to prevent capacity from declining over time, possibly with donor support.

IFAD Management's response[1]

1. Management welcomes the overall evaluation findings of the project performance evaluation (PPE) of the Coastal Climate-Resilient Infrastructure Project (CCRIP) conducted by the Independent Office of Evaluation of IFAD (IOE).

2. Management is pleased to note that the PPE assesses the overall performance of the project as satisfactory (5) and recognizes that the project was implemented well and was successful in achieving its core objective of building infrastructure resilient to natural disasters and climate change impacts in remote, vulnerable coastal areas of the country. Management agrees with IOE that this achievement was critical as Bangladesh is one of the most climatically vulnerable countries and that the lives and livelihood of the rural people in the southwest of Bangladesh are impacted by severe climate events. Indeed, the project has been able to build market infrastructure and enhanced road connectivity that had a positive effect on household incomes.

3. Management concurs with the PPE assessment that CCRIP in many ways was a pioneer in climate resilience efforts, generated important lessons on livelihoods support, market management, gender, and on project design and coordination. Indeed, Management recalls that CCRIP was rated as the number 1 project in IFAD on the dashboard of the Associate Vice-President of the Programme Management Department. In addition to being a well-managed project, CCRIP also pioneered important gender transformation elements, such as, creating a women's section in the rural markets and piloting a community-led household methodology called the Gender Action and Learning System.

4. Management further states that building on the experience of CCRIP, subsequent projects have been designed in the Bangladesh country programme that seek to enhance the experience gained under CCRIP, particularly in the area of women's empowerment and climate resilience and adaptation.

5. Management largely agrees with the PPE recommendations and will ensure that they are considered as recommended for the country programme and future projects. In this regard, Management would like to acknowledge the following:

   (a) **Recommendation 1. Investments in infrastructure should be accompanied by broader support for climate-resilient livelihoods tailored to the project area context, and that includes activities to enable value chain development and to enhance women's participation in labour markets.**

   Partially agreed. Management agrees with IOE's recommendation that infrastructure development should be aligned with broader climate-resilient livelihoods and adaptation needs of the project area. To this end, subsequent projects have been designed to address this issue. The country office actively engages in coordination and collaboration with other development partners, including other financing institutions and bilateral donors, and local organizations to leverage synergies and complementarity. While it may be challenging to develop an implementation partnership with NGOs that work on gender and social inclusion issues due to lack of availability of country grants, management will consult them as needed during project design and strategy formulation as well as during implementation.

   (b) **Recommendation 2. In infrastructure development projects, IFAD should ensure that conditions for mainstreaming a comprehensive and learning approach to climate resilience are in place.**

[1] The Programme Management Department sent the final Management's response to the Independent Office of Evaluation of IFAD on 4th December 2020.

Agreed. Management takes note of this recommendation and fully agrees. Learning from the CCRIP experience, the Bangladesh country programme has since designed subsequent projects that include the "soft" side of infrastructure management. IFAD is already implementing a project, Promoting Resilience of Vulnerable through Access to Infrastructure, Improved Skills and Information (PROVATi3) that includes collaboration with CReLIC. In addition, IFAD has built strong components on research in two of its ongoing projects that include climate services, policy work, capacity building and community mobilization to enhance resilience and adaptation. In addition, Management intends to explore with the Government of Bangladesh and LGED how the Country Programme Support Unit at the Economic Relations Division of the Ministry of Finance can support the formulation of a national climate-resilient infrastructure policy, using the lessons learned from CCRIP and other such projects.

(c) **Recommendation 3. IFAD should engage with central and local government to enable the development of a policy response and strategy to deal with systemic issues related to market leasing and market maintenance and to ensure the long-term sustainability and viability of market infrastructure.**

Agreed. Management will actively engage with local and central governments during the formulation and implementation of projects. Management agrees that enforcement of government regulations is essential to ensure that MMCs have enhanced capacity and resources (financial and human) to ensure sustained operations and management of rural markets. This is already being pursued in on-going projects such as the PROVATi3 project.

6. Management thanks IOE for the fruitful process, and will ensure that lessons learnt from this exercise are internalized to further improve the performance of IFAD-financed projects in Bangladesh and elsewhere.

People's Republic of Bangladesh
Coastal Climate-Resilient Infrastructure Project
Project Performance Evaluation

I. Evaluation objectives, methodology and process

1. The Coastal Climate-Resilient Infrastructure Project (CCRIP) was implemented in 12 districts of south-west Bangladesh between 2013 and 2019, financed by IFAD, the Asian Development Bank (ADB) and KfW Development Bank (KfW). IFAD's Independent Office of Evaluation (IOE) carried out a project performance evaluation (PPE) in 2020 to: provide an independent assessment of the results of the project; generate findings and recommendations for design and implementation of ongoing and future IFAD operations in Bangladesh; and identify issues of corporate, operational or strategic interest that merit further evaluative work.

2. The scope of the PPE was on activities and performance as pertains to IFAD funding and supervision; where it was not possible to separate out the attribution of results to IFAD, ADB or KfW funding respectively, only IFAD's contribution was analyzed.

3. **Methodology.** The PPE was undertaken in accordance with IFAD's Evaluation Policy, with project performance evaluated using internationally recognized evaluation criteria (relevance, effectiveness, efficiency, sustainability and other standard criteria, as indicated in annex II). The specific evaluation questions for CCRIP are outlined in the Evaluation Matrix contained in annex X.

4. The analysis, based on the **theory of change** for the CCRIP project (annex VI),[1] facilitated the assessment of the extent to which assumptions were validated and CCRIP's goal and objectives were effectively achieved in the manner anticipated. The PPE also assessed the contribution of the project relative to other influences on change in the project area, and explored unintended impacts and consequences (positive and negative) arising from project interventions.

5. More specifically, the PPE validated and built on the results presented in the Project Completion Report (PCR) and on the overall extensive and relatively good quality of documentation available about the project (see annex VIII) through inter alia: (i) assessing the methodological rigour of baseline studies, endline studies, the impact assessment carried out by IFAD's Research and Impact Assessment Division (RIA), and other sources of evidence; (ii) triangulating data on topics of interest from a range of sources in order to cross-check findings and capture different perspectives; (iii) identifying gaps in the evidence or analysis and collecting new data to fill those gaps; and (iv) exploring alternative explanations for 'how' and mainly 'why' changes occurred.

6. The **evaluation approach** had to be adapted due to the onset of the COVID-19 pandemic in early 2020. Full details are provided in annex IX. The in-person field mission was substituted by remote data collection and validation by international and national consultants using internet-based and mobile communication technologies. In addition, more extensive use was made of satellite and digital imagery to evaluate the performance, quality and sustainability of infrastructure constructed under the project (annex VII, examples of pre- and post-project imagery that were used). In addition, the PPE took the opportunity to partially focus data collection on districts affected by Cyclone Amphan, which hit south-west Bangladesh in May 2020. The south-western districts received most of the impact, but that also served as a means of validation of infrastructure quality and resilience to climate events.

[1] A theory of change was developed by IFAD's Research and Impact Assessment Division for an impact assessment of CCRIP in 2018. The PPE team adapted the theory of change for its purposes.

7. The PPE team independently selected 3 out of the 12 project districts for local data collection (done remotely) to include: (i) a district that was most affected by Cyclone Amphan; (ii) a district that was rarely visited by IFAD missions or the Project Management Office (PMO) (e.g. due to being less accessible or having fewer communities with built infrastructure); and (iii) a district that was moderately visited by IFAD missions and the PMO. For each of the districts (Satkhira, Khulna and Shariatpur), three communities – with IFAD-funded road and market improvements completed at least two years before – were purposively selected to provide a balanced representation of geophysical characteristics across the nine selected communities (e.g. remoteness, vulnerability to climate change) and market type (small, medium or special market) (see details in annex VII).

8. **Process.** The PPE was conducted from February to August 2020. The first phase involved developing the approach paper, and planning, with subsequent adjustments in response to COVID-19. In parallel, an extensive desk review of available data and information[2] was undertaken; this provided a preliminary analysis of results, indicated gaps in information and areas in need of verification, and informed the generation and analysis of satellite and digital images of CCRIP-built infrastructure. This was followed by remote interviews and data collection with Government officials, the Local Government Engineering Department (LGED), former project staff, IFAD Country Office, cofinancing agencies, partner organizations, research institutes and a range of stakeholders at upazila and village levels.[3] The full list of interviewees is provided in annex IV and details of the spatial data collection are in annex VII. The information was analysed and triangulated to reach an independent assessment of performance and results, and to identify lessons and recommendations for future programming.[4]

9. **Rating system**. In line with the practice adopted in other international financial institutions and United Nations organizations, IOE uses a six-point rating system to score project performance on a set of standard criteria (as set out in annex I and II), where 6 is highest (''highly satisfactory'') and 1 is lowest (''highly unsatisfactory'').

10. **Stakeholders' participation**. In compliance with IFAD's Evaluation Policy, project stakeholders were involved throughout the PPE. This ensured that stakeholders' concerns were considered, that evaluators understood the context in which CCRIP was implemented, and that opportunities and constraints faced by implementing institutions were identified. Regular communication was established (remotely) with IFAD's Country Office in Bangladesh and with the Government.

11. **Limitations**. The COVID-19 pandemic presented several practical, methodological and ethical challenges for the evaluation, particularly due to not being able to meet people in person and physically visit project locations or infrastructure. While nothing can entirely substitute in-person field visits and validations, the PPE gathered a large amount of qualitative and quantitative data to assess the performance of the infrastructure and other results of CCRIP, including extensive GIS data, imagery and videos in the selected field districts, and 75 remote interviews with all stakeholders types, many at community level. Also, the districts and communities where primary data were gathered were independently selected by the PPE team, and the PPE used

[2] Quantitative data from IFAD's Results and Impact Management System and project monitoring and evaluation; the baseline, endline and thematic studies commissioned by CCRIP; IFAD RIA's impact assessment study; project documents such as supervision mission reports, mid-term review and programme completion report; GIS maps developed by the project; and secondary data and academic studies of relevance to the project area.

[3] Local authorities, market management committees members, market leaseholders, women and men traders, producers, labour contracting society members, community leaders etc.

[4] Two other IOE's multi-country evaluations that involved CCRIP were being conducted simultaneously with the PPE: an 'Evaluation synthesis on infrastructure in IFAD-supported projects' and 'Thematic evaluation of IFAD's support to smallholder farmers' adaptation to climate change'. The three teams of IOE staff and consultants exchanged views on methods and data, and the PPE interviews were often conducted jointly with the other two evaluations. The PPE team also consulted the desk-based case study compiled for the infrastructure evaluation.

and validated data from several other studies and surveys about the project. In the end, however, not all information needs could be entirely satisfied remotely.[5]

12. The fact that the PCR in particular, and other CCRIP reports, did not always clarify which activities or results were associated with each of the cofinancers, or assess separately the economic benefits from different interventions, meant that it was not always possible to evaluate the specific contribution of IFAD to project results.

[5] For instance, it was difficult to probe differential impacts within beneficiary groups (e.g. for temporary traders compared to permanent traders, and for LCS chairpersons and secretaries compared to other LCS members).

II. The project

A. National context

13. Bangladesh, a densely populated country of around 163 million people, was once among the poorest in the world. Over the past three decades, it has progressed in strengthening the economy and infrastructure, building democratic institutions and improving social and economic outcomes for its people. Sustained economic growth (particularly from 2005 onwards) led to an increase in per capita national income from US$880 (purchasing power parity, current international US$) in 1990 to US$4,570 in 2018.[7] Income-based poverty levels halved from 48.9 per cent of population in 2000 to 24.3 per cent in 2016.[8] This was accompanied by improvements in health and nutrition (e.g. under 5 mortality rate down from 144 deaths per 1,000 live births in 1990 to 30 in 2018), education (e.g. primary school completion rate up from 47 per cent in 1989 to 80 per cent in 2014[9]), and access to clean water, sanitation and electricity. In 2015, Bangladesh achieved lower middle-income status.

14. The extent and rate of progress is threatened by the COVID-19 pandemic, which started affecting Bangladesh from early April 2020 and is expected to have negative social, economic and developmental impacts in the country. At the time of this PPE, the impacts were still taking place and had not been quantified yet.

15. Even before the COVID-19 pandemic, Bangladesh faced several challenges in its efforts to make further growth and development progress. Although poverty was markedly reduced, one in eight people still lived in extreme poverty – one in seven in rural areas.[10] Over half of the population was considered vulnerable to poverty, with the rate of poverty reduction stagnating in recent years, particularly in urban areas and among rural farming households.[11] Poverty is also higher and had been declining less rapidly in the west of Bangladesh, widening a welfare gap between eastern and western Bangladesh that had been narrowing over past years.[12]

16. Significant advances have been made in addressing gender inequality, and in the 2020 Global Gender Gap Index Bangladesh was ranked 50 out of 153 countries for gender equality (up from 91st in 2006), the highest rank of any country in South Asia.[13] However, although women's employment rates have improved, they remain low relative to men (36 per cent of women are in the labour force compared to 81 per cent of men).[14] Social norms often limit women's opportunities in terms of the types of work that they do and their access to positions of authority. For women in poor and rural households, issues such as these are typically more acute.[15]

17. Agriculture is the country's largest sector, accounting for nearly half the workforce,[16] and is an important driver of poverty reduction.[17] The Government has made self-sufficiency in food production a national priority; yields for major crops have increased substantially over time, which has helped to overcome the devastating

[7] https://databank.worldbank.org/views/reports/reportwidget.aspx?Report_Name=CountryProfile&Id=b450fd57&tbar=y&dd=y&inf=n&zm=n&country=BGD - the World Bank World Development Indicators database.
[8] Poverty headcount using the official upper poverty line which is based on the Cost of Basic Needs. Source: Bangladesh Bureau of Statistics (2017), Preliminary Report on Household Income and Expenditure Survey 2016: https://catalog.ihsn.org/index.php/catalog/7399/related-materials.
[9] UNESCO's Institute for Statistics: http://data.uis.unesco.org/.
[10] Poverty headcount using the lower national poverty line which is based on the cost of basic food and a few non-food items. Source: Household Income and Expenditure Survey 2016, op. cit.
[11] World Bank (2019), Bangladesh Poverty Assessment: Facing old and new frontiers in poverty reduction: www.developmentaid.org/api/frontend/cms/uploadedImages/2019/10/Bangladesh-PA_-Volume-1.pdf.
[12] Ibid.
[13] Global Gender Gap Index for 2020: http://www3.weforum.org/docs/WEF_GGGR_2020.pdf.
[14] Ibid.
[15] Asaduzzaman, Kabir and Ali (2016), Gender inequality: Case of rural Bangladesh, LAP LAMBERT Academic Publishing: https://www.researchgate.net/publication/309633443_Gender_inequality_Case_of_Rural_Bangladesh.
[16] Bangladesh Economic Review 2019, Finance Division, Ministry of Finance: https://mof.portal.gov.bd/site/page/28ba57f5-59ff-4426-970a-bf014242179e/Bangladesh-Economic-Review.
[17] World Bank (2019), op. cit.

famines that in the past left millions hungry. However, agricultural yield is generally still low due to inter alia: very small average farm sizes; degradation of natural resources; limited modernization and diversification; weak research extension linkages and technology delivery; high post-harvest losses; problems with market linkages and value chains; scarcity of agricultural labour, food quality and safety problems; inadequate credit; and lack of availability of seeds.[18]

18. Arguably, at least in the pre-pandemic age, the greatest challenge to the agriculture sector and to rural people is climate change. Most of the country is situated on delta plains of large rivers flowing from the Himalayas, and is less than 10 metres above sea level. It is therefore particularly susceptible to extreme weather events including cyclones, floods and storm surges – the frequency and severity of which are increasing as a result of global climate change. This causes regular and widespread destruction of land, roads, houses and other assets.[19] Population density, poverty and high dependence on agriculture aggravate Bangladesh's vulnerability, with rural poor people with insecure land tenure, women and girls among the affected.[20] The coastal areas are particularly vulnerable, prompting the Government's attention in recent decades, for instance on enhanced agricultural productivity, coastal embankment and irrigation programmes, cyclone shelters and access roads, infrastructure in char areas for resettlement, and generation of employment and economic activities, among others, funded by public investment programmes, together with funding by external development partners.

B. Project context

19. **Project goal and objectives.** CCRIP was generated as a merger between an IFAD project, the Sustainable Market Infrastructure for Livelihoods Enhancement Project, and an ADB and KfW project, the Climate-Resilient Infrastructure Improvement in Coastal Zone Project. Both projects involved LGED as implementing agency and had already been accepted by the donors and the Government of Bangladesh when it became clear that they had complementary objectives and modalities and targeted the same districts in south-west Bangladesh. In June 2012, an agreement was reached between IFAD, ADB, KfW and the Government, to replace the two planned projects with a single project (CCRIP) containing a unified design and logframe, in order to generate synergies and management efficiencies, and to catalyze impact. In practical terms, this meant creating a single PMO and technical team to implement the components financed by each agency in parallel, since each financier funded different activities, and supervision and reporting were conducted by each financier independently.

20. CCRIP's goal was to achieve "Improved livelihoods (higher income, food security) for poor households (women, men) in selected upazilas of 12 coastal districts" by building climate-resilient roads and markets in poor, economically disadvantaged rural areas highly vulnerable to natural disasters and climate change. It was expected that improved climate-resilient road and market infrastructure would enable greater and more consistent access to inputs, services, technology and markets, reduce transport and production costs, increase sales and gains for traders and production and prices for producers, and increase access to education and health services. To address the vulnerabilities faced by women, and empower them economically and socially, the project also aimed to provide destitute women with employment and training opportunities through labour contracting societies (LCS).[21] The LCS hired women to construct road and market infrastructure through contract arrangements, substituting the usual contractors for small infrastructure works with groups of

[18] Ibid.
[19] Ministry of Foreign Affairs of the Netherlands (2018), Climate Change Profile: Bangladesh: https://reliefweb.int/report/bangladesh/climate-change-profile-bangladesh.
[20] Ibid.
[21] This modality has been used in various IFAD projects, including Sunamganj Community-Based Resource Management Project (SCBRMP), Market Infrastructure Development in Charland Regions (MIDPCR); Haor Infrastructure and Livelihood Improvement Project and CCRIP.

mainly destitute women whom LGED had used with good results in previous IFAD projects.[22] In addition, the project aimed to pilot and demonstrate ways to mainstream climate resilience in rural infrastructure.

21. **Project area and target groups.** Coastal south-west Bangladesh was selected for the project because the region is very vulnerable to monsoon flooding, river erosion and natural disasters (cyclones, storm surges), all of which are being intensified by climate change. It was also selected as the region has high levels of poverty, high dependency on small-scale agriculture and a lack of economic opportunities and infrastructure. The precarious nature of the region was illustrated when Cyclone Amphan made landfall in May 2020, affecting more than a million people.[23]

22. Within the selected 12 project districts, 32 of the least-developed and most vulnerable upazilas (subdistricts) were selected based on: poverty level; share of population in agriculture; vulnerability to tidal surge, storm, floods and river erosion; remoteness; level of communication (roads); and proportion of undeveloped markets. The second level of geographical targeting involved rural markets and connecting roads in the least-developed villages and unions within each upazila, mainly rural markets from char, low-lying, disaster-prone and infrastructure-poor communities.

23. The target group, the population in catchment areas of project markets, comprised 3.5 million people expected to benefit from CCRIP (including ADB and KfW-funded infrastructure). It was assumed that small and marginal farmers, small traders and microentrepreneurs, landless people and poor women would particularly benefit, given the agriculture-based economy and livelihoods in selected upazilas. Groups affected by CCRIP were to include: 5,000 people provided with employment and training through LCS, of whom at least 80 per cent were to be very poor women (with priority given to women-headed households); 162,400 traders in the markets under the project; 52,600 transport owners using roads improved by the project; and 235,000 households living in the area of influence of roads and markets.

C. Project implementation

24. **Project components.** CCRIP comprised three components, as follows.

25. **Component 1: Improved road connectivity**. The expected outcome of this component was "Improved road connectivity for men and women living in project upazilas to access markets and social services". Using ADB resources, the project aimed to upgrade 130 km of upazila roads, while IFAD funds were to be used to improve or construct 501 km of union roads and village roads, along with associated minor bridges and culverts. Priority was to be given to roads that benefited the highest number of people and that connected village markets with each other and with growth centres (see below). Three types of roads were to be constructed as appropriate for the conditions: bituminous roads, reinforced concrete cement roads and block roads, all with climate-resilient design features.

26. **Component 2: Improved market services**. The expected outcome was "Enhanced marketing of farm and non-farm produce in local markets and growth centres". IFAD funding was to expand and develop 197 community (village) market facilities, encompassing 3 types of markets: (i) 'special markets' with over 200 permanent shops where commodities are transacted in large quantities; (ii) 'medium markets' with more than 100 permanent shops that serve 7-10 villages; and (iii) 'small markets' with 10-50 shops that serve 3-4 villages. Depending on the type of market,

[22] SCBRMP and MIDPCR.

[23] Cyclone Amphan hit coastal areas of south-west Bangladesh from 20-21 May generating a 2 alert for districts including Satkhira, Khulna, Bagerhat, Jhalokathi, Pirojpur, Borguna, Patuakhali, Barisal, Bhola and offshore islands and chars. Following an evacuation order, more than 2.4 million people were moved to 14,636 shelters in 19 coastal districts before the cyclone hit as an "extremely severe cyclonic storm", affecting nine districts in Khulna and Barishal divisions. According to the United Nations Development Programme, the physical damage involved 149,000 hectares of agriculture land and fish farms, 150 km of protection embankments, 200 bridges and culverts and 100 km of roads.

this would involve building multi-purpose sheds, fish sheds, open paved/raised areas, women's market sections, toilet blocks, internal roads, drainage, garbage collection pits and truck parking spaces. IFAD resources were also to fund the construction of 38 boat landing platforms (ghats) for fish catch in relevant markets, and 5 community collection points for farmers and fishers living in remote locations.

27. Besides funding the hard infrastructure, IFAD also supported building the capacity of market management committees (MMCs). MMCs involve representatives from union parishads, upazila administrations, local traders associations and other market users, in accordance with government regulations. The MMCs were trained to plan and oversee market improvements and manage markets in a sustainable and inclusive way. The project also worked to ensure sustainable financing of markets, by promoting enforcement and transparency around a Government policy requiring 25 per cent of market lease values to go to MMCs for market maintenance.

28. ADB funding was designated to improve 88 growth centres and large rural markets at the upazila level. The CCRIP design report recognized that in ideal conditions the selection of markets and roads would be coordinated by IFAD and ADB, in order to maximize connectivity and integrate rural communities in value chains. However, sites for IFAD-funded infrastructure had already been identified as part of the Sustainable Market Infrastructure for Market Enhancement project, and to avoid delaying implementation this selection would be retained.

29. **Component 3: Enhanced climate adaptation capacity**. The expected outcome was "Rural communities and local authorities are able to cope with volatile climate events and meet their basic needs during climatic shocks". Most funding for this component came from KfW and was allocated to construction or improvement of 25 cyclone shelters, 5 livestock shelters and upgrading the access tracks.[24]

30. IFAD resources were allocated to train LCS on construction and other income-generating activities, to train MMCs to plan and supervise market improvements, and to manage the improved markets. In addition, IFAD grant funding was intended for (i) a Rural Radio Initiative (RRI) to provide mass information on agricultural, market, climate-related and sociocultural topics; and (ii) action research on sustainable waste management in markets, bioengineered slope protection for road embankments, and quality test protocols for road and market constructions.

31. **Changes during implementation.** There was no significant change to project design. There were difficulties acquiring land for commodity collection points, for some community markets and for women's market sections. Devaluation of the Special Drawing Rights and US dollar against the Bangladeshi Taka reduced the value of project aid and led to a minor reallocation of IFAD funds (January 2018), as well as adjustments to construction targets at the mid-term review (MTR): the total number of roads increased from 501 km to 533 km (165 km union, 368 km village), community markets decreased from 197 to 185, the women's market sections decreased from 15 to 14, ghats increased from 38 to 40, and commodity collection points decreased from 5 to 0.

32. **Time frame.** CCRIP, approved by IFAD's Board on 10 April 2013, was effective in June 2013. The completion date was 30 June 2019. Loan closing is 31 March 2020.

33. **Project costs and financing.** CCRIP was initially estimated to have an overall cost of US$150 million, of which IFAD would provide two loans equivalent to US$59 million and a grant equivalent to US$1 million, ADB would provide two loans equivalent to US$40 million and a grant equivalent to US$10 million, and KfW would provide a grant equivalent to US$8.8 million. The remaining US$31.2 million would be provided

[24] In addition, KfW and ADB funds were to be used to enhance LGED's Information/GIS system, develop a web portal, organize training sessions on climate-proofing of rural infrastructure and knowledge management, and set up a climate change assessment strategy and climate resilience rural infrastructure management plan for LGED.

by the Government of Bangladesh, to cover LGED staff salaries, operating costs, land acquisition and resettlement costs, and taxes and duties.

34. The budget was revised at MTR, resulting in a slightly higher total project cost of US$154.1 million but a reduction in IFAD's contribution to US$57 million. Seventy-five per cent of the total investment, and 95 per cent of IFAD's part, would consist of road and market infrastructure. Based on the design report, the focus on infrastructure was to avoid overwhelming LGED's capacities (as an engineering institution) with livelihoods and value chain development activities, which were expected to be provided through other IFAD-funded projects in the region.

35. Based on the PCR, the project achieved an overall disbursement rate of 88 per cent. The disbursement for the IFAD loans and grant was 98 per cent by March 2020.

36. **Implementation arrangements.** LGED, part of the Local Government Division of the Ministry of Local Government, Rural Development and Cooperatives (MoLGRD&C), was the implementing agency. A PMO was established at the LGED headquarters in Dhaka and coordinated project implementation through three regional project offices and district and upazila LGED offices. A project steering committee provided policy guidance for project implementation. The committee was chaired by the secretary of the Local Government Division and included representatives from LGED, the Roads and Highways Department, the Planning Commission, the Implementation, Monitoring and Evaluation Division of the Ministry of Planning, the Economic Relations Division, and the Finance Division of the Ministry of Finance.

37. The upazila roads, growth centres, large markets and cyclone shelters funded by ADB/KfW were built by contractors selected through a competitive bidding process. Most union and village roads, and some community markets funded by IFAD, were built by contractors recruited by LGED in project districts following routine LGED contracting procedures. However, earthworks of road development and medium and small community markets were constructed by LCS; these workers were recruited, trained and supervised by CCRIP and LGED engineers using guidelines from a past IFAD-funded project.

Key points

- CCRIP was implemented in 2013-2019 in a climate risk-prone coastal zone of Bangladesh. The goal, to achieve "Improved livelihoods for poor households in selected upazilas of 12 coastal districts", was to be achieved through building climate-resilient roads and markets in poor and economically disadvantaged rural areas highly vulnerable to natural disasters and climate change.
- CCRIP combined two projects that were at the planning stage, one to be financed by IFAD and the other by ADB and KfW. Both involved the Local Government Engineering Department (LGED) as implementing agency, had similar and complementary objectives and modalities, and targeted the same districts in south-west Bangladesh. The unified project had a single design and logframe but each financier funded different activities and had separate supervision and reporting requirements; this meant it was more like a parallel financing arrangement.
- The project aimed to improve rural roads and market services, and to enhance climate change adaptation capacity. It involved national partners in action research and communication services linked to climate resilience and adaptation.
- The PPE was conducted in 2020 and coincided with the onset of the COVID-19 pandemic. This required that design and implementation of the PPE had to be significantly, flexibly and regularly adapted to take the challenges and risks into account, using innovative evaluation methods in order to maintain quality and safeguard participants' health.

III. Main evaluation findings

A. Project performance and rural poverty impact

Relevance

38. **The CCRIP was aligned with country strategies and development priorities.** At design time, CCRIP was aligned with the Government's Sixth Five Year Plan (2011-2015).[25] The Country Strategic Opportunities Programme (COSOP) 2012-2018 reflects the Government's priorities. The CCRIP concept note was designed to reflect the related development priorities of the plan, such as rural roads and markets, agriculture, livestock and community-based fisheries, as focal areas for pro-poor growth.[26] CCRIP was developed to contribute to developing agriculture by building climate-resilient infrastructure, improving access to local and "outside" markets, reducing production costs and enhancing communication.

39. **CCRIP was relevant and responsive to IFAD strategies and policies.** CCRIP referred directly to IFAD's Strategic Framework 2011–2015 by aligning with the strategic objectives of increasing rural people's productive capacities in sustainable and resilient ways, increasing their engagement in markets, and strengthening the environmental sustainability and climate resilience of their economic activities. The CCRIP design was part of the response of IFAD's country programme to the evolving Government priorities in rural economic development, giving emphasis to climate change awareness and promoting linkages between infrastructure and livelihood resilience to climate change under the COSOP 2012-2018.

40. The 2013 Bangladesh Country Programme Evaluation[27] assessed satisfactorily the general **relevance** of CCRIP, in line with the PCR conclusions (compare paragraphs 98, 99, 102 on a satisfactory assessment of Relevance).

41. **The approach used to design and construct climate-resilient infrastructure incorporated structural and management dimensions of sustainability and resilience.** The approach also capitalized on the opportunity to locally generate employment in construction for poor men and women. End-line studies indicate that while stakeholders were broadly very satisfied with the infrastructure, in some cases what was built by CCRIP didn't always meet all local market requirements.[28]

42. At the time of the MTR, CCRIP had an established structure and was well advanced, thanks to the relatively simple design of the project and close involvement of LGED. No major changes in project design were recommended at that time. The review raised some issues related to the management of market waste. In Bangladesh, while this is an issue that goes beyond CCRIP areas, it is exacerbated by the growth in market trade through CCRIP. The project design considered these issues by piloting the use of biodigesters[29] and providing training on waste management to MMCs. However, these interventions were insufficient to mitigate the risk of negative environmental or health impacts.

43. The MTR also found that conservative sociocultural values and norms and family-related responsibilities were a barrier to some women's participation in LCS and markets, and acted as a constraint on women's economic empowerment more generally. CCRIP therefore decided to pilot the Gender Action Learning System (GALS) to test the effectiveness of this approach for creating an enabling

[25] The sixth five-year plan emphasizes the need to create employment opportunities for rural poor and women in agriculture and livestock, and to build rural infrastructure to develop the rural economy.
[26] Country Strategic Opportunities Programme (COSOP) strategic objectives: (i) livelihoods of poor people in vulnerable areas adapted to climate change; (ii) small producers and entrepreneurs benefit from improved value chains and greater market access (roads, market infrastructure); and (iii) marginalized groups, including poor rural women, are economically and socially empowered.
[27] Country Programme Evaluation, Bangladesh, Independent Office of Evaluation (2016), para. 20.
[28] E.g. enough truck-parking spaces in markets with significant wholesale trade, office space for MMCs, and additional trading space, dustbins and street lighting, among others.
[29] CCRIP research on this matter is described in next sections and 'environmental sustainability'.

environment for women, with a view to scaling up the approach in a subsequent IFAD project to be implemented by LGED – Promote Resilience of Vulnerable Through Access to Infrastructure, Improved Skills and Information (PROVATi3).[30] In addition, following a number of accidents at LCS construction sites, provision was made for work-related insurance for LCS members.

44. **Implementation arrangements were appropriate but could have benefited from more extensive involvement of local governance institutions and of other local organizations**. LGED is the engineering arm of the Ministry of Local Government and is the key Government agency for rural infrastructure development. It is an efficient institution and a long-term IFAD partner that has historically delivered well. Modalities were therefore designed to follow the effective approach inherited from IFAD-Government/LGED projects.[31] However, local governance institutions like the upazila councils and union councils (union parishads) play crucial roles in the management, funding, oversight and legitimacy of rural markets, in line with Government directives. Some of the market-management issues (discussed elsewhere in this report) may have been more effectively addressed if upazila councils had been given a more extensive role in project implementation and oversight, rather than just being involved as local authority representatives in MMCs. Likewise, partnering with local NGOs or other local organizations with expertise in gender and social inclusion would have provided complementary expertise to that of LGED. It could also have enabled greater participation of women and disadvantaged groups in markets from the start.

45. **CCRIP consulted with communities and local stakeholders when developing plans for road and market improvements[32], and key stakeholder groups were involved throughout as a result of being represented in MMCs[33] or participating in LCS construction, which generated a sense of community ownership.** This was considered by interviewed people a strong aspect of CCRIP that made it differ from usual infrastructure development not having local ownership. Despite some initial suspicion by some community members in expressing their opinion and providing feedback, with time the local communities started to realize that their views were being taken into consideration and started sharing ideas and opinions.

46. **There was a gap in the design and management of CCRIP in terms of integrating the income generating activities (IGAs) and livelihood aspects and activities from another IFAD-funded project in the same project area. This affected, to some extent, some of CCRIP's intended outcomes**. The design of CCRIP did not include activities to strengthen on-farm and off-farm livelihoods, partly to avoid overburdening LGED, especially since the PMO had to manage three parallel cofinanced subprojects. Instead, it was expected that beneficiaries would get IGA support from another IFAD-funded project in the same area – the Promoting Agricultural Commercialization and Enterprises Project (PACE). However, PACE targeted the microentrepreneurs with loans from partner microfinance institutions, and ultimately there was little overlap within communities that PACE and CCRIP worked with. The LCS members did not fit within the clients

[30] Promote Resilience of Vulnerable through Access to Infrastructure, Improved Skills & Information.

[31] Contractors for LGED built upazila roads, growth centres, large markets, cyclone shelters funded by ADB/KfW. Contractors for LGED built union or village roads and community (village) markets, funded by IFAD; block roads and roadside plantation was made by LCS groups. Community village markets except type I special markets were built by LCS hired by LGED in MIDPCR, a previous IFAD-funded project, and profit sharing in LCS groups.

[32] Project documents and stakeholder interviews show that CCRIP undertook consultations with communities, the Government and implementing partners at local level. The final progress report for CCRIP's Gender Action Plan indicates that consultations were held in all 272 communities where markets were improved, and that 31 per cent of the 9,842 participants in those meetings were women (against a target of 30 per cent).

[33] Government regulations stipulate that MMCs should comprise 11 members: the chairman of the union parishad (UP), a representative of permanent shop owners, the ward UP member, the female (reserved) ward UP member, the union land officer/assistant, a woman shop owner, the LGED community organizer, two temporary traders, a van/rickshaw puller and a bus/truck owner.

being considered by PACE partners. This should have been foreseen when PACE was designed, since CCRIP's intended outcomes in part depended on livelihoods support from PACE. When it became apparent (during implementation) that PACE would not provide the expected support to CCRIP beneficiaries, CCRIP took corrective measures and proactively introduced IGA training for beneficiaries. Nevertheless, the limited consideration of the above at the stage of design and of partnering with PACE, while the reciprocal objectives and the different beneficiaries were well known, suggests a gap in institutional accountability. This is likely to have affected, to some extent, CCRIP's intended outcomes (since only a few IGA training days were provided to each beneficiary, rather than the broader support for IGAs and value chain development expected via PACE.

47. **Coordination with other donors in project design and implementation leveraged the efforts and led to cost savings. However, it did not include coordinating the selection of project sites, which limited the additionality from cofinancing.** Originally there were two separate projects planned for the same area: ADB and KfW operated at the level of larger roads and markets, and IFAD at the level of smaller roads and markets. Bringing the two projects together therefore leveraged complementary approaches to infrastructure. Cofinancing arrangements with ADB and KfW resulted in some cost savings. However, they did not include coordinating the selection of sites for IFAD-funded infrastructure, which had already been identified as part of the Sustainable Market Infrastructure for Livelihoods Enhancement Project design (involving a lengthy process). To avoid delays, it was decided to retain this site selection. This limited to some extent the even greater realization of the additionality[34] from cofinancing market channels and value chains, from rural communities to urban areas.

48. **Focusing on the south-west coastal region of Bangladesh and targeting the least-developed and most vulnerable rural communities in this region for climate-resilient infrastructure was very relevant**. This was in light of the threat posed by climate change and natural disasters, and the importance of road connectivity and market infrastructure for strengthening rural livelihoods and addressing poverty. For example, shortly after the project closed, Cyclone Amphan struck the project area. Targeting poor women for involvement in LCS groups was also appropriate, given women are often excluded from labour markets in Bangladesh. Since most market users and transport owners in rural Bangladesh are male, most direct beneficiaries from CCRIP were men. The design included a gender mainstreaming strategy to try and ensure maximum participation of women in project activities and benefits, but this only partially compensated for this bias.

Summary – Relevance

49. CCRIP was well aligned with country and IFAD priorities, policies and strategies, with appropriate implementation arrangements, participation, buy-in by users or partners, and relevant targeting. However, the integration of support for income-generating activities and livelihoods into the design and implementation, through the PACE project, did not materialize as expected, which suggests a gap in institutional accountability. Coordination with the other donors created complementarities and efficiencies, but the selection of roads and markets was not done jointly, meaning that opportunities arising from complementary approaches to infrastructure development were not optimized. Overall, therefore, the relevance of CCRIP is rated as **satisfactory (5)**.

[34] Project infrastructure was divided among cofinancers to avoid overlap and ensure complementarity. These were allocated among financers according to their strength and resources: primary and secondary markets and connecting roads at union and village level were developed with IFAD resources; growth centres, large rural markets, connecting roads at upazila level were financed by ADB; construction and repair of cyclone shelters by KfW. Each subproject was selected after ADB and KfW conducted the feasibility study to optimize the synergy with the IFAD-financed activities.

Effectiveness

50. **Adequacy of the monitoring and evaluation (M&E) system. CCRIP activities and results were tracked in line with the project logframe, and monitoring data were collected regularly, yet with some discontinuity and gaps.** In 2017 the logframe changed from being driven by the Results and Impact Management System (RIMS) to being driven by the Operational Results Management System. Neither version of the logframe included indicators to track the number of market traders and transport owners benefiting directly from the project, which led to a significant gap in reporting. Monitoring data were generally collected continuously, but interviews revealed the existence of some discontinuity since field staff did not always receive full logistic, connectivity and communications support. This at times also concerned the staff responsible for data entry, analysis and reporting.

51. Baseline surveys focused on IFAD-funded infrastructure and activities were carried out in 2014, and a midterm evaluation of outcomes in late 2018. Data for the 2018 midterm outcome studies were combined with data for an impact assessment by RIA, sampling from where infrastructure had been improved at least two years before to allow some impacts to occur. As such, the midterm outcome studies effectively served as endline studies for the IFAD-financed components.[35] Other studies included a baseline on RRI and an endline on climate-resilient and climate adaptation features of infrastructure. As a result of the complex market-development process, the project constructed markets first and then built connecting roads. As a result, some elements of the M&E system were delayed (specifically the midterm outcome studies), meaning that the information was gathered too late to be used as initially intended.

52. **CCRIP's outreach and targeting were broadly satisfactory.** The PCR states that the project reached an estimated 600,000 households or 3.7 million people in the 12 project districts, with approximately 46 per cent of households estimated to be poor or very poor. Outcome studies and the RIA impact study suggest that the intended target groups (farmers, small traders, microentrepreneurs, and poor and vulnerable groups of women) benefited from CCRIP. The RIA study found that farm households apparently benefited more than non-farming households, which are less poor in terms of increased household income (more details under Rural Poverty Impact).

53. There were 5,723 poor women and men involved in LCS groups, which is 14 per cent above the target of 5,000, with BDT 43.4 million distributed as wages and BDT 63 million as profit (averaging BDT 18,592 per LCS member but with large variations).[36] Seventy-nine per cent of LCS members were women, close to the target of 80 per cent. Contractors involved in constructing larger roads and markets (including some IFAD-funded markets) were also encouraged to hire poor women as labourers. Overall, 41 per cent of the 2,567,830 labour days generated by CCRIP infrastructure development were allocated to women (73 per cent of all labour days carried out by LCS members and 25 per cent of all labour days carried by workers hired by contractors).[37]

Objective 1: Improved road connectivity for men and women living in project upazilas to access markets and social services.

54. **The project likely achieved the target of roads construction against output targets, within an acceptable margin given the uncertain data reported.** The completion of IFAD-funded roads by June 2019 is in Table 1. As compared to an initial target of 501 km of combined union and village roads, adjusted to 533 km at the MTR, 156.5 km of union roads and 305.8 km of village roads were built (total 462.3 km), 70.7 km less than the revised target, by June 2019. The PCR does

[35] Baseline surveys and endline study for ADB were carried out separately, respectively in 2016 and in 2019.
[36] The number of LCS members and total amount distributed as wages and profit are from section D.1 of PCR (paragraph 6). Other parts of the PCR report different numbers (section D.4, appendix I (logframe results).
[37] Data from the final progress report on Gender Action Plan, April to June 2019.

not clearly show data on road construction but reports that an additional 361.21 km of union and village roads were completed by project end (IFAD/Government funded), on top of that already reported, and 155.3 km of upazila roads by ADB/Government. Total roads constructed or improved under CCRIP would largely exceed the initial target. However, the PCR (appendix 1) reports a total of 750 km constructed against an initial target of 709 km. These inconsistencies made it difficult to assess whether the targets were entirely met, but the trends based on available documents at the time of completing the PPE were positive[38] and some updated data provided subsequently by the Economics Relations Division during the PPE validations suggests that the targets were eventually met.

Table 1
Outputs against targets for component 1 – Improved road connectivity

Target at design (June 2013)	*Revised target and progress (MTR June 2017)*	*Achievement (PCR June 2019)*
501 km (IFAD-funded):	533 km (IFAD-funded) – revised target[39]	156.5 km union roads
160 km union roads	Progress: 248.89 km roads (79.46 union, 169.43 village)[40]	305.8 km village roads
341 km village roads		Total: 462.3 km

Source: PCR, appendix 4.

55. **The construction of roads met some relatively good standards, with the inclusion of climate resilience features**, primarily including the additional 200 mm elevation to avoid significant damage. This applied especially to rural roads, which usually need major repair a few years after construction. Local-level interviews and visual validations, and CCRIP project reports, suggest that LGED developed a quality-control protocol for road and market construction,[41] and that local committees and MMCs[42] were normally involved in monitoring quality and communicating on quality aspects with LGED. However, ensuring good quality-control during infrastructure construction was sometimes challenging due to the need to provide substantial supervision support to LCS groups, with geographical remoteness and a heavy workload making it difficult for LGED engineers to travel frequently to some project communities.

56. **The volume of traffic and activity increased, and costs to operate vehicles declined, factors which are associated with road construction and rehabilitation.** Motorized transport increased 117 per cent on haat (market) days and 84 per cent on non-haat days between 2014 and 2018, on IFAD-financed village and union roads, versus increases of 16 per cent and 39 per cent for the control group of roads.[43] This exceeds the CCRIP target of a 50 per cent increase. For non-motorized transport, manual rickshaws/vans, the control roads experienced larger increases than project roads since 2014, which shows the extent to which road quality affects the type of vehicles that use roads. For CCRIP roads, there were more passengers per vehicle, lower passenger fares per kilometre[44] and faster travel per kilometre.[45] The traffic volume in the monsoon season only declined by 13 per cent

[38] For example, the 2018 supervision mission reported that CCRIP was on course to meet the targets (360 km roads already constructed, 128 km under construction and 311 km procured for construction; total 799 km).
[39] Target revised was 165 union roads and 368 village roads (as revised at MTR in June 2017).
[40] Project completed 248.89 km roads (79,46 km, 169,43 km union and village roads respectively), additional 108.5 km under construction (37.39 km union roads, 69.2 km village roads at different stages of development), and 197.60 km were planned for 2018. The average cumulative physical progress to 30 June 2017 was 55 per cent.
[41] Although systematic compliance on these aspects could not be verified by the PPE.
[42] Centre for Environmental and Geographic Information Services (CeGIS), 2019, Volume I.
[43] Baseline and midterm outcome surveys, BETS Consulting Services Ltd (BETS) and Agrani Bank Limited (ABL) (2015 and 2018).
[44] There was a 39-41 per cent reduction in travel cost per kilometre for motorized vehicles (whether it was haat day or not) and 37 to 38 per cent reduction for non-motorized vehicles. The target was 25 per cent reduction.
[45] Average 31 per cent reduction in travel times per km for motorized vehicles and 23 per cent reduction for non-motorized vehicles, against a target of 50 per cent.

from the dry season, after the road improvements, in line with 42 to 48 per cent declines at baseline.[46]

57. Vehicle owners and operators indicate that the cost to operate and maintain vehicles on project roads went down (average of 7 per cent for motorized vehicles, 10 per cent for non-motorized vehicles) from 2014 to 2018, compared to increases of around 8 per cent for control roads.[47] Reduced costs on CCRIP roads may be due to less damage to vehicles on improved roads, and/or higher passenger numbers.

Objective 2: Enhanced marketing farm and non-farm produce in markets.

58. **Output targets under this component were met in most cases, in terms of markets built or rehabilitated, with some shortcomings also due to lack of available Government-owned land at construction sites. The construction standards were mostly met by applying the climate resilience features.** CCRIP recorded the construction or rehabilitation of 88 large markets in 12 districts as per ADB/Government target and 184 community markets, as compared to an initial target of 197 (IFAD/Government funding target, under IFAD responsibility, Table 2). In addition, 28 boat land platforms (ghats) were built (against an initial target of 40). Where infrastructure targets were not achieved, this was often due to a lack of available Government-owned land at construction sites. This mainly affected the building of community collection centres – none of 5 planned centres was built, and 4 of 15 planned women's markets sections were not built for this reason.[48]

Table 2
Outputs against targets for component 2 – Improved market services

Target at design (June 2013)	*Revised target and progress (MTR June 2017)*	*Achievement (PCR June 2019)*
Total: 197 community market facilities	Total: 185 (target) 139 (progress) community market facilities	Type 1 (special): 4 Type 2 (large): 33 Type 3 (small): 147 Total: 184 markets

Source: PCR, appendix 4.

59. An independent 2019 study reported that relatively good standards had been applied in terms of quality of infrastructure and of quality control for roads and for markets.[49] However, the quality control on rural markets was not always ideal or could not always be ensured. Observations by the PPE and feedback from upazila engineers and MMCs suggest that, for the sample market sheds and concrete areas built by LCS, there was no need for significant maintenance since all markets were in good condition and usable by local traders and producers; this was even after minor damage caused by Cyclone Amphan and floods. Since no floor or concrete areas of the markets were flooded and remained usable in local weather conditions, it is concluded that overall markets were constructed by properly applying the climate resilience features, raising the floor above the height of floods level and adhering to quality protocols.

60. **Market management improved, yet the quality of management varied depending on capacity and commitment of MMCs members.** CCRIP required that all markets had properly constituted, multi-stakeholder MMCs, offered training to MMC members (normally followed by refresher training) and provided follow-up

[46] As confirmed in interviews: travel times declined and annual traffic volumes grew at times by 20-60 per cent.
[47] Baseline and midterm outcome surveys, BETS and ABL (2015 and 2018).
[48] Markets by CCRIP were built on existing markets, selected based on poverty incidence, agricultural labour rate around markets, vulnerability to natural hazards, remote location, percentage of paved road and road density. Infrastructure was built on Khas (Government) land or on donated land. As land is scarce, CCRIP was not able to identify Khas land to build all community collection centres and women's market sections.
[49] CeGIS, 2019, Volume I.

support and monitoring through field monitoring officers. Monitoring data on MMCs performance were collected by these officers and problems were reported to the PMO,[50] but MMCs performance data were not aggregated at project level and were not available for the PPE team to review. For markets visited for the midterm and endline outcome studies, MMCs were generally found to be run, and to be executing tasks, in line with Government regulations.[51] [52] These issues were also raised in project reports and during PPE interviews, with market-management quality varying depending on the capacity and interest of MMC members, mainly the president.[53]

61. **The key issue affecting market sustainability is funding of market maintenance due to insufficient funds generated through lease fees that, despite increasing, resulted in insufficient market maintenance.** Government regulations require that 15 to 25 per cent of market leasing fees be transferred to MMCs for market development and maintenance. To get these funds, MMCs must prepare an annual maintenance plan and submit it to upazila executive officers. Prior to CCRIP, this system was not functioning in most markets due to: MMCs not being constituted and/or not understanding and executing their tasks; a lack of open competition and transparency in awarding leases; and variable and low lease values with little correlation between value and market turnover, resulting in insufficient funds generated for market maintenance and oversight. Tolls, only collected from temporary traders, were usually higher than fees authorized by the Government, and leaseholders did not fulfil their responsibility for daily cleaning of markets.[54]

62. The midterm and endline studies found that lease values increased (on average) after market development but not proportionally to the growth in market turnover, resulting in insufficient funds for market maintenance. They also reported that the process to award leases often did not comply with Government rules. While the PCR found that, for the markets visited, MMCs received a share of lease funds and used it for market maintenance, people interviewed for the PPE suggested that CCRIP project staff played a critical role in ensuring upazila executive officers allocated funds to MMCs, and for several markets these funds were still not forthcoming. Although many markets are now posting the official toll rates, as required by regulations, the tolls collected by leaseholders often exceeded the rates, with less monitoring of toll collection by the Government.[55]

63. **Overall, the volume of trade, and the numbers and activity levels of traders, producers, transport providers and other enterprises in and around markets developed by CCRIP increased significantly during the project. As a result, some of the markets needed expansion to meet the local demand.** According to the 2018 midterm study, the improved number, variety and quality of market facilities for project markets since 2014 far outweighed those of comparable non-project markets.[56] The average number of permanent shops and temporary traders increased by 169 per cent, and 53 per cent, respectively, versus 25 per cent and 55 per cent increases for the control group (Table 3). This is noticeably higher than the 25 per cent endline target. Trading hours in project markets were extended and the volume of goods traded increased by 241 per cent, versus 40 per cent for control markets and a target of 50 per cent. Likewise, total market turnover was estimated

[50] During monthly team meetings and led to action taken by the Project Director to resolve any issues.
[51] Baseline and midterm outcome surveys, BETS and ABL (2015 and 2018); and endline studies by University of Dhaka (ISWR), market study, 2019.
[52] Leaseholders apparently fulfilled their tasks. Market users reported improved security and cleanliness, yet an inspection of a sample of project markets conducted in 2019 found cases of repairs not carried out to sanitation facilities, toilets not cleaned adequately and inadequate waste management. CeGIS, 2019, Volume I.
[53] The MMC president is the chairman of the union parishad, the village level authority.
[54] CCRIP aimed to address these by: (i) a precondition for market development that upazila administrations commit to sharing lease income with the MMCs for market maintenance; (ii) training MMCs on Government rules for market management and how to develop and submit their annual plans to upazila executive officers; and (iii) engaging in dialogue with the Government to ensure regular competitive bidding to lease out markets.
[55] Baseline and midterm outcome surveys, BETS and ABL (2015 and 2018).
[56] Baseline and midterm outcome surveys, BETS and ABL (2015 and 2018).

to have increased by 190 per cent on average over the four-year period, compared to an increase of 41 per cent for the control group and a project target of 20 per cent.[57] More transport vehicles serviced project markets, and capital was invested in market shops, in business enterprises and in other establishments in the surrounding areas.[58]

64. Also based on PPE field interviews, the project enabled greater and more consistent access of local people to markets; these people can now transport their products (e.g. agricultural, fisheries) more easily, and conveniently trade in all weather conditions. In all markets, the number of customers, traders, farmers, permanent and temporary traders, and the volume of trade, increased significantly (reportedly, in the sampled communities, estimates of increases ranged from 20-30 per cent to doubling) and some of the markets needed expansion to meet the demand of local traders and producers.

Table 3
Average number of traders in CCRIP community markets before and after the project

CCRIP market						*Control market*					
Permanent shops			*Temporary shops*			*Permanent shops*			*Temporary shops*		
2014	*2018*	*Change*	*2014*	*2018*	*Change*	*2014*	*2018*	*Change*	*2014*	*2018*	*Change*
153	411	169%	274	420	53%	120	150	25%	55	85	55%

Source: BETS and ABL, 2019.

65. **Improved, climate-resilient road and market infrastructure has helped to ensure producers and consumers have year-round access to markets.** There are more traders for producers to sell to and for consumers to buy from. Trading hours were extended and special market days prior to major festivals added. Improved market facilities have made markets more usable and attractive to consumers, including women. Market access has also been facilitated by the increase in transport service providers and reduced travel times and costs. As a result of these changes, the 2018 outcome study on community markets found that the average number of consumers per shop had increased by 188 per cent on haat days and by 122 per cent on non-haat days. It also found that products from CCRIP markets were now being sold to buyers outside the upazila and district, whereas in comparable non-project markets sales were still all within the upazila. Farmers therefore encountered more favourable conditions for selling more of their output at the markets, increasing their volumes of trade.

Objective 3: Rural communities and local authorities are able to cope with volatile climate events and meet their basic needs during climatic shocks.[59]

66. **A management plan for climate-resilient infrastructure was developed by CCRIP, and targets were broadly achieved in terms of infrastructure built that generally met the quality standards, capacity delivered and climate information provided, for rural communities and local authorities to cope with climate events and meet their needs during climatic shocks.** In terms of approaches for coping with climatic volatility and for better resilience to climatic shocks, CCRIP completed a climate-resilient rural infrastructure management plan. Under this project component, 22 cyclone shelters were built, plus 1 killa (shelter for livestock) and 24 km of access roads, thereby adding shelter capacity for about 6,600 local rural people. In addition, 432 training sessions were provided to infrastructure

[57] Confirmed by field interviews that two of the markets in the PPE sample (Tarail, Munshigonj) report an increase in overall trade volume in all markets, and an increase of about 60 per cent in some markets.
[58] Such as shops, supermarkets, computer service centres, cyber cafes, hotels, restaurants, Government, private and NGO offices, manufacturing facilities.
[59] Activities implemented under project component 3 were funded mainly by KfW. The PPE focused on activities funded by IFAD, and, where not possible to attribute results clearly to one financier, only the contribution of IFAD was analysed. The extent to which this project objective was met was therefore only partially assessed.

management groups,[60] 8,916 people (73 per cent female) trained in infrastructure development, 8,227 people (67 per cent female) trained in IGA and business management, and an estimated 536,680 people were provided with climate information services via the RRI. The use of ICTs to support the RRI was piloted to enhance dissemination of information for small farmers and small producers, for example related to market days, commodity prices, weather forecasts and early warnings, and messages for the extension of crop, fish and livestock production. Climate change adaptation measures were applied under all technical components.

67. As discussed further under *Adaptation to climate change*, component 3 to enhance climate change adaptation capacity included incorporating climate resilience features into the design of roads and markets. Road embankment heights were designed to be up to 800 mm above flood level;[61] additional drainage structures considered added run-off and sea level rise; pavements incorporated full drainage layers and slope protection by planting vetiver grass (bioengineering) on road shoulders and embankments; community markets were developed on raised land or filled ditches to prevent them being affected by floods, with structures well above the expected maximum flood levels.

68. Field interviews with beneficiaries and with local LGED upazila engineers and MMCs, as well as the visual assessment of roads and markets, revealed that infrastructure in the selected communities was resilient against the climate impacts of Cyclone Amphan and floods. No road was significantly inundated, or damaged, only minor road-slope damages were observed, and the road embankments were in good condition. Market sheds and concrete areas were not significantly affected, suggesting that, in those districts, CCRIP infrastructure was able to withstand those severe climate events and remain operational through the climate hazards.

69. **The piloting and use of bioengineering technology (vetiver grass) for durable, low-cost, maintenance-free, road-slope protection produced promising results and has potential for the future.** Road embankment slope protection typically involves the use of expensive materials and requires adherence to quality standards in construction, both of which can be problematic. CCRIP was among the first LGED projects that – in Bangladesh – piloted the use of vetiver grass for slope protection and funded researchers from the Bangladesh University of Engineering and Technology (BUET) to conduct field trials in 13 sites across 9 project districts; vetiver grass was planted along 100-metre strips of road and then monitored. The vetiver generally took hold and performed well as slope protection, due to its deep-root system but, in areas with saline soil, adding organic fertilizer and proper watering (or planting just before monsoon) were preconditions for success. Results[62] were disseminated to LGED and other agencies and this led to good uptake of the technology (see under 'scaling up').

70. **The use of biodigesters for sustainable waste management in rural markets, researched during the project, shows potential but it is far too early to say how viable and scalable the technology is.** Aware of the environmental and health issues associated with the lack of waste-management systems in rural markets, CCRIP funded action research on anaerobic waste treatment. BUET's laboratory analysis of waste from two large markets, and information from an existing biodigester plant,[63] indicated that biodigesters have the potential to be a commercially viable and sustainable way to deal with market waste.[64] Two biogas

[60] Since there were 275 CCRIP markets and 22 cyclone shelters, it is assumed 432 refers to training sessions for infrastructure management groups, with some MMCs and cyclone shelters groups getting more than 1 round of training.
[61] In a 'climate-resilient' scenario, roads were raised by embankments 600 mm above the highest flood level, while in a 'climate-adaptive' scenario an extra 200 mm were provided in embankment height, on top of the 800 mm of the first scenario, to address forecast climate conditions for the next 20 years.
[62] Islam, Shariful, Investigation of Climate-Resilient Slope Protection of Embankments, Final Report, 2020.
[63] The BUET research uses data from a biodigester set up by an ActionAid project in 2012 and still operational.
[64] Around half of solid waste generated on market days was suitable for treatment; the resulting biogas (57-59 per cent methane) could be sold to restaurants and consumers for cooking; the slurry could be sold as fertilizer.

plants were constructed for live testing, with agreements that the MMC will be responsible for operating one and the municipal mayor the other, supported by the lead researcher from BUET. The reasons for not completing the testing were attributed to delays by the local Rural Electricity Board in installing the required connections.[65] Given that the plants are not yet operational, and that strong management is essential in ensuring proper operation, maintenance and commercialization of the plants, it is too early to say how viable and scalable this technology may be and the actual community interest in adopting it.

71. **A community radio initiative for mass communication on climate and other information was developed and run during the project, but was not continued after the project ended.** A volunteer-run interactive radio programme, *Upakuler Katha* (Voice of the Coastal People) was established under the RRI, with space provided for radio staff by the University of the Philippines Los Baños.[66] The MTR concluded that the programme was unlikely to be sustainable without any external support and recommended that CCRIP provide technical support to drawing up a plan for securing advertising revenue and/or donor or government funding. At PCR time, the programme was still running but there was little awareness of it in CCRIP communities that were visited. The radio programme developed under CCRIP ended with the project, due to a lack of funds, but the radio stations continued to broadcast previously recorded episodes and made new (less costly) programmes with financial support from other sources.

Summary – Effectiveness

72. CCRIP was among the first LGED projects to pilot climate adaptation in rural coastal areas by including climate resilience features in the design of infrastructure (roads, markets). The intended target groups (farmers, small traders, microentrepreneurs, women, and the poor and vulnerable) benefited to varying extents. The data in project documents, however, do not always or clearly allow assessment of the benefits, or confirmation of the findings, as there are gaps in reporting and it's not always easy or possible to discern the contribution by IFAD or other cofinancers. While the M&E system was run well, it was at times difficult to gather quality-control data in some areas, some elements came too late to be used as intended, and there were some limitations in aggregating or analysing data. The performance and quality of CCRIP infrastructure was assessed after the project completed, and against the impact of major climatic events that affected project areas in mid-2020; the results were positive to a large extent. The project also delivered better road connectivity that allowed users to access markets and social services, developed markets for products and (in most cases) ensured quality infrastructure. The ability of rural communities and local authorities to cope with volatile climate events was strengthened through capacity building for MMCs and LCS. Nevertheless, follow-up on training was not always enough to ensure sustained benefits. Overall, climate resilience and climate adaptation objectives and physical targets for coastal roads and markets infrastructure in the selected upazilas of the project districts were met, and some progress was made on livelihoods. Yet environmental, sustainability, livelihoods and other trade-offs were generated from which future projects can learn from CCRIP. Overall, the effectiveness of the project is **satisfactory (5)**.

Efficiency

73. The CCRIP project was designed for a six-year period of implementation from 2013 to 2019. No critical modification was made to the initial design, and the rationale of focusing on climate-resilient rural infrastructure remained coherent during the implementation period, with adequate levels of physical and financial resources.

[65] This, as reported by BUET researchers in charge, was exacerbated and further delayed by COVID-19.
[66] Four community radio stations broadcast 272 episodes of *Upakuler Katha* in 2016 to 2017, on climate safety, agriculture, weather and other rural-focused topics, reaching an estimate of more than 500,000 listeners.

74. **Disbursement, financial management and procurement were generally efficient and compliant.** The project saw high disbursement rates (88 per cent by June 2019, with the rate for IFAD loans and grants at 96 per cent at that time, and an additional 2 per cent disbursed by the end of 2019), with an appreciable cost efficiency and high leverage of IFAD funding (US$1.44 as of 31 March 2018, leveraging US$1.44 dollars invested into CCRIP from others from each dollar invested by IFAD), effective unit cost of almost all the activities,[67] and good coordination of fund utilization of all financiers (as parallel cofinancing allows cost-efficiency and sharing of human resources). **The management structure**, based on consistent interview feedback, **was sound**, as discussed in more detail under the performance of partners' criteria, namely the LGED, and there was an overall efficient operational coordination.

75. **The Economic Internal Rate of Return on the CCRIP investment was high, partially influenced by cofinancing and sharing of human resources, and maintenance costs calculations.** The PCR calculated the economic internal rate of return (EIRR) using a detailed methodology. While some of the assumptions and calculations in the EIRR submodels[68] (including markets, roads and transport) differed to some extent, the overall approach is broadly comparable, hence the final EIRR remains valid at closure time. The PCR calculations yield an EIRR of 35 per cent and an economic net present value of BDT 14,841 million for a 20-year time frame, with discount rate of 10 per cent in the base case. The EIRR grew from 17 per cent estimated as expected at the design stage, to 31 per cent at MTR time.[69]

76. What also contributed to the high EIRR is that post-project maintenance costs over 20 years, especially for roads and markets at union and village levels and MMCs, allocated from the public budgets and toll collection incomes, were not[70] always considered in total costs calculations. Maintenance of village and union roads was the responsibility of upazila or local LGED, with resources allocated from Government budgets.[71] The Government was committed to ensuring that enough funds for maintenance were in place.

77. When benchmarking the EIRR with past projects in the IOE database, the 35 per cent final EIRR for CCRIP is high in both relative and absolute terms, as compared with other IFAD projects in Bangladesh (a normal range is 15-30 per cent). In these terms, CCRIP seems to have exceeded the expectations made at design.[72]

78. The growing EIRR from design to completion suggests that the project achieved more economic returns than expected. This indicates CCRIP efficiency in investing IFAD financial resources in the economy. Part of the reason for this high EIRR is a parallel cofinancing structure in CCRIP, allowing for cost-efficiency and sharing of human resources, as it was originally foreseen as an IFAD-financed project, then cofinanced with KfW and ADB with similar infrastructure types in south-west Bangladesh.

[67] The expenditure of IFAD resources, as of June 2019, had this distribution by components: 82 per cent on roads (Component 1), 11 per cent on markets (Component 2), and management cost (5 per cent of the IFAD funds, 2 per cent higher than expected at design; unit cost per beneficiary was about US$104 versus the appraisal target of US$94 per beneficiary, about 10 per cent higher than estimated).

[68] Feasibility studies for SSW-2 subprojects show relatively high EIRR; for flood management the EIRR is 38 per cent, drainage improvement 53 per cent, water conservation 34 per cent, command area development 27 per cent (PCR appendix 4).

[69] MTR paragraph 116, working paper 6, economic analysis in paragraphs 154 and 177.

[70] An example (PCR appendix 4) is the village road model: benefits are reduced as compared to the estimates at MTR, since major repairs and high maintenance costs were not incurred at that stage and not included. Net benefits were aggregated to estimate total road benefits. Another example is the union road benefit model.

[71] LGED is bound to maintain the infrastructure and receives budget allocation for maintenance of completed work. Market maintenance is ensured by MMCs receiving up to 25 per cent of lease values collected on markets, to spend on daily and long-term maintenance. In addition, CCRIP included a rate of 5 per cent for maintenance and 10 per cent for repairs of construction, which were included in the cost flow as annual maintenance costs.

[72] EIRR comparators for projects in Bangladesh are the Participatory Small-scale Water Resources Sector Project (2019) with EIRR ranging from 26 per cent to 28 per cent, and 29 per cent for the overall; SCBRMP (2016) with PCR that did not include the EIRR for the programme as it was unsatisfactory; and MIDPCR (2015), with an EIRR of 27 per cent compared to 17.8 per cent at design.

Cofinancing increased cost efficiencies as IFAD used the services from the infrastructure specialist financed by ADB, and increased the total financing of road and market connectivity and climate resilience capacity building in the project area, improving the implementation efficiency. This helped in keeping costs commensurate to results.

79. **Coordination with other projects and agencies in terms of fund utilization, planning and monitoring of activities, and sharing of human resources with other projects and agencies, was to a large extent efficient, despite some initial difficulties and unequalness between partners.** At project design it was expected that coordination between CCRIP and PACE would enable integrated approaches. CCRIP, implemented by LGED, would provide the infrastructure "hardware" while PACE,[73] implemented by Palli Karma-Sahayak Foundation and starting in 2015, would scale up the value chain and financial services development. Project documents and interviews at various levels suggest, however, that CCRIP and PACE communities and beneficiaries had little overlap and there was no formalized coordination at design. PACE worked with organizations giving loans to microentrepreneurs, and attempts were made to facilitate linkages between LCS and PACE's partner organizations. However, most LCS members did not fit the client profile of the partner organizations (microentrepreneurs able to take out larger loans).

80. Also, separate missions were conducted for each of CCRIP's financing agencies, and for PACE. Joint missions would have enabled better communication but did not take place because of the stand-alone components and different agendas from the various partners (even though IFAD, ADB and KfW had initially agreed to conduct joint supervision missions). Coordination and communication therefore were not sufficiently efficient. The coming together of three cofinancers (ADB, KfW and IFAD) into a single project, however, also had benefits. For instance, ADB funded a design-management team. Likewise a similar arrangement by KfW and IFAD paid for field monitoring officers and for M&E and knowledge management. ADB financed a part-time gender specialist for CCRIP. IFAD provided international support on gender and other technical areas. Also, the IFAD missions and country team also benefited from receiving input from the technical teams funded by ADB and KfW. Critically, the management teams paid by ADB and KfW did not only look at KfW or ADB-funded activities, but at the whole project, likewise for gender. The knowledge management system generated learning from some good practices for the IFAD country programme in Bangladesh and other projects in the country.

Summary – Efficiency

81. CCRIP showed a satisfactory disbursement rate, effective unit cost of many of its main activities, good coordination of fund utilization, cost-efficient cofinancing and sharing of human resources and fairly efficient coordination with other projects and agencies (but not with all partners), a sound management structure, fairly efficient M&E and knowledge management systems (though a few challenges were identified), a generally compliant financial management and procurement, and a good economic rate of return, also by benchmarking CCRIP's EIRR with that of past IFAD projects in Bangladesh. This all makes the overall efficiency of CCRIP **satisfactory (5)**.

Rural poverty impact

82. CCRIP has resulted in more connected and vibrant rural markets and stimulated local economies in some of the least-developed and most climate-vulnerable areas of Bangladesh. It has also provided short-term employment for some of the poorest people in rural communities. In this section we assess the impact this has had in relation to four dimensions of rural poverty: (i) household income and assets; (ii)

[73] Implemented by the Palli Karma-Sahayak Foundation.

human and social capital; (iii) agricultural productivity and food security; and (iv) institutions and policies.[74]

83. Evidence on household-level impacts mostly comes from the RIA impact assessment (2018) which used robust methods and statistical analysis to correct for the absence of a suitable baseline. Other evidence comes from the 2018 midterm and 2019 endline studies, which involved relatively large surveys and qualitative data, but had limitations,[75] which meant that the findings needed to be treated with caution. The findings of these studies were verified and complemented by information collected during remote interviews for the PPE, including from LCS members and producers. Nevertheless, there were some gaps in evidence, particularly in relation to market prices, value chain development and differential impacts for beneficiary groups.

Household income and assets

84. **CCRIP led to a moderate increase in household income in market catchment areas.** According to the RIA's impact assessment, gross income for households within 2 km of CCRIP community markets increased by 11 per cent, against project targets of 20 per cent by 2021 (see Table 4).[76] There was no difference in net income,[77] which could be because households are investing more in their livelihoods, but could also be a sign of the low profitability of those livelihoods. There was a small increase in ownership of durable household assets but no increase in productive assets or cash savings.

[74] The RIA impact study provided a robust evidence base for quantitative impacts, complemented by qualitative information provided by local informants interviewed for the PPE. Data from the midterm and endline outcome studies have been used sparingly and with the relevant caveats, given their various methodological limitations.

[75] Limitations were: (i) the baseline study for endline survey was carried out two years after project start; (ii) the baseline studies were incomplete, so the midterm and endline included indicators for which there was no baseline data; (iii) the criteria for sampling households in the midterm study differed from the baseline, making a comparison between baseline and endline problematic; (iv) there were potential selection biases in selecting project sites for evaluation, including involvement of the PMO in site selection; (v) qualitative methods were not always used properly; for example, focus group discussions were used to collect quantitative data; (vi) before-after and with-without counterfactuals were used to assess results without testing for statistical significance; (vii) pre-existing differences between treatment and control groups were not taken into account in midterm studies; and (viii) changes due to factors beyond the project were not taken into account in the endline.

[76] The RIA impact study involved communities where market construction had been completed by July 2015 (phase 1 of CCRIP) to capture impacts after a sufficient period of time had passed. The finding of 11 per cent increase in income is therefore considered relatively reliable.

[77] Equal to gross income minus all economic expenditures.

Table 4
Impact of CCRIP on total household income and on income from different sources

Income-related indicators	*Average Treatment Effect (%)* [a]					
	Households ≤2km from markets	*Households ≤1 km from markets*	*Households ≤2km from markets, >1km from roads*	*Households ≤2km from markets, ≤1km from roads*	*Farm households*	*Non-farm households*
Gross income per capita	10.5***	9.0	12.7*	7.5	15.9***	-6.7
Net income per capita	0.01	-1.02	-	-	-	-
Above $1.90/day poverty line (% likelihood)	4.4**	5.3*	5.3*	3.8	5.5**	0.9
Income from crop sale per hectare [b]	104.0***	108.3***	150.4***	81.2**	-	-
Income from fish sales	49.5**	52.5*	59.6*	70.7**	-	-
Income from livestock sales	12.4	19.9	69.3*	-32.9	-	-
Income from waged labour per capita	18.3***	11.2	17.0	18.4**	14.2**	14.03
Income from household enterprise per capita	-9.1	12.7	-26.6	5.7	3.0	-20.9

Notes. [a] Average Treatment Effect (ATE) is the average of the difference between matched pairs of treatment and control households for each indicator, expressed as a percentage, e.g. average percentage difference between gross income per capita for households within 2 km of CCRIP markets and gross income for households within 2 km of the control group of non-CCRIP markets. For each estimated ATE, *, ** and *** indicate that the ATE is statistically significant at the 10 per cent, 5 per cent and 1 per cent levels, respectively. [b] The ATE is for households that engaged in crop production in the previous year, not the full sample of households. Income from crop sales is the gross income The same is true for the ATEs related to income from fish sales/ livestock sales/ waged labour/ household enterprise.
Source: Based on CCRIP Impact Assessment Report (Arslan, Higgins and Islam, 2019).

85. **The impact on household income varied depending on the type and composition of household livelihood strategies and on the location.** Larger increases in income from crop and fish sales for households within 1 km of markets were offset by reduced income from household enterprises and remittances. Somewhat surprisingly, there was a larger impact on total income for households that were *not* close to the road (12.7 per cent increase) than for households that were within 1 km of the road (no significant impact). This was due to larger impacts on income from crops and livestock among households further from roads.

86. Household income in Bhola District (Barisal Division) was up 60 per cent due to large increases in income from fish sales and wage labour, and in Dhaka Division household income was up 21 per cent due to large increases in livestock sales. However, there were no significant changes in household income in all other districts of Barisal and in the Khulna Division, as higher incomes from some sources were offset by lower incomes from others.[78]

87. **Poorer households, including farming households, experienced more significant improvements in income than better-off households.** There was a moderate reduction in poverty overall, with households within 2 km of community markets 4.4 per cent more likely to be above the USD$1.90 per day poverty line as a result of the project (see Table 4). This rises to 5.5 per cent for farming households. Given that the average income of farming households was 30 per cent lower than that of non-farming households, and increased by 16 per cent compared to no significant increase for non-farming households, this is evidence that CCRIP was more beneficial for poorer households. Further evidence of CCRIP's pro-poor impact

[78] The study analysed results separately for Barisal, Patuakhali, Bhola and Barguna districts of Barisal Division, but for districts in Dhaka and Khulna divisions the samples did not allow district-level analysis.

is that households further from roads were poorer and experienced larger increases in income than households closer to roads.

88. Most of the direct beneficiaries interviewed for the PPE (traders, producers and LCS members) reported an overall improvement in their livelihoods, incomes and well-being, and there were indications that households in more remote locations particularly benefited as well as people already involved in business, trading or agricultural activities prior to the project.

89. **There is some evidence that market traders' income increased as a result of the growth in trade volumes, but it is not clear whether poorer traders have benefited equally.** Traders interviewed for the midterm outcome study in 2018 reported that higher and more stable incomes enabled improvements in the quality of food consumed and investments in housing and education. However, there is no reliable data on gross and net income for traders or differences in income changes between permanent and temporary traders, or male and female traders. There is anecdotal evidence that in some markets space intended for temporary traders (generally poorer) was taken up by permanent traders, but the PPE could not verify whether this was common. On the other hand, compensation was not usually paid to traders in IFAD-financed markets for disruption to trade during market improvements; this may have affected permanent traders more than temporary traders. This was offset by negotiating voluntary resettlement with traders prior to starting construction, and in some cases agreeing a compensation package in accordance with the resettlement framework of the project.[79]

90. **LCS employment provided short-term consumption support for poor women (and men) and enabled some of them to engage in longer-term, income-earning activities.** A non-representative survey of 90 LCS women who participated in the construction of CCRIP markets found that they used just over half of the income earned for consumption, while 31 per cent was invested in IGAs[80] and 18 per cent was used to pay off land leases or debts.

    PPE interviews with LCS members found that, for many women, it was the first opportunity they had to earn their own income. The requirement that men and women LCS members were paid equally was reportedly enforced, which contrasts with the norm of paying women less than men for agricultural labour and other types of work in rural areas. Women reported using the money earned for buying land, repairing houses, paying for schooling (especially for daughters) and investing in small businesses and livestock.

91. **LCS work was popular but was not accessible to all women, and the calculation of wages and profits was not always understood by LCS members.** Most LCS women interviewed for the outcome survey and the PPE were keen to do more work through their LCS. However, this had not materialized for reasons such as a lack of new Government projects using the LCS model, a lack of equipment, insufficient skills and no access to capital. They also reported that in some areas people tried to create barriers to group formation and some members left their groups after a short period of work due to family and social pressure. Other issues raised by some women included: low wage rates and no increase in wages due to inflation; payment delays that sometimes resulted in them having to borrow money at high interest rates; some cases of gender discrimination in recruitment

[79] According to the CCRIP design report, all roads and markets were to be built on existing land. Resettlement or eviction were not foreseen in CCRIP and the design report did not anticipate issues or need for settlement with land acquisition and resettlement for IFAD-financed infrastructure, but only that should it be unavoidable; the same procedure as for ADB-financed infrastructure would be applied (ADB's social safeguard policy required that, for ADB-financed markets, traders were compensated for income loss during construction, and land-title owners compensated if road-building needed acquisition of private land).

[80] The highest proportion was invested in cow rearing (19 per cent), followed by goat rearing (5 per cent), with the remainder invested in rickshaws/vans, starting a small business or shop, and duck or chicken rearing.

and wages; and low profit payments and a lack of clarity about the way profits were calculated.[81]

92. These findings are aligned with those of a country-wide policy study on LCS commissioned by IFAD in 2017.[82] It found that women often lacked a clear plan for investing the capital from LCS profits and needed more capacity building and mentoring to make best use of money. It also noted that when LCS members subcontract skilled workers for tasks they are unable to do, they frequently pay higher rates than allowed for in LCS contracts. In addition, their contracts do not include provisions for price adjustments when material or labour costs increase as a result of project delays and seasonal or climatic factors, common in the coastal region.[83] This affects profit margins and can occasionally lead to LCS incurring financial losses.

Human and social capital

93. **A significant amount of training was provided under CCRIP but was mostly short-term and there was little follow-up or monitoring of the results.** LCS members, women traders, MMCs members and LGED officials were the main recipients of IFAD-funded training. They received, as relevant, training on basic construction, IGAs, market management, financial management, business promotion and gender. An endline assessment of CCRIP training concluded that it had increased participants' understanding and skills, but was not always planned carefully with the target audience in mind or delivered using the most effective methods. In addition, training outcomes (e.g. knowledge acquired and applied) was not monitored.

94. **Training and ongoing monitoring of MMCs led to improvements in how markets are managed and maintained, but these improvements are threatened by the lack of an ongoing training programme since the project ended.** Although LGED community organizers and upazila engineers are represented in MMCs and can therefore provide some follow-up support to other MMC members, this falls short of what is required to ensure MMCs can fulfil their responsibilities in the long term (due to turnover in the membership of MMCs, for example).

95. **CCRIP had only a small impact on LCS members' skills and knowledge related to construction and other IGAs.** The training they received on market or road construction was sufficient for them to carry out basic work, with ongoing supervision and support from upazila engineers and project staff, but skilled tasks had to be subcontracted out. A minority of LCS developed sufficient capacity to independently take on new construction works after CCRIP ended. The IGA training was limited to one day on poultry, livestock or crop production. A more comprehensive set of activities designed around value chain development was part of the 2017 livelihood strategy, but these were not implemented and the financial services expected to be channelled through PACE did not materialize in most cases.

96. **Involvement of communities in planning and implementing market improvements, including LCS undertaking construction work, has fostered a sense of ownership of markets as community assets.** As well as being

[81] Profit was allocated based on number of days worked but some LCS members did not understand how labour days were allocated, and felt that LCS chairs and secretaries benefited more than other LCS members. At times, LCS members mentioned a monthly payment of BDT 2,500 rather than daily wage and profit. This points to a need for increased transparency and effort put into enabling LCS members to understand the payment system.

[82] Neelormi, S. (2017). The study involved data collection in two CCRIP districts (Khulna and Gopalganj) plus six districts linked to other IFAD-funded projects.

[83] This was also reported by LCS members interviewed by the PPE. The project policy on price adjustments was dictated by Government procurement policy, which only allows price adjustments in contracts of more than 18 months. Most LCS contracts were for less than 18 months. The PPE team considers that special dispensation should be made for LCS contracts, given the economic vulnerability of LCS members (compared to conventional contractors). This is an issue that needs to be addressed at the policy level.

important for sustainability, this has encouraged community engagement with local government and union parishad matters, particularly among LCS members.

97. **Community radio stations learned programming skills but financial sustainability of programming remains an issue.** Training for the staff of four community radio stations reportedly increased their understanding of how to engage with listeners and how to deliver information related to climate change and agriculture. Training was also provided to enable sustainable financing of newly developed programmes; radio stations have had some success in attracting new funding, but full financial sustainability is hampered by Government rules preventing funding from commercial advertisement.

Agricultural productivity and food security

98. **CCRIP did not lead to an overall increase in agricultural production or crop diversity but did lead to a higher sale of agricultural products in markets and increased production of high-value crops.**[84] The lack of impact on productivity was partly due to there being no increase in the volume of agricultural inputs used, with signs that lack of access to capital was a reason,[85] as well as the absence of production-related activities and infrastructure in the project design. However, crop production increased in the dry season and beneficiary households were 8 per cent more likely than non-beneficiaries to grow high-value crops.

99. Income from crop sales increased by 104 per cent annually (130 per cent increase in the dry season and 79 per cent increase in the monsoon season)[86] due to a larger proportion of harvests being sold rather than used for home consumption or lost to pests. Beneficiary households were 11 per cent more likely to have sold at least a proportion of their harvest at a market rather than from home or at the farm gate, with increased accessibility and better-attended markets throughout the year reported as important factors by farmers. Similarly, there was no significant increase in the value of fish production but income from fish sales increased by 50 per cent. For livestock producers, there was no increase in the value of production or income from sales, perhaps because trading livestock at the IFAD-funded communities' markets was rare. However, the milk productivity of cows increased by 62 per cent, which may indicate that the project increased access to more productive calves and cows, and related inputs and services.

100. **Households are experiencing less food insecurity and child malnutrition has decreased, but these changes are not all attributable to CCRIP.** Households are at least 10 per cent less likely to have worried about having enough food or to have been unable to eat healthy food due to a lack of resources during the past year,[87] but there was no impact on dietary diversity. Anthropometric measurements point to reduced child malnutrition in project households[88] but there was a similar reduction in child malnutrition for households in the control group.

Institutions and policies

101. **The main institutional development was the establishment of MMCs in all markets.** Prior to the project, most markets did not have a functioning MMC and the day-to-day operation and maintenance of markets was left to the Local Traders' Association of permanent traders in each market. CCRIP has brought improvements in the way markets are governed and run. Some MMCs are taking a leadership role in promoting diverse use of market structures and sites, and seeking private sector

[84] As reported in the RIA impact study, which compared agricultural production among households in CCRIP market catchment areas with agricultural production among the control groups of households.
[85] Cited in RIA's impact study report, page 40.
[86] This was for households within 2 km of markets. For households within 1 km of markets, there was a 108 per cent increase in crop income annually, but no significant increase when the dry season and monsoon season were analysed individually.
[87] As measured using the full Food Insecurity Experience Scale score.
[88] Stunting decreased from 33.8 per cent in 2014 to 3.01 per cent in 2018; wasting decreased from 21.3 per cent to 0 per cent; and underweight decreased from 35.8 per cent to 1.25 per cent.

investment for market development.[89] The PPE validated the formation of MMCs according to Government regulations. It found that MMCs are still operational and actively involved in market management, although they meet less regularly than during the project period.

102. **Market management remains a problematic area, especially in relation to lease values and funding for maintenance.** Not all MMCs have effective leaders, and MMCs members (especially presidents) sometimes have multiple responsibilities and limited time for performing their duties. While MMCs are more representative of, and engaged with, permanent traders than they were previously,[90] permanent traders are underrepresented in MMCs, considering they have strong interest in market maintenance. There is limited (active) participation of temporary traders and women in MMCs and many traders say they have little contact with MMCs. The main challenge, however, relates to continued problems with market-leasing systems in terms of: (i) non-transparent allocation of leases and low value of leases relative to market turnover; and (ii) upazila administrations being reluctant to transfer a part of market lease value to MMCs for maintenance purposes.[91]

103. **CCRIP produced some useful lessons and learning documents, and influenced practices within LGED, but did not have a significant influence on policy at the national level.** Changes adopted within LGED include increased use of LCS in LGED works, mainly on earth-filling activities of road works, and planting of vetiver grass for slope protection. According to the design report, CCRIP aimed to engage in policy dialogue around the provision of Government funds for road and market maintenance, and to monitor and disseminate successful practices around project features such as women's market sections and MMCs, to influence national policies. Funding for road maintenance has increased in the years since CCRIP started,[92] with strong commitment within Government reflected in a policy adopted in 2012 which requires 30 per cent of the budget for infrastructure development projects to be set aside for maintenance. It is not clear whether IFAD has influenced this in any way. The PCR states that the planned policy dialogue on designing and applying good practices for climate-resilient roads and on road maintenance was not carried out, and no formal system was put in place to enable LCS formed under CCRIP to participate in other civil works (another intended policy objective). CCRIP produced good-quality studies on market-leasing systems and the LCS modality, and held some events to disseminate the findings. However, LGED, IFAD and ADB have all struggled to gain traction with Government authorities and other decision makers in relation to the recommendations of these studies. There is, however, a good chance that lessons related to climate-resilient infrastructure will influence policy through the newly created Climate-Resilient Local Infrastructure Centre (CReLIC) in LGED. CReLIC is a knowledge-management initiative that has been established with funding from KfW and the Green Climate Fund, and is being managed by the former Project Director of CCRIP.

Summary – Rural poverty impact

104. CCRIP has brought a moderate increase in income for rural households, largely driven by increased sales of agricultural outputs in markets. As a result, there has been a small reduction in the likelihood of being poor, along with lower food insecurity. Economic impacts varied depending on location and composition of livelihoods, with increased income from one source sometimes offset by decreased income from another source. The impact was greater for farming households, which

[89] As reported in the PCR.
[90] One of the strategies of the project was to enable leaders of the unofficial trader/business associations, who are actively involved in day-to-day management of markets, to become members of the MMCs under the trader quota, so that the two committees could complement each other. The project also provided training to the leaders of the trader/business associations.
[91] For example, most of the nine MMCs interviewed for the PPE were not receiving maintenance funds from their respective upazila administrations.
[92] According to senior leaders in LGED.

are generally poorer, in spite of the project not leading to an increase in agricultural production. Incomes for traders have reportedly increased and become more stable as a result of market growth and year-round trade, although there is a lack of evidence on the scale and distribution of impacts for different types of traders. LCS employment improved the economic status of some of the poorest households and enhanced the skills and confidence of poor and vulnerable groups of women, but many of the effects were short-term. In general, the project had little sustainable impact on social and human capital due to the short duration of training and a lack of sustained support after the project ended. While the establishment of MMCs in all markets was an important institutional development, further capacity building support and policy-level interventions are required for MMCs to manage rural markets effectively and inclusively into the future. Overall, the impact on rural poverty is **moderately satisfactory (4)**.

Sustainability of benefits

105. **The sustainability of project benefits largely depends on the sustainability of the infrastructure constructed or improved under CCRIP.** Different dimensions of sustainability were assessed by comparing the performance of road and market infrastructure before and after the project, and assessing the degree to which infrastructure was affected by Cyclone Amphan and subsequent flooding in 2020. The sustainability of benefits for LCS members was also explored.

106. **Technical sustainability. Project roads and marketplaces are in good condition and have been operating continuously since they were improved, with no reported service disruptions prior to the COVID-19 pandemic.**[93] For the nine communities selected for the PPE, interviews with MMCs members, along with information, photos and videos provided by upazila engineers, revealed that roads, market sheds and concreted areas were not severely damaged or inundated by Cyclone Amphan or by the recent flooding in Bangladesh; instead there was only minor damage reported, such as settlement of some roads, tearing of road surface in some places, and minor damage of roadside slopes. Most of the infrastructure had not required any maintenance since construction, but tubewells and toilet blocks in some markets needed repairs and were not operating at the time of the PPE. In recent months, markets have not able to open as usual, due to the COVID-19 pandemic. This has been a source of considerable frustration and concern among local stakeholders.

107. Several IFAD missions noted that heavily loaded trucks were using the newly constructed village and union roads and damaging them, thereby reducing the durability of roads and requiring extra maintenance even within the project period. It was recommended that village and union roads be designed to allow for these types of vehicles, given difficulties in restricting them from using the roads. LGED apparently discussed resolutions with MoLGRD&C, but no further action followed.

108. **Institutional and financial sustainability. The foundations for institutional and financial sustainability of CCRIP infrastructure investments are in place but are stronger for road connectivity than for market services.** The operation and the maintenance of village and union roads falls under the mandate of LGED, using financial resources allocated from the central government budget. The design report noted that the availability of resources was uneven and not always timely. This was to be mitigated by good-quality design and construction of project roads, and Government guarantees that adequate maintenance funds would be allocated for all CCRIP infrastructures beyond the life of the project. LGED and Government officials advise that central government funding for road maintenance has increased steadily over recent years (e.g. 24 per cent increase in the last financial year) and that LGED decides how to use these funds based on road and soil conditions, traffic volumes and social factors. There is inevitably still a gap between what would ideally

[93] According to project documents and verified by the RIA impact study and PPE field study.

need to be spent on maintenance compared to the funds received, due to the competing demands on Government budgets. This is expected to widen in the context of reduced Government revenue due to COVID-19.

109. The operation and maintenance of markets is a responsibility of MMCs. MMCs have greater capacity to function, according to the Governmental MMCs management circular. During the project, the only substantial issues reported were that some open-market sheds were occupied by permanent traders, and waste management was often inadequate, with solid wastes disposed in waterways or along the roadsides. However, continuous monitoring of MMCs performance by project-financed field monitoring officers apparently played an important role in keeping MMCs on track. Also, the PPE found that since the project ended, MMCs had been meeting less frequently and not all MMCs members were actively involved.

110. More problematic is the issue of funding for market maintenance. Although there has been an increase in lease values and some improvements in the transfer of lease values to MMCs, the allocation of lease payments is not consistent across MMCs and the leasing system is often not operating as it should be. This holds lease values down and therefore limits the funds available for market maintenance. For larger markets, the funds are more likely to be enough, but for smaller markets there is often a shortfall. MMCs sometimes raise funds locally to cover the gap, but this is dependent on the leadership and initiative of each MMC.

111. **Human resource/social sustainability. Refresher training and training for new MMCs members is needed to prevent capacity diminishing over time, but no formal training programme is in place.** Informants from LGED suggest that upazila engineers, who are members of MMCs, and LGED community organizers provide some ongoing support and monitoring. However, members of MMCs say that they have not received any training since the project ended, and newer members have received no training. Conversely, technical expertise for road management is within the mandate of the district and upazila LGED, with trained technicians available as part of LGED regular staffing for road maintenance.

112. **Economic and social benefits for LCS members have been sustained but not to the extent anticipated in the project design.** CCRIP aimed to create long-term employment opportunities for LCS members by developing their capacity to obtain and fulfil contracts for minor construction work, and by encouraging use of LCS services in civil works. For the most part, these new opportunities with civil works have not materialized and the majority of LCS have not undertaken further construction works independently. There is no reliable evidence on whether benefits from investing LCS wages and profits in IGAs were sustained. However, LCS members who became shop owners or traders in the markets, or who invested in livestock, appear to be the most likely groups to have experienced sustained benefits, although not all of their enterprises have been successful.

113. **Environmental sustainability. The main environmental sustainability issue is waste management in markets.** The MTR reported that there was no waste-management system in most locations visited, hence rubbish was usually dumped in locally acceptable sites or, at times, burned. CCRIP is likely to have exacerbated this issue as a result of the considerable growth in market trade. Although a pilot of using biodigesters for sustainable waste management was undertaken as part of CCRIP, no other significant and substantive action was taken to mitigate the risk of negative environmental and health impacts from the disposal of market waste.

Summary – Sustainability

114. From a technical perspective, CCRIP has been highly successful in constructing infrastructure that is resilient to recurrent natural disasters and to climate change effects, with infrastructure designed to last up to 20 years. This has meant rural communities have been able to continue buying and selling in markets throughout the year, and remain connected to nearby towns and cities even during extreme

climatic events. The regular maintenance of roads is mostly assured under LGED's remit and central government funding. The sustainability of improvements in market management and maintenance is less certain due to the absence of an ongoing training programme for MMCs, low market lease values and upazila administrations failing to allocate a proportion of lease values for market maintenance. Some aspects of market management are already proving inadequate, notably waste management and maintenance of tubewells and toilets. The sustainability of economic improvements for the poor and vulnerable groups (women, men) is mixed. Overall, the PPE rates the sustainability of project benefits as **moderately satisfactory (4)**.

B. Other performance criteria

Innovation

115. **The most innovative aspect of CCRIP was the integration of climate resilience features into the design and construction of infrastructure.** To a good extent, CCRIP replicated the approach used in the Market Infrastructure Development Project in Charland Regions (MIDPCR), which developed rural road and market infrastructure, and established and strengthened MMCs, offering economic opportunities for poor women via the LCS and Women's Market Sections. The key change made in CCRIP was that the information on climate change was used to inform the design of infrastructure. In addition, quality test protocols for climate-resilient infrastructure were piloted as part of the rehabilitation of roads and markets, with guidelines revised and used to train LGED engineers. Although other infrastructure projects in Bangladesh have also taken this type of approach in recent years, CCRIP was one of the first to do so. This is an important contribution to LGED's knowledge and practice, given the climate context of Bangladesh.

116. **CCRIP helped to create a network of small, medium and large markets, thereby creating a "pull" effect and stimulating economic and social development in some of the most marginalized areas of Bangladesh.** The complementary focuses of IFAD and ADB on – respectively – smaller- and larger-scale infrastructure, brought the possibility of linking remote producers and communities with buyers and services in larger markets and towns, and in turn linking larger markets and growth centres to higher-level traders and markets. Outcome studies found that a proportion of sales from CCRIP community markets are to buyers from outside the upazila and district, including some exports of paddy, pulses and seasonal products to Dhaka and other regions, whereas for comparable non-CCRIP markets, sales were within upazilas only. Products from the larger markets and growth centres were also being sold further afield than previously and in some cases all over Bangladesh.[94] However, this result would likely have been even stronger if the selection of community markets for IFAD financing had been coordinated with the selection of growth centres and large rural markets for ADB financing.

117. **The project carried out useful action research on climate-resilient and environment-friendly technologies for roads and markets.** Although the vetiver grass technology in Bangladesh is not new and BUET had researched it for some years, CCRIP was the first instance in which LGED used this bioengineering technology for road-slope protection. The CCRIP research was also the first large-scale trial that BUET had done, and results have been influential in shaping both continued uptake in LGED and use of vetiver grass by other agencies (see *Scaling up*). IFAD is also financing further testing of vetiver grass in the Hoar Region of northern Bangladesh, in the Haor Infrastructure and Livelihood Improvement Project.

118. Similarly, while using biodigesters for sustainable waste management is not a new technology for the country, research into the effectiveness and viability of the technology could be instrumental in addressing a critical problem in Bangladesh.

[94] Endline studies by University of Dhaka (ISWR), market study, 2019.

Although live testing of the biodigesters was not completed before CCRIP project completion, the lead BUET researcher remains committed to following it through.

119. **CCRIP adapted the women's market section modality to become more appropriate for pro-poor impacts.** For each market where a women's market section was planned, poor women interested in being allocated a shop were identified prior to construction, and involved in its development, so that they could use the profits as start-up capital for their enterprises. As well as being motivational for the women involved, it helped to reduce the risk of elite capture during the allocation of shops.[95] To enhance the benefits to women, CCRIP insisted on women's market sections being constructed near the centre of the market, rather than in a remote part (which is often the case for women's market sections).

120. **The GALS approach was piloted with LCS households to create an enabling environment for women's economic empowerment.** Household methodologies have been used previously in Bangladesh, but CCRIP introduced the idea of using GALS in the context of LCS infrastructure construction. This was an MTR recommendation, arising from the realization that women were sometimes unable to participate in markets or in LCS due to family and sociocultural constraints. GALS was piloted in five communities over a one-year period[96] and is considered by project staff to have been effective for creating a more supportive environment for women, although no impact evaluation was carried out (only case studies of individuals). The materials and lessons from this pilot have been taken forward in the design of IFAD's latest project in Bangladesh, PROVATi3. This is positive but there remain some concerns around the costs and effectiveness of scaling GALS, and the extent to which this type of approach will be something that the Government of Bangladesh will be interested in funding with non-concessional loans.

Summary – Innovation

121. CCRIP was innovative in being one of the first projects (operated by LGED) to integrate climate resilience features in infrastructure, and to develop a network of small, medium and large markets as the basis for economic development in coastal rural areas. It also funded action research on innovations related to road-slope protection and market waste management, and tested new approaches to women's empowerment. As such, the PPE rates CCRIP as **satisfactory (5)** on innovation.

Scaling up

122. **CCRIP-funded research on vetiver grass has encouraged uptake of this bioengineering technology by other agencies.** The most concrete example of scaling up to date is LGED's use of vetiver grass for slope protection, which is now common practice in the agency. According to BUET, dissemination of the research findings led to other Government agencies making (more) use of the technology, including the Roads and Highways Department, Chittagong City Corporation and the Water Development Board. In addition, examples of the technology being scaled up abroad are a result of the reputation gained from CCRIP research on vetiver.

123. **Scaling up of project innovations and approaches has been mostly limited to other projects but is expected to gain pace as a result of LGED's new knowledge centre.** As the Government agency in charge of rural engineering and infrastructure, LGED is well placed to mainstream CCRIP's good practices and action research findings across the coastal region and elsewhere in the country, where relevant. Other LGED-managed projects have reportedly integrated climate-resilient features into infrastructure design, and a manual on sustainable construction practices for the coastal area that was developed under CCRIP is being used by LGED in that region. Historically there has been no effective system for cross-learning from

[95] While the risk was reduced, PPE interviews indicated that local elites often still influenced who was allocated shops in women's market sections. Discussed in Gender Equality, Women's Empowerment.
[96] The GALS pilot was launched in April 2018, with support from an international specialist who worked with two national consultants to adapt the GALS methodology to the project context.

LGED projects, which tended to operate in isolation. Although knowledge generated by CCRIP has been taken forward in other IFAD-funded projects, especially PROVATi3[97] in the central north of Bangladesh, this does not constitute a mainstreaming approach or scaling up at the national level.

124. This situation is expected to improve with the establishment of the KfW- and Green Climate Fund-financed CReLIC within LGED, set up with the aim of sharing climate-resilient infrastructure knowledge and informing and guiding future infrastructure development.[98] CReLIC will undertake revisions of LGED manuals and guidance, and provide systematic training and knowledge for all new projects. The fact that the former CCRIP project director is managing CReLIC adds to the prospect that it will enable scaling up of lessons from CCRIP.

Summary – Scaling up

125. CCRIP was only minimally effective in scaling up good practices and lessons learned across LGED and in other Government agencies and donor-funded projects, with the main achievement in this area being the now widespread use of vetiver grass that had been encouraged by the findings of CCRIP-funded research. The establishment of a knowledge and learning centre in LGED should help to address this, for LGED at least, but cannot entirely be attributed to the project. Therefore, CCRIP's achievement on scaling up is **moderately satisfactory (4)**.

Gender equality and women's empowerment

126. **CCRIP took a systematic approach to gender mainstreaming, enabled by senior-level commitment to gender equality in LGED.** A gender action plan was developed for CCRIP at design,[99] which included gender-specific targets for the project as a whole and for each component. A gender specialist was employed part-time (by ADB) to monitor and update the plan and ensure implementation. In addition, the deputy project director, who at the time was secretary of LGED's Gender Forum,[100] was assigned as the gender focal point for CCRIP.

127. The PPE team heard from female project staff and LGED engineers that there was/is a good working environment for women at both central and district levels. This created a conducive environment for CCRIP's gender action plan to be implemented, with almost all targets in the plan met or exceeded.[101]

128. **CCRIP's most significant gender intervention was targeting poor and vulnerable women for inclusion in LCS, enabling over 5,000 women to earn an independent income for between four months and two years, and facilitating their ongoing engagement in labour markets.** The majority of this income was used for consumption and other non-productive purposes, but investments in IGAs were encouraged by paying LCS members a "wage" (daily subsistence amount) of BDT 125-150 per day, with the majority of payment received as a lump sum from the "profit" after construction was completed and all costs deducted. LCS members were given one day of training on suitable IGAs for their

[97] PROVATi3 involves building climate-resilient rural infrastructure with LCS, and incorporates lessons learned from CCRIP such as using vetiver grass for slope protection, placing more focus on market management from the start, introducing risk-reducing measures in LCS (price escalation, insurance and safety equipment), and including additional measures to economically and socially empower LCS members. PPE interviews confirmed that many design features are being implemented or planned, but adaptations are sometimes being made in order to ensure suitability for the different conditions in the PROVATi3 project area, or for other reasons.

[98] See Coastal Resilient Infrastructure Mainstreaming at www.greenclimate.fund/project/fp004.

[99] The plan aimed to address gender issues by: (i) creating scope for women's participation in project planning, implementation, monitoring and evaluation; (ii) generating jobs for women by involving them in construction, maintenance and tree-plantation activities; (iii) facilitating linkages of rural women beneficiaries with different resources for sustainable livelihoods; (iv) facilitating social and economic development programmes aimed at women, to increase their access to infrastructure development activities; (v) helping promote and build capacity of union parishads so they can plan, coordinate and monitor social- and gender-related development activities in project areas, and play an effective role assigned to them under the project and through various government circulars; and (vi) ensuring a gender-friendly working environment in all project-implementation activities.

[100] The Gender Forum is reportedly a useful forum for identifying problem areas and sharing lessons learned.

[101] Progress report on the Gender Action Plan (April to June 2019).

level of education and resources (e.g. poultry production, dairy cattle management, fish farming, garment sewing) just prior to the distribution of profits; a special event was organized in the community when profits were paid out, with local government officials, NGOs and other local organizations invited, to encourage further support for LCS members. There was no tracking of how well LCS members did after receiving their share of the profit, or of any unintended consequences, but the available evidence indicates that at least some women had economic benefits and that the project helped shift social norms and attitudes in relation to women's abilities and the appropriateness of them working outside their home.[102] However, low levels of education, the gendered division of labour and resources in households, and a lack of comprehensive support for IGAs in project design (e.g. access to finance and training on financial management, formation of producer groups, development of support services and value chain linkages) limited the scale of change.

129. **CCRIP took some steps to address the fact that some women are unable to participate in LCS and markets due to sociocultural and family constraints, but only on a limited scale.** In addition to piloting the GALS approach in five communities (which was not included in the project design), in some localities women were allowed to work shorter hours and/or an LCS member was paid to look after children. In two of the ADB-financed markets, one shop in the women's market section was set aside as a childcare centre and space for women market users to breastfeed. These good practices have apparently not yet been mainstreamed in LGED's LCS approach, but some have been taken up in other IFAD-financed projects.

130. As to whether LCS primarily supports poor and vulnerable women, the selection criteria (e.g. unemployed and poor people; less than 0.5 acre of land; dependent on their labour for income; and widowed, separated or only earner in household) were apparently used relatively consistently.[103] This brought new economic opportunities to some of the most vulnerable women in project communities (sometimes for the first time), but unfortunately no monitoring data exists to verify this. The 2018 outcome study found that 10 per cent of LCS women were widowed, separated or divorced. This is the same percentage as for the representative sample for the RIA impact assessment, suggesting that female-headed households benefited only proportionally to their overall presence in the project area.

131. **Extreme weather and administrative delays can increase costs for LCS groups and reduce their profits.** Construction works generally take place during the dry season. However, if there are any delays to starting work for administrative reasons, or the monsoon starts early or there are other unexpected extreme climate events, this can increase the cost of delivering construction works. Three of the nine LCS groups interviewed for the PPE reported delays which affected their profits, and this issue was also reported in the LCS policy study commissioned under CCRIP. Increasingly unpredictable weather and a rise in the sea level due to climate change is likely to increase the risk of delays.

132. **Some, but not all, of the women who were allocated shops in women's market sections succeeded in establishing successful enterprises.** The PPE field study verified statements in the PCR that many women benefited from thriving enterprises (e.g. pharmacy, bakery, beauty salon). However, in some cases shop owners were unable to continue running their businesses due to a lack of money, a change in their priorities or for other reasons.[104] Furthermore, women's market

[102] Some LCS members cited that joint training for men and women helped foster mutual understanding.
[103] The midterm review and subsequent IFAD missions found that LCS members were frequently very poor and vulnerable women, in line with the targeting strategy. However, interviews conducted for the PPE revealed that local elites and politics often still influence the selection of LCS members and the allocation of shops in women's market sections.
[104] Four of the nine sampled markets had women's market sections, and in two of the markets only two or three of the women's shops were still operational (in the other two markets this was not mentioned as an issue).

sections were constructed in 11 IFAD-financed markets and 7 ADB-financed markets, meaning only 108 women benefited in total.[105]

133. **Women's participation in markets has increased by only a small margin.** CCRIP aimed to facilitate women's involvement in markets by sensitizing MMCs to allocate 30 per cent of open market space to women traders and providing water and separate toilet facilities for women. The number of women sellers and buyers in CCRIP markets increased, but the increase was in line with the overall growth in the number of sellers and buyers in markets; women still only represent around 11 per cent of all traders (up from 10 per cent before the project) and 12 per cent of buyers (no change) in CCRIP community markets.[106]

134. MMCs were constituted in line with Government regulations requiring inclusion of the women's representative of local government and a representative of women traders (if there were any), but women remain a significant minority of MMCs members (Table 5). Interviews with MMCs members (men and women) suggest that most were aware of the need to involve women in market management and that, when present, women were able to contribute to MMC decisions, but that not all MMCs had active women members.

Table 5
Women's participation in market management committees

Type of market	*No. of markets constructed*	*No. (%) of women members in the MMCs*	*No. (%) of male members in the MMCs*
IFAD-funded community markets	184	401 (19.8%)	1623 (80.2%)
ADB-funded growth centres and large rural markets	88	176 (18.2%)	792 (81.8%)
Total	272	577 (19.3%)	2415 (80.7%)

Source: CCRIP M&E data.

135. **For households in market catchment areas, CCRIP did not have a significant impact on women's autonomous income generation and decision-making power**. According to survey respondents in RIA's impact study, only 1.6 per cent of household income came from women's own enterprises or their wage labour,[107] and just 2.1 per cent of households had a woman owning her own enterprise. There was also no impact on women's involvement in household decision making. However, there were statistically significant results among some subgroups of women, possibly linked to them being in more conducive sociocultural environments in which women's engagement in economic activities outside the home is more common and socially acceptable.

136. **With regard to IFAD's Gender Policy objectives,[108] CCRIP has made a contribution to women's economic empowerment, particularly among LCS women who were able to invest in IGAs, but has apparently had only minor**

[105] The PCR has inconsistent data on women's market sections (WMS). On page 8/24 it states that 11 WMS were built with 6 shops per WMS (total of 66), then says 84 women benefited. On page 12/24 it says that 14 WMS were constructed, suggesting that 84 women benefited. CCRIP's former gender specialist confirmed that 11 WMS were constructed with IFAD funding and 7 with ADB funding. This would mean 108 women benefited overall. It is noteworthy that the criteria that WMS should be built in the core business area of markets to ensure sufficient trade – a commendable requirement – unfortunately also meant that many markets did not qualify for WMS construction.

[106] The 2018 outcome study on IFAD-financed markets indicates that: (i) women accounted for around 43 of 427 sellers (10.1 per cent) per market (on average) before CCRIP and 92 of 831 sellers (11.1 per cent) after CCRIP; and (ii) women accounted for around 99 of 800 buyers per market (12.4 per cent) (on average) before CCRIP and around 178 of 1507 buyers per market (11.8 per cent) after CCRIP.

[107] It is possible that this proportion is underestimated, depending on which member of the household provided the information on household income. For example, men may not have accurate information on women's income, and vice versa.

[108] The gender policy strategic objectives are: (i) promoting economic empowerment for rural women and men, (ii) enabling women and men to have an equal voice and influence, and (iii) achieving a more equitable balance in workloads and sharing of economic and social benefits between women and men.

effects on women's decision-making power and the distribution of work and benefits within households. For the small number of households involved in the GALS pilot (which was not in the original project design), CCRIP may have helped to achieve a more equitable balance of workloads, but otherwise the project did not implement any activities to address this issue, which was a blind spot in the design of the project's approach to gender.

Summary – gender equality and women's empowerment

137. CCRIP had a relatively comprehensive approach to gender for an infrastructure project. It achieved positive results in several areas, including contributing to an inclusive culture within LGED and promoting the concept of equal pay for equal work. The LCS model provided short-term income to some of the poorest women (and their families) in the project area, and has facilitated longer-term engagement in labour markets for LCS members. However, the socio-economic impacts for the wider community of women in market catchment areas are less clear. It seems that, for the most part, CCRIP had only minimal effects on the multiple barriers to women's equal participation in markets in rural Bangladesh, including their relative lack of IGA experience and skills, and sociocultural norms that limit women's mobility and engagement in work outside the home. The absence of a more holistic approach to women's empowerment and transformation of gender norms across the project, CCRIP's focus on infrastructure, and the fact that men are the main users of roads and markets, meant that the overall impact on gender equality was almost inevitably limited in scale and depth. As such, and in spite of the demonstrable commitment and efforts of project management to address gender issues that arose during implementation, the overall performance of CCRIP on gender equality and women's empowerment is rated as **moderately satisfactory (4)**.

Environment and natural resource management

138. **The project developed an environment management framework, even though its focus was not primarily on the impacts of the environment and natural resource management, and no major environmental concerns were raised at the design stage. The project was an intermediate risk category.** The project developed an environment-management framework to assess the environmental impacts. An Environment Management Plan was developed for each subproject, with contractors bound by the plan to ensure its implementation. The project also employed an environment specialist under ADB-KfW funding. Project monitoring was used during the implementation of the Environment Management Plan, and the project sought annual, mandatory clearance from the Department of Environment for project implementation. CCRIP infrastructure consisted in many cases of some upgrades to existing structures, with no major negative environmental impact expected from programme activities (e.g. road/culvert drainage congestion, excess soil erosion).[109] The PCR also noted that climate change adaptation measures in the design of roads and markets may have reduced pressure on the natural resources base.

139. The only information on environmental and natural resource impacts available from project documents refers to data gathered at design stage. There is no new evidence of impact provided except for the generic effects of upgrading deteriorated facilities on the environment, assuming its positive environmental impacts. Additional mention of effects on natural resources is in terms of improved drainage and enhanced slope protection, reducing soil run-off and improving the environmental market and roadside conditions. This is based on BUET studies on slope protection or road and market test protocols. The PCR didn't provide any new data. Therefore

[109] The CCRIP was classified as a Category B project, with negligible environmental and social implications. Therefore, there was no recommendation for further environmental analysis. The review was based on documentation of IFAD Environmental and Social Assessment Procedures.

this PPE assessment was mainly based on interviews and observations at different levels.

140. **Research funded by CCRIP on the main environmental and natural resources management issues, linked to the infrastructure built in project areas, generated some initial and promising outcomes.** The main environmental sustainability issue is waste management in markets, where solid wastes were often disposed in waterways or along the roadsides. Waste bins and sanitation facilities were constructed or improved as part of the project, and MMCs received some training in environmental awareness, waste management and sanitation and hygiene. Interviews for the PPE and project documents indicate a range of ongoing problems in many markets (bins too small, poorly located and/or not used, waste disposed in unused land and waterways). Negative environmental and socio-economic impacts were already highlighted by the 2018 supervision report, and CCRIP is likely to have exacerbated the issue as a result of the growth in market trade and since no substantive action was taken to mitigate the health and environmental impacts from the disposal of market waste. Interviews and local feedback suggest that toilet block and tube wells of the markets are in some cases not operative or not in good condition, with reported drainage issues, which demand urgent attention by LGED and MMCs to ensure hygiene in markets.

141. BUET action research showed potential for anaerobic biogas digester waste management at markets, and sale of biogas and slurry. However, the research has not yet been completed and it is unclear whether the technology is commercially viable and sustainable in dealing with market waste. Field observations and interviews did not find evidence of any sustainable solid-waste-management system in the sampled markets.[110] Market solid waste and wastewater is instead dumped or disposed into nearby lowlands or water bodies; however, no significant environmental impact was reported. Some observations instead suggest that the project improved other aspects (grass on roadside slopes, planted trees and markets free from mud).

142. While waste management is a country-wide problem that must be addressed at the national and policy levels, local action and strong management are all needed to ensure the proper operation, maintenance and viability of the biodigester plants. For the time being, however, it is impossible to conclude about the viability and scalability of this technology and about the actual community interest in adopting it.

143. In addition to this, CCRIP planted shade trees on both sides of 7.2 km road shoulders and embankments, with maintenance provided by groups of LCS women. Vetiver grass was planted for road-slope protection as an environmentally friendly, low-cost, maintenance-free bioengineering technique. Road embankment-slope protection by CCRIP was one of the first LGED projects that piloted this technology and funded BUET research and field trials. Vetiver grass generally took hold and performed well as a form of slope protection. Results were disseminated to LGED and to other agencies, and this has led to good uptake of the technology.

144. **No systematic or firm action was taken on the key environmental or natural resources management issues identified and researched by CCRIP. The negative effects were not significantly counteracted by project end, at the level and scale required to satisfactorily address environmental concerns**. The examples cited above (and in other sections) are scant, anecdotal cases of any real impact or widespread systemic effect of CCRIP on natural resources and on the environment. Several activities were carried out by the project, including developing the Environment Management Plan. However, based on the limited focus and information on these aspects by the project and also based on the evidence provided by the PCR and by other project documents, which were validated and probed

[110] In addition to this, anaerobic biogas digesters were not found to be a viable solution for small- and medium-sized markets, because they do not produce enough biodegradable waste and do not operate on a daily basis.

through interviews, it is difficult to draw conclusions about the effective promotion of sound environment and natural resource management, and the impacts of CCRIP infrastructure on the environment or on the presence and impact of unintended consequences from project activities.

Summary – environment and natural resource management

145. While CCRIP invested in action research on environmental and natural resources management issues, connected to the infrastructure investments in project areas, and while there were some initial and promising outcomes especially in the use of vetiver grass, there were no firm lessons learned, no evidence of effective mitigation measures, and no ongoing assessment of the environmental impacts. Therefore no real actions were taken by the project's end to counteract the negative environmental effects, at the level and scale required to satisfactorily address the environmental concerns. Overall, the promotion and protection of the environment and natural resource management is rated **moderately satisfactory (4)**.

Adaptation to climate change

146. **CCRIP is among the first IFAD projects in Bangladesh, operated by LGED, to include climate resilience in infrastructure investments, in order to prepare rural communities and authorities in coping with volatile climate events and shocks.** The project was designed to build resilience to climate change in some of the poorest and most vulnerable communities in Bangladesh. It sought to do this by ensuring that these communities had improved access to markets and services under both normal and exceptional conditions (e.g. floods, cyclones), as well as by improving the provision of climate-disaster shelters in the project area (the latter being funded by KfW and therefore outside the scope of the PPE). As one of the first LGED projects that explicitly included climate resilience in infrastructure investments, the concept and practical implementation was initially not fully clear to the implementers. CCRIP was therefore implemented differently from conventional infrastructure projects in the country as well as beyond, and required investments in capacity building at LGED and community levels (that were mostly funded by KfW under component 3).

147. In terms of approaches to cope with climatic volatility and enhance resilience to climate shocks, CCRIP completed a management plan to develop climate-resilient rural infrastructure; MMCs groups were set up to manage infrastructure; beneficiaries were trained in developing skills for IGAs and business management; climate information services (agricultural, market and climate risk) were provided mainly via the RRI; and cyclone shelter capacity was added for local rural people. Adaptation measures were applied in all technical components. Climate knowledge was also provided through CCRIP's website (http://ccrip.org/). Most of the focus of the project, basically, was on climate-resilient infrastructure rather than on a broader approach to climate resilience among rural populations in coastal areas that encompassed other important areas of climate vulnerability, such as the suitability of crop varieties for changing weather patterns, soil degradation and salinity issues.

148. **Performance and quality of climate-resilient infrastructure components of the project were overall good and did not require much maintenance work, also after the climate events of mid-2020**. Since climate events and climate change could determine a rapid deterioration of rural infrastructure in the absence of climate resilience features, the PPE assessed the impacts of climate change on the infrastructure that was built by the project. It did this by using spatial imagery (annex VII) to validate the durability of the infrastructure, by field observations and analysis of ground photos and videos on the performance of infrastructure before the project started and after completion, and by observation of post-climatic

shocks[111] in Satkhyra and Khulna districts after Cyclone Amphan, which struck in mid-May 2020.

149. In addition to PCR data, the PPE collected field information on the extent to which infrastructure had responded to climate change concerns and developed the climate resilience of beneficiaries and communities, against recent climate shocks; it also collected field information in view of sustained use of infrastructure beyond the project life. The visual observations, and feedback from upazila engineers and from members of the MMCs, suggested that most market sheds and concreting areas in the sample communities, constructed three to five years earlier by LCS, did not require significant maintenance work. The imagery revealed that all the sampled markets were in good condition and met the needs of traders and producers as planned, according to quality protocols followed in most cases by which local committees have oversight on the quality of infrastructure construction.

150. According to CCRIP project documents and project reviews, CCRIP implemented the expected measures to enhance climate-resilient adaptation of coastal road, market infrastructure and people. This included strengthening the resilience of local communities against climate-related shocks resulting from a rise in sea levels, higher monsoon season rainfall and increased severity of impact of cyclones, through investing in road, market and cyclone infrastructure. The roads built or rehabilitated by the CCRIP were raised 200 mm more than the height for roads resistant to tidal surge and floods, so as to last longer and to cope with climate disasters, based on climate resilience information and scenarios. The project interventions were aligned with infrastructure investments by the Government and other donors (World Bank, KfW) and included efforts to mainstream climate resilience in LGED.

151. Although adaptation to climate change was a central theme across CCRIP and was at the core of the assessment of the degree to which the project had achieved its objectives, the PCR did not report much on climate change impacts; most data on climate resilience (PCR appendix 5) reports information that had been gathered at the design stage but also provides little new evidence on impacts, except for the effects on the environment of upgrading the deteriorating facilities, and is based on assumptions regarding expected positive environmental impacts. All other data provided in CCRIP reports show that the project generated climate-resilient infrastructure and capacities and that, overall, it has applied the required adaptation measures.[112]

152. **Climate resilience was considered in designing project infrastructure. The use of even longer-term climate-risk scenarios would have added further value to the approach, as would broader approaches to sustain climate resilience and the capacities built during the project.** The move towards a focus on climate change adaptation of projects like CCRIP is valid and commendable.[113] However, approaches for optimizing the environmental benefits and enhancing climate resilience were not entirely developed, and the focus was on market access (infrastructure) for whole communities rather than addressing climate-related vulnerabilities for poor households specifically. Special measures for the climate-resilient construction for civil work were introduced under all CCRIP technical components, where current and future climate change was taken into consideration, such as an increase of monsoon rainfall and sea-level rise. Drainage and road-slope protection were designed and built to cope with the expected extra rainfall and erosion by extreme weather, and to be resilient for about 20 years by raising roads above the highest flood levels. While these were useful actions to deliver climate-resilient infrastructure, informants also observed that risks were assessed based on

[111] Based on damage data from local upazila sub-assistant engineers and parliament members. The most-affected areas were Shayamnagar and Assashuni upazila (Satkhira), and Koyra, Paikgacha and Dacope of Khulna.
[112] This information has been already provided in various other sections of this PPE document. Practically, in this PPE climate change adaptation has been treated as a cross-cutting and overarching theme.
[113] As already noted by the Country Programme Evaluation, Bangladesh, Independent Office of Evaluation (2016).

current estimates; actual future risk assessment should be made based on even longer-term scenarios and additional climate data. This would have provided even greater assurance about ensuring future climate resilience.

153. In terms of capacities, CCRIP developed a manual on climate resilience practices that is reportedly being used by other projects including by PROVATi3 (IFAD-funded). The project also trained and supported MMCs. CCRIP raised awareness about climate change adaptation and promoting mutual support of neighbouring groups and communities in vulnerable spots. CCRIP built awareness and trained community members regarding climate impacts on livelihoods, and regarding early warning and disaster preparedness, to mitigate future coastal disasters. According to the PCR, the actions delivered outputs to village leaders, youth groups, NGO representatives and members of disaster-management committees, reaching an estimated 24,459 persons.

Summary – adaptation to climate change

154. CCRIP was one of the first LGED projects to include climate resilience in infrastructure investments. It aimed to prepare rural communities and authorities in coping with volatile climate events and meeting their needs during climate shocks, formed groups to manage infrastructure, trained beneficiaries on skills for IGA, and delivered climate-information services, in addition to the infrastructure itself. The performance and quality of the climate-resilient infrastructure components of the project was assessed as being satisfactory overall. Special measures for the climate-resilient construction for civil work were introduced under all the CCRIP technical components. CCRIP also trained infrastructure management committees on climate resilience aspects, raised awareness about climate change adaptation, trained community members on climate impacts on livelihoods, and regarding early warning and coastal disaster preparedness, and promoted mutual support of neighbouring groups and communities in vulnerable spots. However, approaches for optimizing climate resilience and enhancing the environmental benefits were not entirely developed, and the capacity that was developed may not remain now the project has ended. The lessons to help mainstream, design and implement climate-resilient projects are already rooted in new projects after CCRIP, which are funded by other donors. In the overall the CCRIP project, efforts aimed at including climate resilience in infrastructure investments in coastal areas are **satisfactory (5)**.

C. Overall project achievement

155. CCRIP was a highly relevant project for the climate risk-prone and economically underdeveloped context of south-west Bangladesh. Project activities were executed as planned, with no significant delays, and output targets were mostly achieved. The efficiency was satisfactory, with a good disbursement rate, sound management structure and a very good economic rate of return. This has meant that many of the expected outcomes were achieved, including more climate-resilient road and market infrastructure, improved institutional capacity to build and manage climate-resilient infrastructure, improved connectivity and lower transport costs, increased access to markets and increased volumes of trade. CCRIP has also brought valuable short-term employment opportunities for poor women and men through the LCS modality, with around a third of income from this employment being invested in productive activities aimed at longer-term income generation.

156. In terms of impact, the project has brought a moderate increase in income and assets for households in the vicinity of markets, and a small reduction in the likelihood of poverty and of experiencing food insecurity. There has been no increase in agricultural productivity but producers are selling more of their produce in markets, including during the monsoon season. Women LCS members report improvements in livelihoods, status and well-being, but there is no change in women's autonomous income generation and decision-making power for households in market catchment areas. Additionally, the long-term sustainability of many markets is put at risk by

the low lease value of markets and the reluctance of local authorities to allocate lease funds for market maintenance, as well as a lack of ongoing capacity building for MMCs. Even though CCRIP took action to address the unintended consequences of project activities and environmental impacts, there is no evidence of significant impacts from promoting sound environmental actions to address the waste-management issues that are connected to markets.

157. The above suggests that the theory of change (annex VI) from input to outcome levels proved valid to a good extent, yet it did not always hold true at the level of outcome and impact. This is partly due to assumptions at project design time not holding true, particularly in terms of the additional support for livelihoods and value chains expected to be available through other interventions. This has meant that the overall goal of the project – improved livelihoods (higher incomes and food security) for poor households (women and men) in selected upazilas of 12 coastal districts – was only partially achieved. While some of the innovations and good practices from CCRIP have been replicated in other IFAD and LGED projects in Bangladesh, there has been little scaling up or influence on the overall policy environment to date.

Summary – overall project achievement.

158. Considering all the above, overall project achievement is rated **satisfactory (5)**.

D. Performance of partners

IFAD

159. **IFAD's performance as donor and partner on CCRIP is consistently valued highly**, throughout the project documents and interviews, as well as other validations conducted at different levels, including with the other development partners.

160. According to the CCRIP design report, merging the project designed by IFAD with the project that was simultaneously planned and funded for the same area by ADB and KfW was intended to generate synergies from: (i) a joint focus on rural transport and market infrastructure development: (ii) a common project area; (iii) lower adverse livelihoods impacts of climate change; and (iv) reduced management costs. Some of the synergies were realized, yet there was little interaction between the different components financed by ADB and IFAD. **IFAD has value added and comparative advantage in focusing its interventions in smaller-, local- and rural-level infrastructure.** This is seen as the branding of IFAD's interventions, working closer with implementing partners, being an approachable partner, careful about targeting and about development, more explicitly pro-poor, attentive to employment generation, to vulnerable people and livelihoods (for instance through LCS work), and to following up on its interventions. This is often evident from interviews and, for some aspects, is seen as a different way of operating as compared with other multilaterals and other international financial institutions.

161. In line with COSOP 2012-2018, **IFAD is seen as responsive to the request by the Government, as a considerate partner respectful of national priorities and systems, flexible in designing the project and investing in infrastructure with a specific climate resilience element and with focus on vulnerable areas and people**. The team that was put in place ensured that the context was taken into consideration for implementation and helped in managing the complex issue of which agency should have invested where and on what. In doing this it was clear that IFAD would be focusing on rural and LCS activities, ADB on larger infrastructure, and KfW on cyclone shelters and other aspects of climate resilience.

162. The PCR reports consistent feedback about the fact that financial and fiduciary aspects were adequately managed during the project. The field and stakeholder interviews generally tend to confirm this overall trend. Also, supervision and input were regularly provided by IFAD headquarters (four supervisions, one MTR done in 2017 and various implementation support missions) in coordination with the country

team. The disbursement rates of IFAD funds, also in relation to disbursement by the other cofinancers, indicate that release of funds was generally well coordinated.

163. **IFAD's coordination with other financers and projects was a complex process that generated useful synergies, efficiencies and cost savings. However, coordination during the design phase was weak,** with the result that the cofinancing component could not start in standard ways, with different funding, procurement and financial management processes for each partner. This in turn required separate missions, reports and complex coordination. Interviews also revealed that communication between IFAD, ministries and LGED was in some cases slow, especially on aspects of tenders and approvals. While this was the result of the development partners group and of their coordination, which correctly decided not to do separate projects in the same area, the responsibility for initial design inefficiencies and difficulties in coordination is shared among all cofinancers and cannot be attributed to one or the other. Since IFAD played a part in this, design and coordination issues count towards IFAD's performance but also offer lessons for improving even more such synergetic joint efforts in the future.

164. The performance of IFAD in general and with its national partners, as well as within the broader partnership with other cofinancers, can be considered **satisfactory (5).** It has been praised by the other regional and national partners as well as the other international partners, and could have been even higher had the coordination, initial design and cofinancing issues been even better managed from the start.

Government

165. The Government of Bangladesh was supportive of CCRIP's approach. **CCRIP represented an opportunity for the Government to promote and apply climate adaptation and resilience, and in some ways test the approach** within a project that did not only focus on infrastructure but paid attention to livelihoods, economic growth, vulnerable areas or people, employment and LCS/women.

166. The Government provided the counterpart matching funds in a timely manner, and the LGED under the MoLGRD&C approved annual workplans and budget, organized the project steering committee meetings and chaired the wrap-up of supervision missions. At operational level, the LGED district and upazila offices in the project area ensured the proper execution of project interventions, and the high physical and financial achievements of CCRIP is an indication of their effectiveness and efficiency. CCRIP leadership was recognized and praised, based on interviews at all levels, for the critical role that was played in the project. The Government undertook financial management, project management and implementation responsibilities.

167. Contractors for civil works accepted that the standards of work that were required by CCRIP needed to be climate-resilient and were applied where needed. The post-contract quality control and maintenance were observed. Also, the project managed to operate the LCS without traditional infrastructure private contractors.

168. Several interviews suggest however that LGED-managed projects tend to work in silos, especially at the start of CCRIP. This undermines knowledge sharing and learning from one project or area, and use in other projects/areas, for example in relation to climate change adaptation and climate-resilient infrastructure. Planned work was implemented with different approaches by the cofinancers, through the LGED. Donors held separate supervision and support missions. Issues that at times occurred, for instance in terms of ineffective communication, were also reflected on the part of national LGED and ministries counterparts operating the activities.

169. Despite this, **the Government showed a strategic approach to coordinated knowledge management by starting the Climate-Resilient Infrastructure Mainstreaming project in 2018** with the Green Climate Fund and KfW. The project aims for institutional reform of LGED, to create a centre of excellence that brings climate science and learning on climate resilience and adaptation systematically into

infrastructure investments that LGED does nationally and will conduct in the future. The linkage between IFAD, ADB and KfW, coordinated by the PMO, and the fact that the CCRIP director went to lead the infrastructure mainstreaming project, is an important step towards that, and will help to ensure that lessons from CCRIP are scaled up.

170. While there was no formal partnership between the three donor agencies, the PMO built synergy between financial and technical resources from different sources. All led to a holistic development where small village roads and markets financed by IFAD and the Government, growth centres and upazila roads by ADB, and cyclone shelters by KfW, provided better climate resilience capacities to the project area.

171. The performance of the Government in general, and with the cofinancers, is assessed as **satisfactory (5).** It was praised by other regional, national and international partners and could have been even higher had the coordination, some initial design, and cofinancing issues been even better managed from the start.

E. Assessment of the quality of the project completion report

172. **Scope.** The PCR is comprehensive and covers all the expected areas with a good level of detail, although less information is provided for environment and natural resource management, scaling up and sustainability. The PCR draws on a range of sources,[114] but the base for findings is often not clear and efforts to explore project impacts independently from project management and staff (e.g. by conducting independent interviews with stakeholders) do not seem to have been made. There does not seem to have been any information gathered from organizations outside of the core project partners. The scope is rated overall as **satisfactory (5).**

173. **Quality.** The quality of the PCR is variable. Some sections are well structured and clear, while others are quite difficult to follow. There are several inconsistencies in the data, analysis and/or performance ratings presented in the report, apparently due to revisions made between different versions without editing for a consistent narrative throughout.[115] There is no comment on quality of data in the midterm and endline studies, which the PPE team found to be quite poor. The quality of evidence used to report on LCS impacts is weak and the PCR does not draw on the LCS policy study, which found more mixed results. The findings from studies on IFAD-financed infrastructure are not disaggregated from those on ADB-financed infrastructure, and there is a lack of disaggregated findings for different beneficiary groups. However, the analysis of lessons learned is relatively good and recommendations sound. The quality of the PCR is **moderately satisfactory (4).**

174. **Lessons.** The section on lessons learned and knowledge generated is useful and wide-ranging, but focuses on good practices; there are gaps (e.g. related to using climate science to design climate-resilient infrastructure, management of markets and leasing systems, and LCS modality). Recommendations are linked to lessons learned and other areas in which the project did not achieve as much as it might have with a modified design. Overall, lessons are rated as **satisfactory (5).**

175. **Candour.** The PCR tends towards a positive framing of project results, although this is justified in many areas and the assigned ratings are largely in line with PPE findings. Embedded within the narrative are somewhat more frank assessments of the challenges faced, and these are brought out more clearly in the lessons learned and recommendations. As such, candour is rated as **satisfactory (5).**

[114] These include: M&E data and studies; RIA impact assessment; PCR mission interviews; and (to a lesser extent) inputs from half-day workshops with representative of stakeholder groups in the three project regions.
[115] Several of the examples of data inconsistencies and errors are reported as footnotes throughout this report.

Key points

- CCRIP was aligned with national priorities and IFAD policies, and was highly relevant for the climate risk-prone coastal areas of south-west Bangladesh.
- LGED performed well as the implementing agency. Most output targets were achieved with no significant delays. Project efficiency was satisfactory, with good internal rates of return. Cofinancing arrangements with ADB and KfW generated complementarities and cost savings, but resulted in a high project-management burden for the PMO.
- The project was effective in developing climate-resilient infrastructure, improved road connectivity and access to markets for rural, climate-vulnerable communities. This stimulated local economies, increased the volume of trade in project markets, and led to some increase in household incomes and a small reduction in local food insecurity.
- CCRIP was less effective for strengthening livelihoods and for increasing agricultural production. This was due to the project design but also partly to the fact that the envisaged support for CCRIP beneficiaries, through the IFAD-funded PACE project in the same region, did not occur.
- LCS generated short-term employment for nearly 6,000 poor and vulnerable people. This alleviated poverty and enabled some to engage in longer-term economic activities. However, CCRIP did not have wider impacts on women's income or decision-making power.
- CCRIP-built infrastructure was relatively unaffected by recent extreme climate events, which is an indication of quality and sustainability. Maintenance of roads will be carried out as and when required by LGED. Regular maintenance of project markets is less certain due to MMCs not always being allocated funding from market lease values, and the lack of an ongoing capacity-building programme for MMC members.
- CCRIP was innovative in integrating climate resilience features in rural infrastructure, and enabled the formation of a network of small, medium and large markets and roads. It also supported research on environmentally friendly technologies and piloted GALS to create an enabling environment for women. Some good practices and lessons learned have been replicated in other IFAD-funded and LGED projects, and scaling up should continue through the new LGED knowledge-management centre (CReLIC).
- CCRIP-funded action research on vetiver grass for road-slope protection has enabled more widespread uptake of this environmentally friendly technology. The research on biogas digesters for waste management in markets has not yet been completed. This and other action taken by the project was insufficient to prevent negative environmental and health effects from poor waste-management practices in markets.
- CCRIP strengthened LGED's capacity related to climate-resilient infrastructure. It also built cyclone shelters and undertook training and community awareness to promote climate change adaptation in project areas (most of these involved funding by KfW).

IV. Conclusions and recommendations

A. Conclusions

176. **CCRIP achieved its core objective of building infrastructure that is resilient to natural disasters and to the impacts of climate change in some of the most remote and vulnerable coastal areas of Bangladesh.** This is an important achievement given the increasingly severe effects of extreme climate events on the natural environment and on the lives and livelihoods of rural people in the project area. The fact that CCRIP was one of the first infrastructure projects implemented by LGED to incorporate climate resilience in infrastructure design adds to the significance of this achievement and the value of the project. Furthermore, this added value is more likely to be captured as a result of the recent establishment of a knowledge centre on climate-resilient infrastructure in LGED (CReLIC).

177. **Improved road and market infrastructure resulted in more connected and vibrant rural communities and markets. This has brought moderate increases in household incomes in market catchment areas, but the project did not lead to an increase in agricultural production.** The fact that roads and markets are no longer submerged during the monsoon period and during other flooding events has been important for enabling increased connectivity and year-round trade. Income effects are stronger among farming households than non-farming households, which are less poor, mostly due to increased sale of agricultural production in markets. However, the project did not lead to an increase in the use of agricultural inputs or in agricultural production, and the income effects also vary depending on location and composition of livelihoods. This shows the importance of understanding the composition of household livelihood strategies when designing projects and supporting the livelihood activities most important to each local context.

178. **Impacts on livelihoods were limited in scale and scope as a result of project-design issues and limited coordination between development partners.** The focus of CCRIP was on climate-resilient infrastructure, but at the design stage as well as the MTR stage, it was recognized that a more holistic and integrated approach to livelihoods would produce stronger results. Therefore the intention was for PACE to provide complementary livelihood support to CCRIP beneficiaries. However, PACE was not designed with these considerations in mind, which undermined the potential for the sum of the two projects to be greater than the parts, in spite of the recognized valuable efforts by the projects' management to coordinate. Similarly, although joining the IFAD-funded project with the ADB/KfW-funded project under one design and logframe delivered some cost savings, more comprehensive cofinancing arrangements and improved coordination could have brought even greater efficiencies and value chain impacts; for example jointly selecting which of the small, medium and large roads or markets to improve, and combining supervision and reporting requirements. More generally, project activities to build climate-resilient livelihoods were too narrowly defined and measured.

179. **The LCS approach created valuable, short-term employment opportunities for poor women and enabled further engagement in labour markets, but the model needs updating and, overall, the project had limited impact on women's participation in markets.** The LCS modality has been used by LGED in much the same manner since it was first introduced in the 1980s. It needs updating to address problematic areas (such as financial risks for LCS when there are administrative or climate-related delays to construction works) and to accommodate the socio-economic development and socio-economic changes that took place in Bangladesh during this period (for example, enabling LCS to use machinery to reduce the drudgery of LCS work). The LCS policy study carried out in 2017 provides elements for a rethink of the LCS model and could potentially be taken forward by CReLIC with support from IFAD. CCRIP's experience of involving LCS in constructing women's market sections, and using GALS to foster a more enabling environment

for women's participation in markets, are examples of the kind of add-ons to be integrated into the LCS model, as and when funding allows, to achieve more transformative change for poor women.

180. **The management of community markets has improved but is challenged by ongoing difficulties in securing enough funding for the day-to-day operations and for maintenance, a lack of ongoing sustained training for MMCs and systemic waste-management issues.** Upazila administrations are not always allocating the required funds from the market lease values to undertake maintenance work and the occasional repairs. Also, although lease values have increased, they are still below what is needed to sustain the quality of market services over time, while there is often a lack of transparency around how leases are awarded. These are issues that require policy-level intervention, as they represent a lack of compliance with Government regulations which could undermine the significant investments made in improving market infrastructure. The absence of an ongoing capacity-building programme for MMCs and systemic waste-management issues are also threats to the sustainability of infrastructure and market services, which need to be addressed by Government.

181. **LGED performed well as the implementing agency, with efficient and timely delivery of outputs, and will benefit from more systematic and centralized knowledge management going forward, but a broader range of partners may have helped to address challenges related to market management and gender inequality.** Most project targets were achieved and there were no major delays. The PMO was responsive to the recommendations of IFAD missions and demonstrated willingness to innovate and learn, although some limitations of the M&E system reduced its utility for performance management and lesson learning. There is also a tendency for LGED projects to operate in silos, which has historically undermined cross-learning. Going forward, CReLIC offers an excellent opportunity to ensure that good practices and lessons learned from CCRIP and other such projects are more effectively shared and, if appropriate, mainstreamed within LGED. However, being an engineering organization, LGED is not necessarily the best placed institution to deal with community-level challenges of market management and gender inequality. These challenges may have been more effectively addressed had there been even greater involvement of upazila administrations and local NGOs in project implementation than took place during the project.

182. **COVID-19 poses risks to the sustainability of some CCRIP benefits.** The most immediate impact (with the pandemic still ongoing) is that markets are operational at a significantly reduced level, due to the hygiene risks and need to respect social distancing requirements, which is affecting people's incomes and livelihoods. In the medium term, the negative impact on Government revenues means that budgets allocated to LGED for road maintenance may be reduced, in spite of the strong commitment to infrastructure maintenance within the Government and LGED.

B. Recommendations

183. **Recommendation 1. Investments in infrastructure should be accompanied by broader support for climate-resilient livelihoods tailored to the project area context, and that include activities to enable value chain development and enhance women's participation in labour markets.** Although this was (partially) recognized when CCRIP was designed, there were inadequate measures put in place to ensure that anticipated complementarities with other funding agencies and other IFAD-funded projects materialized and were optimized. In future, IFAD should design projects in such a way as to ensure that a holistic package of support is provided to targeted communities. This should be achieved either by funding the complete package within the project itself, or by ensuring good coordination with partner projects and agencies, and institutional accountability for delivery of anticipated linkages, efficiencies and results. The first step is to ensure that opportunities for, and potential barriers to, coordination are explored during the

design process and are adequately reflected in project design. Partnerships with NGOs or other local organizations with recognized expertise in gender and social inclusion should also be included in project design, to develop and apply contextually relevant and effective approaches for addressing barriers to women's participation in markets.

184. **Recommendation 2. In infrastructure-development projects, IFAD should ensure that conditions for mainstreaming a comprehensive and learning approach to climate resilience are in place.** This includes ensuring that climate science informs the design of climate resilience features, and that adequate focus is given to the "soft" side of infrastructure management as well as sustainability. In the case of Bangladesh, for LGED, this approach could be facilitated through CReLIC, so long as the focus of knowledge generation and learning is not narrowly defined. It is further recommended that IFAD engage proactively with CReLIC to co-fund training and research on areas of interest, for example in relation to testing and implementing technologies and systems for sustainable waste management in markets. Beyond CReLIC, IFAD should aim to support the development of a national climate-resilient infrastructure policy with different stakeholders and ministries, using the lessons learned from CCRIP and other such projects.

185. **Recommendation 3. IFAD should engage with central and local government to enable the development of a policy response and strategy to deal with systemic issues related to market leasing and market maintenance, and to ensure the long-term sustainability and viability of market infrastructure.** The PPE findings related to market leasing and funding of market maintenance are not new; indeed, they informed the design of CCRIP and the focus that was placed on establishing and building the capacity of MMCs and requiring local authorities to commit to allocating funds for market maintenance prior to developing markets. The 2017 CCRIP policy study on market leasing provided further evidence on the nature and extensiveness of these issues. Although CCRIP has shown that engaging with local authorities and building the capacity of MMCs can improve the situation, a more sustained and systematic approach coming from the Government is needed. On the one hand this means taking steps to enforce Government regulations on market management and on the allocation of lease values for market maintenance. On the other hand, it involves developing an ongoing training programme for MMCs to prevent capacity declining over time, possibly with donor support.

Basic project data

				Approval (US$ m)		*Actual (US$ m)*	
Region	Asia and the Pacific		Total project costs	154.712			
Country	Bangladesh		IFAD loan, per cent of total	39.504	25.5%	36.714	*n/a*
			IFAD loan (2)	19.500	12.6%	19.923	*n/a*
			IFAD grant (3)	1.008	0.7%	0.814	*n/a*
Loan number (first loan; 1) Loan number (additional loan; 2) Grant number (3)	LI-896-BD 2000000060 2000001457 G-I-C-1445-BD		Borrower (Government of Bangladesh)	30.900	20.0%	32.934	*n/a*
Type of project (subsector)	Rural Development, Rural Infrastructure		Co-financier 1 (ADB)	21.500	13.9%	Not reported	
Financing type	Loans and grant		Co-financier 2 (Strategic Climate Fund)	32.600	21.1%	*Not reported*	
Lending terms*	Highly concessional*		Co-financier 3 (German Credit Institution for Reconstruction, KfW)	9.700	6.3%	*Not reported*	
Date of approval	10/04/2013 (1 & 3) 30/12/2015 (2)		Co-financier 4	n/a	n/a	n/a	
Date of loan signature	28/06/2013 (1) 22/10/2016 (2)		Beneficiaries	5 764 285 Total		3 036 326 men 2 728 008 women	
Date of effectiveness	28/06/2013 (1) 30/12/2015 (2)		Other sources:				
Loan amendments	No amendment		Number of beneficiaries: (specify if direct/indirect)	6,991 beneficiaries contracted in LCS			
Loan closure extensions	31 March 2020						
Country programme managers	Omer Zafar		Loan closing date	31 December 2019 (30 June) operational		31 March 2020 financial	
Regional director(s)	Nigel Brett		Mid-term review	15 August 2017			
Lead evaluators for the project performance evaluation	Roberto La Rovere Sally Smith		IFAD loan disbursement at project completion (%)	98%			
Project performance evaluation quality control panel	Nurul Alam Johanna Pennarz Fabrizio Felloni		Date of project completion report	31 March 2020			

* Highly concessional loan terms: free of interest but bearing a service charge of three fourths of one per cent (0.75%) per annum and having a maturity period of 40 years, including a grace period of 10 years.
Source: CCRIP project completion report, March 2020.

Definition and rating of IOE evaluation criteria

Criteria	*Definition* *	*Mandatory*	*To be rated*
Rural poverty impact	Impact is defined as the changes that have occurred or are expected to occur in the lives of the rural poor (whether positive or negative, direct or indirect, intended or unintended) as a result of development interventions. *Four impact domains* • Household income and net assets: Household income provides a means of assessing the flow of economic benefits accruing to an individual or group, whereas assets relate to a stock of accumulated items of economic value. The analysis must include an assessment of trends in equality over time. • Human and social capital and empowerment: Human and social capital and empowerment include an assessment of the changes that have occurred in the empowerment of individuals, the quality of grass-roots organizations and institutions, the poor's individual and collective capacity, and in particular, the extent to which specific groups such as youth are included or excluded from the development process. • Food security and agricultural productivity: Changes in food security relate to availability, stability, affordability and access to food and stability of access, whereas changes in agricultural productivity are measured in terms of yields; nutrition relates to the nutritional value of food and child malnutrition. • Institutions and policies: The criterion relating to institutions and policies is designed to assess changes in the quality and performance of institutions, policies and the regulatory framework that influence the lives of the poor.	X	Yes No No No
Project performance	Project performance is an average of the ratings for relevance, effectiveness, efficiency and sustainability of benefits.	X	Yes
Relevance	The extent to which the objectives of a development intervention are consistent with beneficiaries' requirements, country needs, institutional priorities and partner and donor policies. It also entails an assessment of project design and coherence in achieving its objectives. An assessment should also be made of whether objectives and design address inequality, for example, by assessing the relevance of targeting strategies adopted.	X	Yes
Effectiveness	The extent to which the development intervention's objectives were achieved, or are expected to be achieved, taking into account their relative importance.	X	Yes
Efficiency	A measure of how economically resources/inputs (funds, expertise, time, etc.) are converted into results.	X	Yes
Sustainability of benefits	The likely continuation of net benefits from a development intervention beyond the phase of external funding support. It also includes an assessment of the likelihood that actual and anticipated results will be resilient to risks beyond the project's life.	X	Yes
Other performance criteria			
Gender equality and women's empowerment	The extent to which IFAD interventions have contributed to better gender equality and women's empowerment, for example, in terms of women's access to and ownership of assets, resources and services; participation in decision making; work load balance and impact on women's incomes, nutrition and livelihoods.	X	Yes
Innovation	The extent to which IFAD development interventions have introduced innovative approaches to rural poverty reduction.	X	Yes
Scaling up	The extent to which IFAD development interventions have been (or are likely to be) scaled up by government authorities, donor organizations, the private sector and others agencies.	X	Yes
Environment and natural resources management	The extent to which IFAD development interventions contribute to resilient livelihoods and ecosystems. The focus is on the use and management of the natural environment, including natural resources defined as raw materials used for socio-economic and cultural purposes, and ecosystems and biodiversity - with the goods and services they provide.	X	Yes
Adaptation to climate change	The contribution of the project to reducing the negative impacts of climate change through dedicated adaptation or risk reduction measures.	X	Yes

Criteria	*Definition* *	*Mandatory*	*To be rated*
Overall project achievement	This provides an overarching assessment of the intervention, drawing upon the analysis and ratings for rural poverty impact, relevance, effectiveness, efficiency, sustainability of benefits, gender equality and women's empowerment, innovation, scaling up, as well as environment and natural resources management, and adaptation to climate change.	X	Yes
Performance of partners			
• IFAD	This criterion assesses the contribution of partners to project design, execution, monitoring and reporting, supervision and implementation support, and evaluation. The performance of each partner will be assessed on an individual basis with a view to the partner's expected role and responsibility in the project life cycle.	X	Yes
• Government		X	Yes

* These definitions build on Organisation for Economic Co-operation and Development/Development Assistance Committee (OECD/DAC) Glossary of Key Terms in Evaluation and Results-Based Management; the Methodological Framework for Project Evaluation agreed with the Evaluation Committee in September 2003; the first edition of the Evaluation Manual discussed with the Evaluation Committee in December 2008; and further discussions with the Evaluation Committee in November 2010 on OE's evaluation criteria and key questions.

Rating comparison[a]

Criteria	*Programme Management Department rating*	*Project performance evaluation rating*	*Rating disconnect*
Rural poverty impact	4	4	0
Project performance			
Relevance	5	5	0
Effectiveness	5	5	0
Efficiency	5	5	0
Sustainability of benefits	5	4	-1
Project performance[b]	5	5	0
Other performance criteria			
Gender equality and women's empowerment	5	4	-1
Innovation	4	5	+1
Scaling up	4	4	0
Environment and natural resources management	4	4	0
Adaptation to climate change	5	5	0
Overall project achievement[c]	**-**	**5**	**-**
Performance of partners[d]			
IFAD	5	5	0
Government	5	5	0
Average net disconnect			**-0.1**

[a] Rating scale: 1 = highly unsatisfactory; 2 = unsatisfactory; 3 = moderately unsatisfactory; 4 = moderately satisfactory; 5 = satisfactory; 6 = highly satisfactory; n.p. = not provided; n.a. = not applicable.
[b] Arithmetic average of ratings for relevance, effectiveness, efficiency and sustainability of benefits.
[c] This is not an average of ratings of individual evaluation criteria but an overarching assessment of the project, drawing upon the rating for relevance, effectiveness, efficiency, sustainability of benefits, rural poverty impact, gender, innovation, scaling up, environment and natural resources management, and adaptation to climate change.
[d] The rating for partners' performance is not a component of the overall project achievement rating.

Ratings of the project completion report quality

	PMD rating	*IOE rating*	*Net disconnect*
Scope	n/a	5	
Quality (methods, data, participatory process)	n/a	4	
Lessons	n/a	5	
Candour	n/a	5	
Overall rating of the project completion report		5	

Rating scale: 1 = highly unsatisfactory; 2 = unsatisfactory; 3 = moderately unsatisfactory; 4 = moderately satisfactory; 5 = satisfactory; 6 = highly satisfactory; n.a. = not applicable.

List of key persons met

Government

Amin Sharif	Senior Assistant Chief, Planning Section, Ministry Local Government Rural Development and Cooperatives
Mohammad Rezaul Karim	Superintending Engineer, LGED and former Project Director for PROVATi3
Sk. Md. Mohsin	Additional Chief Engineer, Road and Bridge Maintenance Unit; LGED
Anwarul Islam	Former Executive Engineer, Barguna, Superintending Engineer, LGED, Barishal
Abdur Rashid Khan	Chief Engineer, LGED
Rahmat -e-Khuda	Head of Regional Offices, Senior Assistant Engineer, LGED, Barisal
Jobayda Akter	Head of Regional Offices, Senior Assistant Engineer, LGED, Khulna
A.K.M. Luthfur Rahman	CCRIP Project Director and Additional Chief Engineer & Director, Climate-Resilient Local Infrastructure Center, LGED
Syeda Asma Khatun	CCRIP Deputy Project Director and former Secretary, Gender and Development Forum, LGED
Shahjahan Miah	CCRIP Monitoring, Evaluation and Knowledge Management Specialist
Jahangir Hussain	CCRIP Livelihoods Specialist
Sabina Islam	CCRIP Gender Specialist
Neamul Ashan Khan	CCRIP GIS Specialist
Mayen Uddin Tazim	CCRIP Land Acquisition Specialist
S.M. Shafinul Haque	CCRIP Field Monitoring Officer, Satkhira District
Sherin Sabnam	CCRIP Field Monitoring Officer, LGED HQ
Soma Chakrabarti	CCRIP and PROVATi3 LCS/GALS/gender, consultant
Md. Ziaul Haque	CCRIP Market Planner

International/national and donor institutions

Omer Zafar	Country Director, IFAD Bangladesh
Sherina Tabassum	Country Programme Officer, IFAD Bangladesh
Christa Ketting	CCRIP Ex-Programme Officer, IFAD Bangladesh
Aslihan Arslan	Senior Agricultural Economist, Research and Impact Assessment Division, IFAD and Lead CCRIP impact study
Anura Herath	IFAD economist consultant
Oyvind Homdrom	Asian Development Bank – Former CCRIP team leader
S. M. Mehedi Ahsan	Former Project Officer/ Senior Urban Resilience Specialist, KfW Development Bank, Bangladesh Office
Anisul Wahab Khan	Project Director for PROVATi3 (current)
Akond Md. Rafiqul Islam	Project Director for PACE - Palli Karma-Sahayak Foundation

Non-governmental organizations and associations

Monir Kamal	Manager Rural Radio Initiative; Producer Upakuler Katha programme, Lokobetar, Barguna

Research and training institutions

Shaker Ahmed	Team Leader, Research Team, BETS and ABL
Abdul Jalil	Bangladesh University Engineering & Technology, Professor, Civil Engineering, CCRIP Research Lead of Sustainable Waste Management Study
Moh. Shariful Islam	Bangladesh University Engineering & Technology, Professor, Civil Engineering and CCRIP Research Lead of Vetiver Grass
Sardar Shafiqul Islam	International Centre for Climate Change and Development

Other resource persons

Nuri Niyazi	IOE consultant on rural infrastructure study

Beneficiaries and field informants

Sukhdara Bazar, Batiaghata, Khulna

Md. Abdul Sadi Sarder	Union Parishad Chairman
Uzzala Roy	LCS member
Habibur Rahman	temporary trader
Shirina Begum	shop owner

Banisanta Bazar, Dacope, Khulna

Sudev Kumar Roy	Union Parishad Chairman, West Khajuria
Ashima Mondal	MMC member
Oshok Mondol	market (permanent) trader
Kibria Fokir	market lease holder

Laukhola Bazar, Jajira, Shariatpur

Nurul Amin Howalder	Union Parishad Chairman
Dholu Chowkidar	local trader and shop owner in Laukhola market
Maya Rani Sarkar	LCS Chairman, Kaowadi

Tarail Bazar, Kaligang, Sathkhira

Md. Enamul Hossain (Soto)	Union Parishad Chairman
Md. Kabir Hossain	Local Traders' Association Representative, MMC
Md. Akbar Ali	Men and Women Producers' Association
Md. Abdur Razzak	market leaseholder

Char Atra Bazar, Naria, Shariatpur

Nayema Begum	Union Parishad member, Munshikandi
Tojammel Munshi	Local Traders Association Representative, MMC
Kabir Ali	Man and Women Producers' Association
Towhid (Doctor)	Member, MMC
Jamsheda Begum	LCS Chairman, Char Atra
Didar Howladar	Temporary Traders' Association

Nowadda Bangla Bazar, Naria, Shariatpur

Abdur Rob Khan	Union Parishad Chairman
Adil Munshi	Local Traders Association Representative, MMC, Chairman
Rashid Bapari	market lease holder
Salina Begum	LCS Chairman
Dr. Ismail Hossain	village doctor and market pharmacy owner
Abdul Huq	local producer

Munshigonj Bazar, Shyamnagar, Satkhira

Md. Abdul Kashem Moral	Union Parishad Chairman
Monsur Hossain	Lease Holder of market, Shyamnagar, Munshiganj
Md. Rafiqul Islam	Local Producer
Mst Jamila	Union Parishad member

Kalabagi Baza, Assasuni, Satkhira

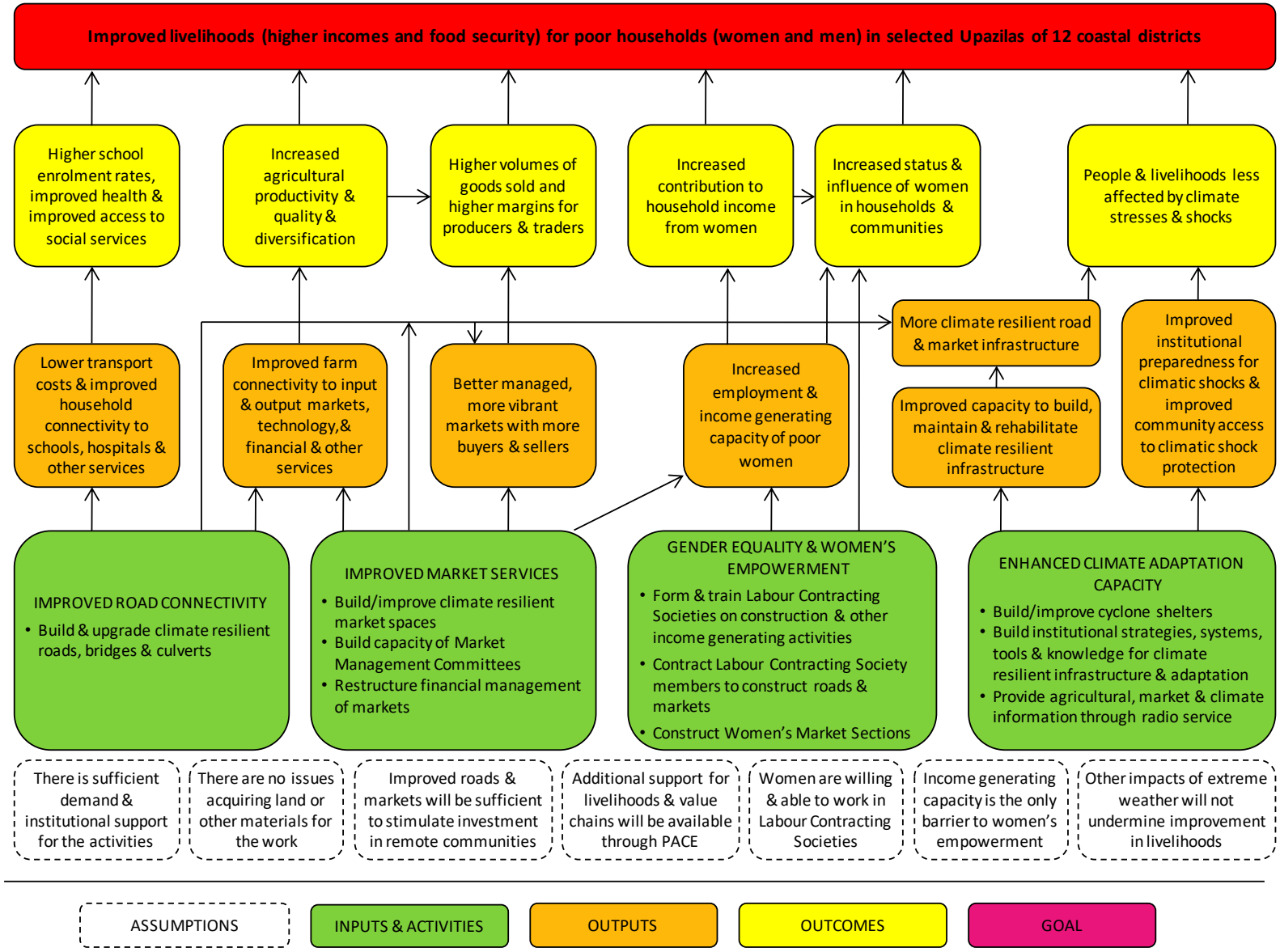
Md. Abdus Satter	Local Trade Association Representative

Md. Liakot Ali	market leaseholder
Ms Taslima Khatun	Union Parishad member
Md Abdus Sattar	Shop owner, Kalabagi market, Sridhar Pur
Farida Khatun	Chairman, LCS Committee, Sridharpur
Shahina Khatun	Secretary, LCS Committee, Sikderpur

Vendarpole Bazar, Koyra, Khulna

Alhaj Amir Ali Gain	Union Parishad Chairman
Amena Bibi	LCS Chairman
Marjina Khatun	LCS member
Anwara Begum	fish producer

Theory of change



Spatial information and maps, and satellite imagery

Methodology for sites selection and for satellite, spatial and imagery data collection

The selection of locations for the PPE field data collection (remote) focused on these criteria: climate vulnerability, remoteness of location, number of visits by IFAD and other external groups in markets and combining diverse geo-physical characteristics while identifying and selecting community markets and adjacent communities. In total 9 locations were selected based on various types of community markets out of 187 community markets under CCRIP. Although the selection was done randomly, a balanced representation was kept of small, medium and special markets depending on the remoteness and on the scale of climate vulnerability of the location as well as poverty dynamics and community uptake of the project results.

The selected nine community markets and adjacent community locations are:

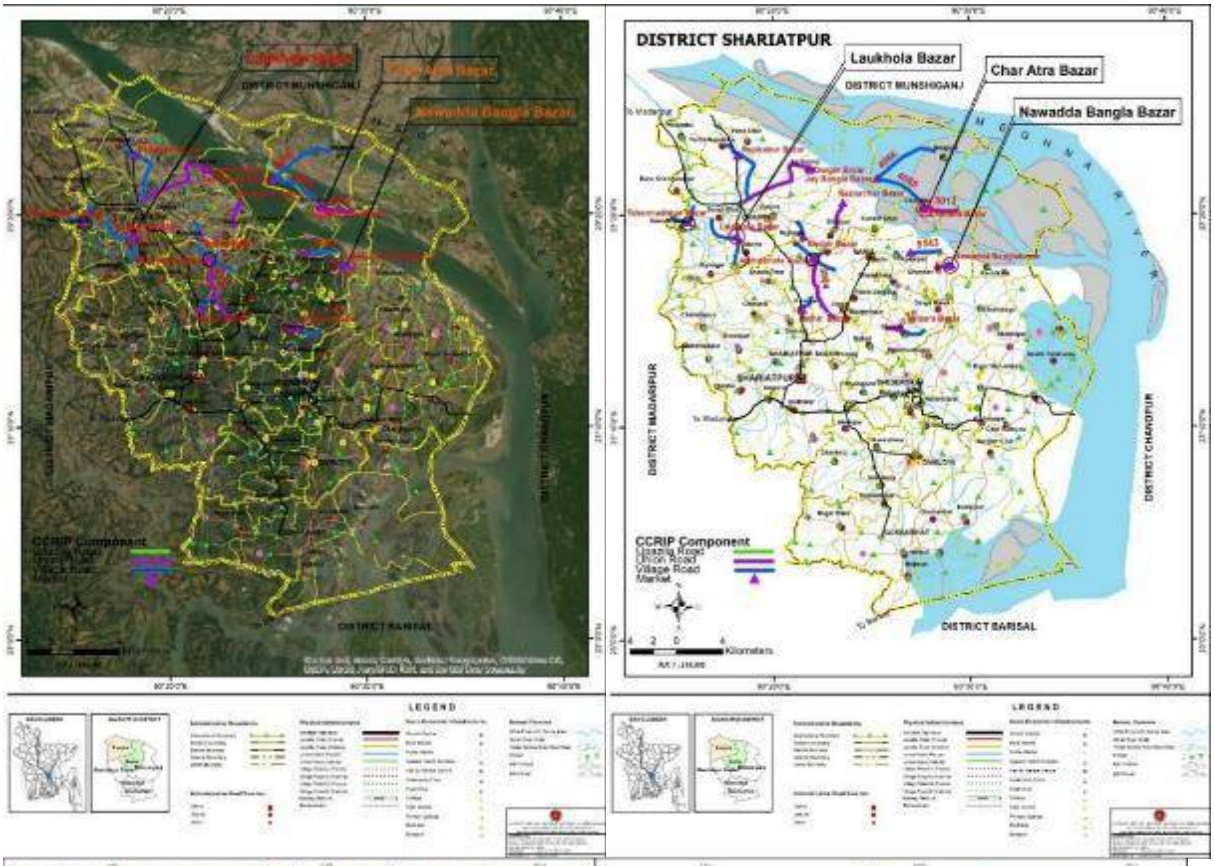
No.	Community market name	Market size and category	Vulnerability characteristics of the location	Connecting road and market infrastructures developed under ifad project.	Location lat/long at map pic/Google Earth
1.	Nowadda Bangla Bazar: Sharaitpur, Naria Upazila, medium market	Length: 1 km Total lease value: 178150, Naria Up. Medium market	Most vulnerable due to river erosion and highly affected by poverty and climate impacts	Road: Halsa high school - Gorisar Union Parishad office via Nowadda Bangla Bazar. Meat shed, fish shed, toilet block, RCC road, deep tube well, V-drain, site development.	1. 23°18'0.00"N 90°28'54.00"E 2. 23°21'50.00"N 90°28'2.00"E 3. 23°19'27.00"N 90°17'36.00"E Following pages: Shariatpur D., satellite map
2.	Chart Artra Bazar: Sharaitpur, Naria, Small market	Length: 1 km/2 Total lease value: 5100, Naria Upz.	Most vulnerable due to river erosion and highly affected by CC/Disaster. Char location and small local market	Road: Char Atra – Khas Bazar at Ch. 00-2000m Multipurpose shed, fish shed, toilet block, deep tube well, internal road, field rising.	
3.	Laukhola Bazar: Shariatpur, Janjira, special market	Length: 1 km Total value: 401000 Janjira Upazila	Affected by river erosion regularly and more than thousands of families are evaded. Markets are destroyed too. This is a special market	Road: Connected by road and highway Fish shed, open sales platform, garbage pits, internal CC road, earth filling, toilet block, MMC office building, deep tube well, and HBB road.	
4.	Baniashanta Bazar, Khulna, Dacope: small market	Information not available	Highly impacted by Cyclone Ayla and affected by Cyclone Amphan, highly vulnerable to CC and in remote location close to Bay of Bengal. Small market with community access.	Road: Banisanta Union Parishad office – Banisanta Bazar. Multipurpose shed, toilet block, deep tube well, internal road, field rising.	4. 22°27'32.14"N 89°34'59.42"E 5. 22°40'30.00"N 89°28'17.00"E 6. 22°27'56.09"N 89°19'25.65"E Following pages: Khulna District & Satellite Map
5.	Sukdara Bazar:, Batiaghata, Khulna, medium market	Information not available	Sukdara Bazar is a historical, medium village market. Vulnerable to sea water intrusion and close to Kajibacha river. Impacted by cyclones Ayla and Amphan.	Road: Sukdara Hat – Gangarampur Hat at Ch. 00-1500m. Multipurpose shed, fish shed, toilet block, deep tube well, internal road, field rising, open sales platform, drain and cross drain.	
6.	Vandarpole Bazar, Koyra, Khulna, medium market	Information not available	Remote location and most vulnerable to CC/disaster. Lowest literacy rate and livelihoods are vulnerable. It is a medium market. Impacted by Cyclone Amphan.	Multipurpose shed, toilet block, internal HBB road, site development, open sales platform.	
7.	Kalabagi market, Assasuni, Satkhira: small market	Information not available	Vulnerable to climate change, affected by cyclones Ayla, Bulbul and Amphan. Small remote community market.	Road: Khashbagan –Sreedharpur via Dorgapur Union Parishad office Multipurpose shed, toilet block, fish shed, open sales platform, deep tubewell, internal road, field rising.	7. 22°36'10.00"N 89°14'50.38"E 8. 22°16'4.30"N 89°11'43.69"E 9. 22°29'46.83"N 10. 89° 4'11.54"E Following pages: Satkhira District and satellite map
8.	Munshiganj Bazar, Shyamnagar, Satkhira, medium market	Information not available	CC vulnerable, frequent disaster /cyclone/storm, livelihood at risk.	Road: Munshiganj Bazar – Garaja hat bridge road Multipurpose shed, toilet block, fish shed, internal road, field rising, open sales platform, drain.	
9.	Tarail Bazar, Kaliganj, Satkhira, special market	Information not available	Special market, hard hit by Cyclone Amphan, roads destroyed, flash flood continuing. Most remote and vulnerable	Road: Jafarpur – Tetulia Nona math and improvement of east Trili UZR – Kashibati GPS road at Ch. 0-2300m. Multipurpose shed, fish shed, open sales platform, toilet block, drain, internal cc road and field rising.	

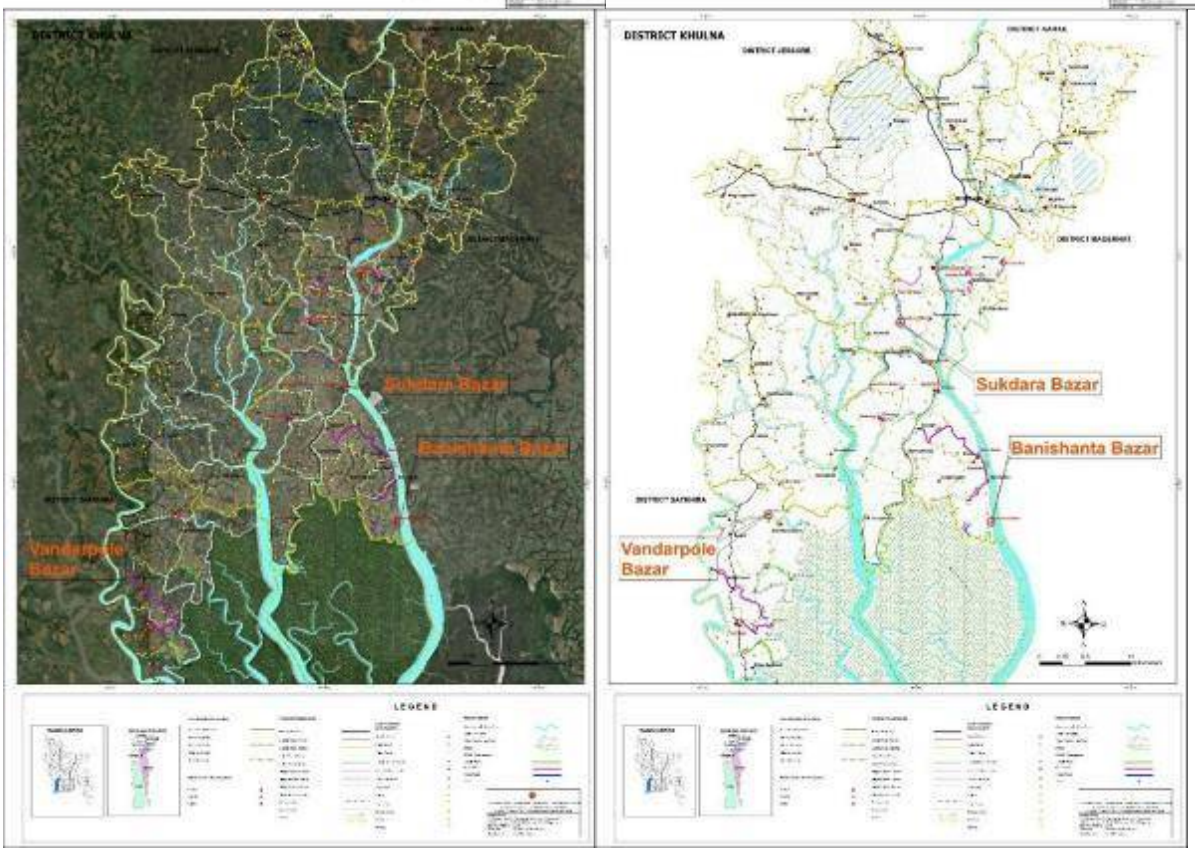
The methodology for spatial data collection included the following steps:
1. Collecting base map data from LGED GIS (CCRIP 2013-2018) in PDF and JPEG format. This maps and shapefile are copyright by LGED and maps are created in Lambert Conformal Conic Projection., 2. Field ground truthing during project period, 3. Map of CCRIP project location are checked by satellite image, 4. All of CCRIP road and market kmz file are created and shortlist made of PPE IFAD relevant shortlisted data provided for display.

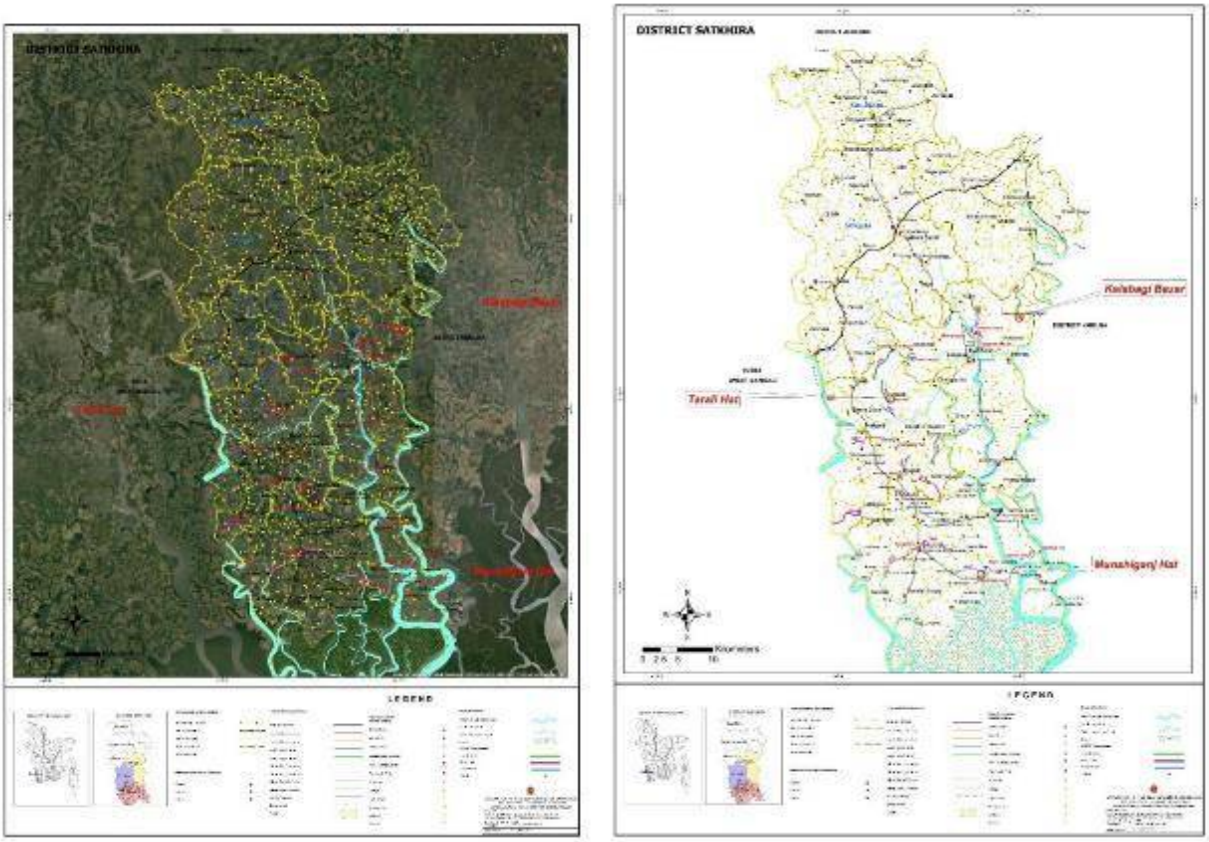
	Project Performance Evaluation (PPE): CCRIP - Infrastructure components	
	Road (UPR and UR)	Road ID:
	Evaluation questions/observation	
Effectiveness	Types of Road (Bituminous road/ RCC road/ block road)	
	Any damage of the road surface (seal coat) and road shoulder after completion	
	Any damage of the road slope/slope failure	
	Condition of Vetiver Grass on slopes	
	Any damage of road embankment (tidal surge, Cyclone Amphan)	
	Any flooding /inundation of the road embankment, if yes, how long the inundation period?	
	Any overflow of the cross-drainage system	
	Annual traffic volume in the road (%)	
	Heavy loaded trucks operated in the roads?	
	Reduction of the travel time (min)	
	Any land acquired for road construction? The land acquisition was done and payment made for land acquisition?	
	Condition of road safety (road signs, delineators and others)	
	Any repair required after completion (types of repair works)	
Sustainability	Source of fund for repair /maintenance works	
	Budgetary amount for Repair/Maintenance in each year by LGED	
	Capacity building (training of LGED/others)	
	Any ongoing training after project completion	
	Bridge/Culvert	Bridge/culvert ID
Effectiveness	Condition of approach road	
	Any damage of bridge/culvert in the recent time after construction	
	Any water stagnation upside of the bridge/culvert	
	Any damage of the embankment closed to bridge/culvert	
	Any repair or maintenance required after completion	
Sustainability	Source of funding for repair /maintenance	
	Any budgetary allocation for repair/maintenance by LGED	
	Capacity building (training of LGED/others)	
	Any ongoing training after project completion	
	Rural Market	Market Name, ID
Effectiveness	Conditions of the market sheds	
	Conditions of the concreting area of market	
	Any damage of the structure (shed, paved area) after completion	
	Condition of drainage facilities	
	Condition of sanitation facilities (water supply, cleaning, separate facility for male / female)	
	Condition of solid waste management	
Disposal to nearby low land or river, or collection system of wastewater)	How is wastewater from the market managed (any plan disposal system)	
	Any flooding or inundation of the market or paving area	
	Is there a market office	
	Is there a women's section	
	Street / market lighting facilities (solar, supply line)	
	Any repair/ maintenance required after completion	
Sustainability	Source of fund for repair /maintenance works	
	Budgetary allocation by LGED	
	Lease amount per year	
	Training of MMC	
	Any ongoing training after the project completion	
Environment and natural resource management	How the solid wastes and liquid wastes management in the market managed?	
	Any negative impact of the project on environment (e.g. water stagnation/accumulation, blockage of drainage, water pollution)	

Annex VI

Google Earth and physical maps and spatial features of locations of markets in the three selected districts.

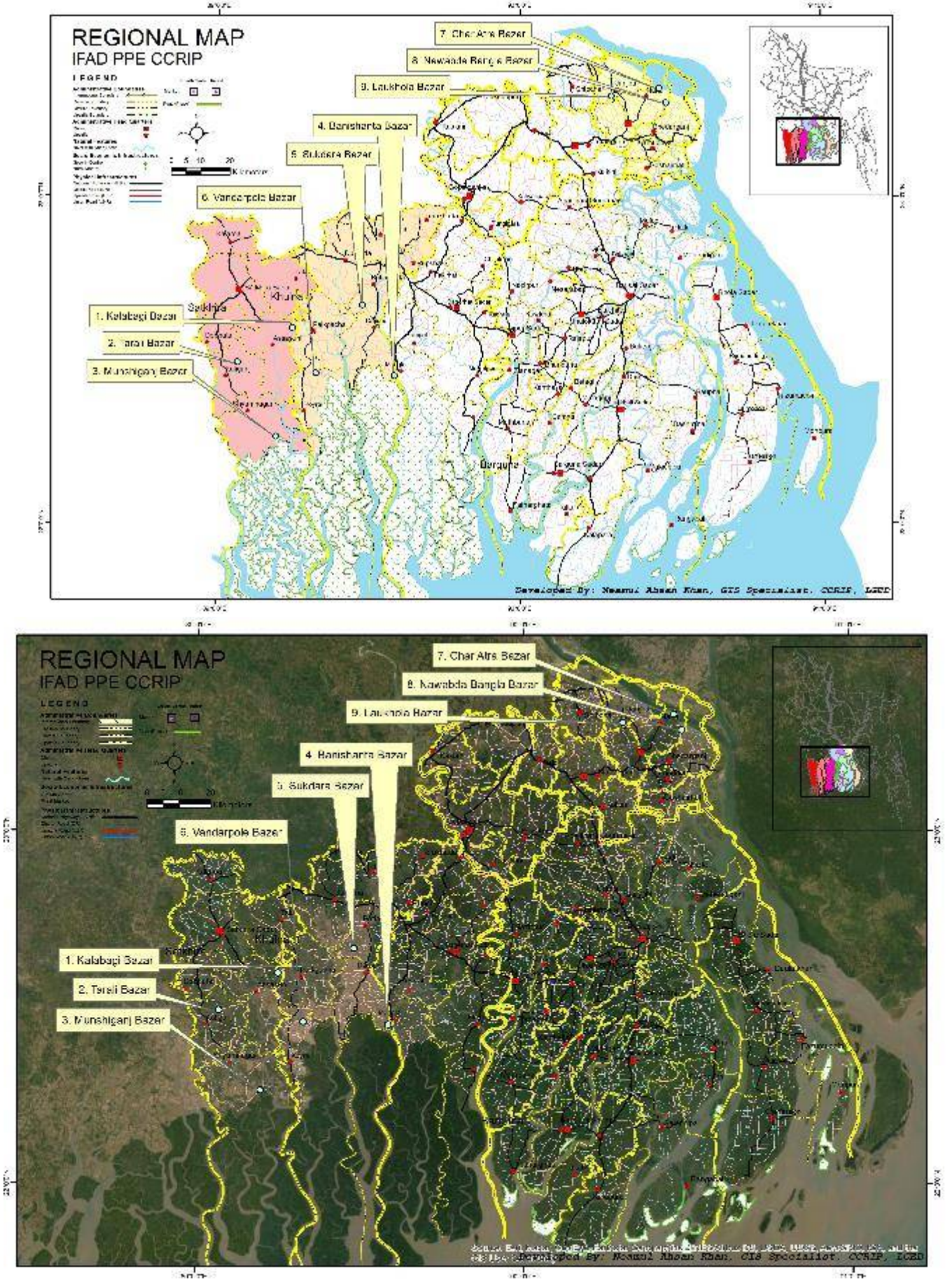




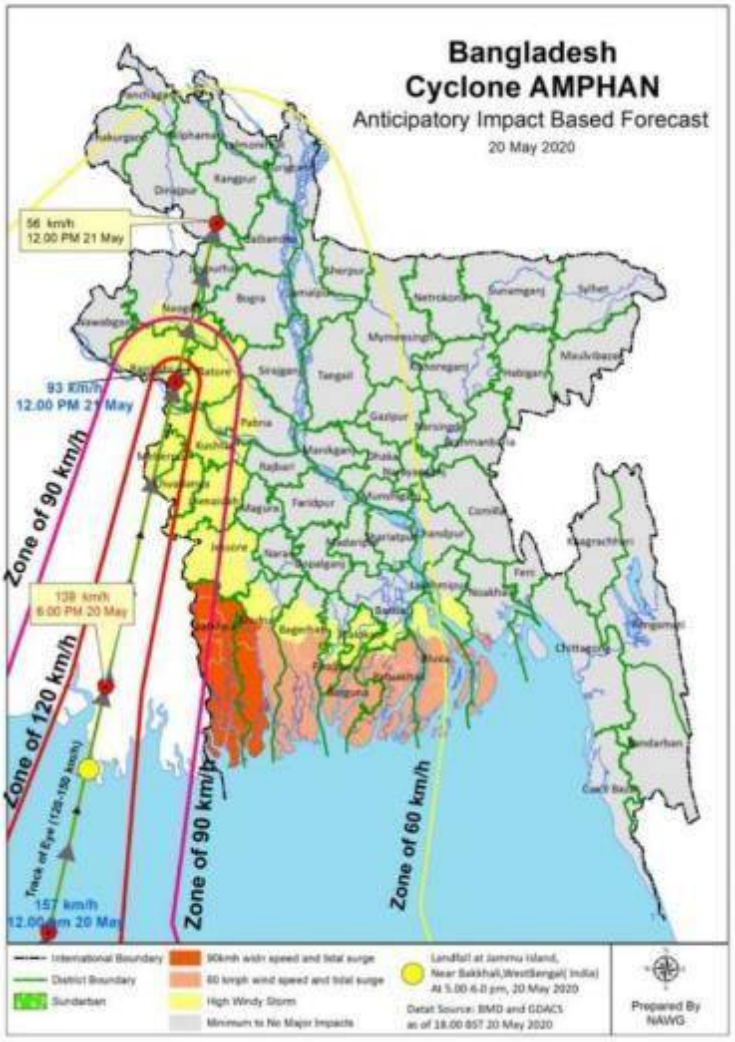


Overall consolidated regional map of CCRIP interventions (first), with details of the 9 sample markets (second).

Geo-location of the 9 markets (bazar) selected for the CCRIP data collection by the PPE field team.

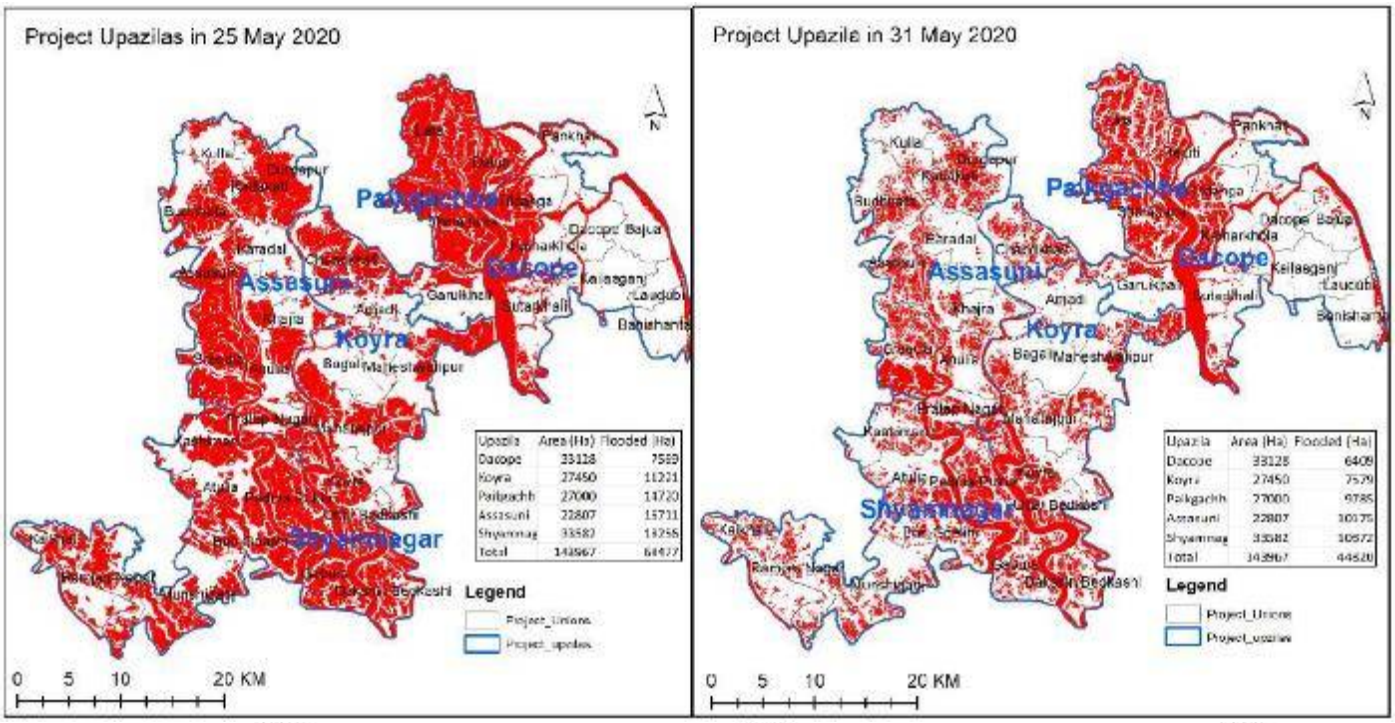


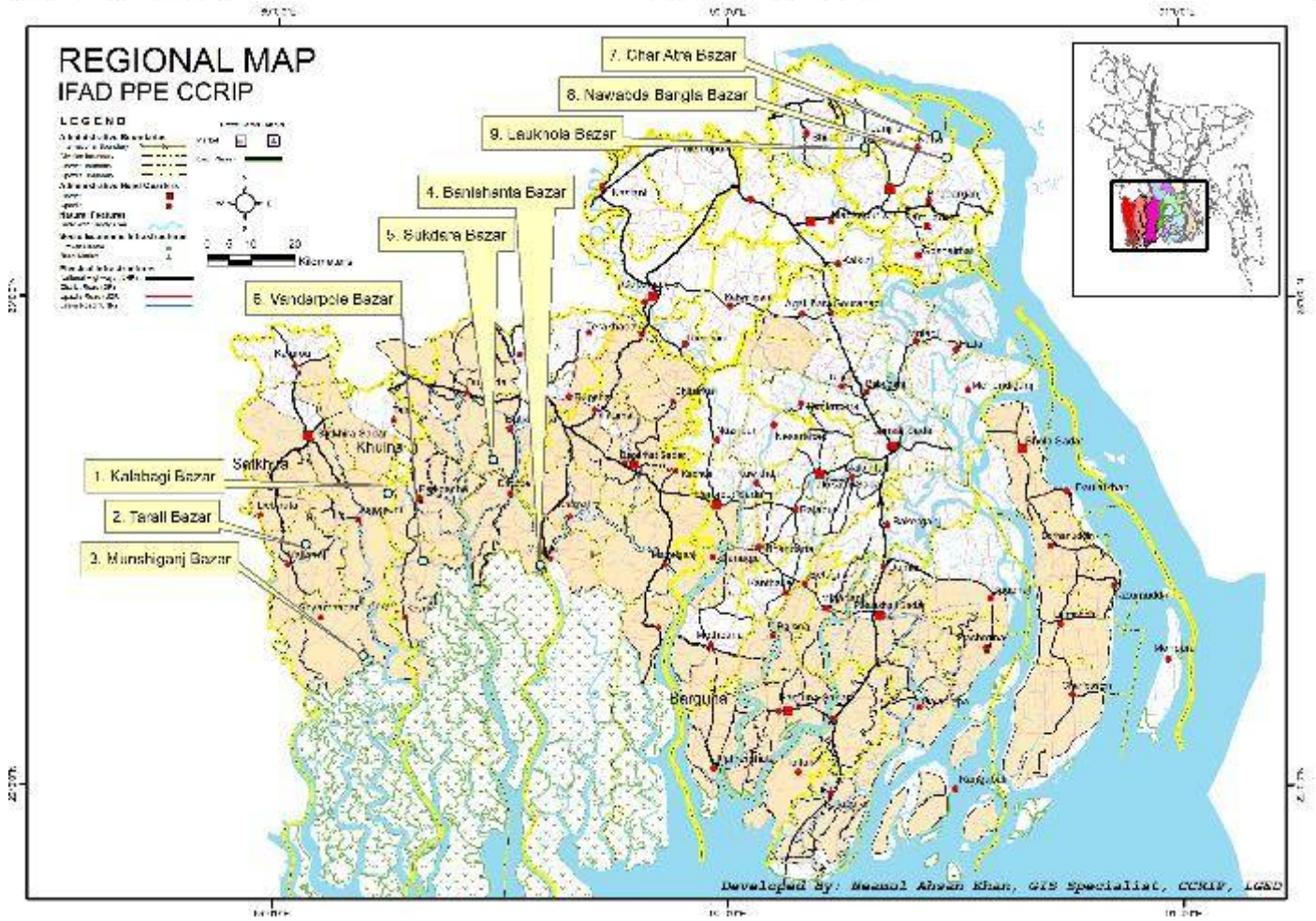
Map of satellite-detected Cyclone Amphan path (first map) and of affected inundated areas (areas in red, next maps) in Khulna and Satkhira districts as observed from Sentinel-1 images, data from United Nations Development Programme remote sensing and UNOSAT.



Annex VI

Maps relating to flooding in selected CCRIP districts and upazila, after Amphan, as of 25 May 2020.





Satellite images of Tarali Bazar before CCRIP (1st), after CCRIP (2nd), after Cyclone Amphan (3rd).

Report on before / after CCRIP and Cyclone Amphan, for selected sample markets

1. Nawabda Bangla Market, Naria, Shariatpur

Name of infrastructure	Nawadda Bangla Bazar (medium)		
Name of connecting road	Holaishar-Ghorishar Union Parishad via Bangla Bazar Village (ID5127)		
District	Shariatpur	Upazila	Naria
Geographic location	Latitude 23°17'38.04"N		Longitude 90°28'58.57"E
Time change detection			

Figure 1: Market after Amphan (5 August 2020)

Figure 2: Market connecting road

Imagery 1: 16 December 2012 (before CCRIP)

Imagery 2: 26 December 2018 (after CCRIP)

2. Char Atra Market, Naria, Shariatpur

Name of infrastructure	Char Atra Bazar (small)		
Name of connecting road	Char Atra to Khas Bazar (Road ID 3017)		
District	Shariatpur	Upazila	Naria
Geographic location	Latitude 23°21'57"N Longitude 90°28'7.2"E		
Time change detection			

Figure 1: Market (10 August 2020)

Figure 2: Market connecting road

Imagery 1:12 December 2010 (before CCRIP)

Imagery 2: 26 December 2018 (after/during CCRIP)

3. Laukhola Bazar, Zanzira, Shariatpur

Name of infrastructure	Laukhola Bazar (special)		
Name of connecting road	1. Laukhola Bazar-Bango Bazar Village Road (Road ID 5071) 2. Laukhola Bazar to Gopalpur via Khoratola (Road ID 5011)		
District	Shariatpur	Upazila	Janzira
Geographic location	Latitude 23°19'1.21"N		Longitude 90°17'36.00"E
Time change detection			

Figure 1: Market (05 August 2020)

Figure 2: Market connecting road

Imagery 1:13 March 2013 (Before CCRIP)

Imagery 2: 26 December 2018 (after/during CCRIP)

4. Banishanta Bazar, Dacope, Khulna

Name of infrastructure	Banishanta Bazar (small)		
Name of connecting Road	1. Banisanta Union Parishad office to Banisanta Bazar Union Road (Road ID 3002) 2. 247174028; Khajuria WDB Gora Krishnapada to Dhangmari Biswashnath P/School via Binapani VR		
District	Khulna	Upazila	Dacope
Geographic location	Latitude 22°27'34"N		Longitude 89°34'59.33"E
Time change detection			

Figure 1: Market (10 August 2020)

Figure 2: Market connecting road

Imagery 1:4 December 2013 (before CCRIP)

Imagery 2: 17 March 2020 (after CCRIP)

Comment: Damage by Amphan

5. Sukdara Bazar, Batighata, Khulna

Name of infrastructure	Sukdara Bazar (Medium)		
District	Khulna	Upazila	Dacope
Geographic location	Latitude 22°40'32.07"N Longitude 89°28'35.97"E		
Time change detection			

Figure 1: Market (20 July 2020)

Figure 2: Market connecting road

Imagery 1:3 October 2013 (before CCRIP)

Imagery 2: 16 February 2018 (after/during CCRIP)

6. Vandarpole Market, Koyra, Khulna

Name of infrastructure	Vandarpole Bazar		
District	Khulna	Upazila	Koyra
Geographic location	Latitude 22°27'57.47"N Longitude 89°19'26.82"E		
Time change detection			

Figure 1: Market (22 August 2020)

Figure 2: Market Ghat

Imagery 1:3 October 2013 (before CCRIP)

Imagery 2: 22 April 2019 (after CCRIP)

7. Kalabagi Bazar, Assasuni, Satkhira

Name of the market	Kalabagi Market (small)		
Name of the road	1. Gabtala-Agordari Village Road (ID 4089) 2. Khashbagan-Sreedharpur-Kharihati Village Road (ID 4031)		
District	Khulna	Upazila	Koyra
Geographic location	Latitude 22°36'9.37"N Longitude 89°14'13.4"E		
Time change detection			

Figure 1: Market (05 August 2020)

Figure 2: Market connecting road

Imagery 1:3 October 2013 (before CCRIP)

Imagery 2: 22 April 2019 (after CCRIP)

8. Munshiganj Bazar, Shyamnagar, Satkhira

Name of infrastructure	Munshigonj Bazar Market (medium market)		
Name of connecting road	Munshiganj Bazar-Garrage Hat Bridge Road (ID 4062)		
District	Satkhira	Upazila	Shyamnagar
Geographic location	Latitude 22°16'11.9"N Longitude 89°11'42.49"E		
Time change detection			

Figure 1: Munshigonj Bazar (29 July 2020)

Figure 2: Market connecting road

Imagery 1:3 October 2013 (before CCRIP)

Imagery 2: 17 March 2019 (after CCRIP)

9. Tarali Bazar, Kaliganj, Satkhira

Name of infrastructure	Tarali Bazar Market (special market)		
Name of connecting road	1. East Trali UZR - Kashibati GPS Road (ID 4017) 2. Jafourpur - Tetulia Via Nonamath Road (ID 5276)		
District	Satkhira	Upazila	Shyamnagar
Geographic location	Latitude 22°29'48.9"N Longitude 89° 4'11.51"E		
Time change detection			

Figure 1: Market (22 August 2020)

Figure 2: Market connecting road

Imagery 1:4 June 2013 (before CCRIP)

Imagery 2: 17 March 2019 (after CCRIP)

Approach paper

I. Introduction

1. The Independent Office of Evaluation IFAD (IOE) will undertake a project performance evaluation (PPE) of the IFAD-financed Coastal Climate-Resilient Infrastructure Project (CCRIP). CCRIP was implemented in 12 districts of southwest Bangladesh between 2013 and 2019. The main objectives of the PPE are to provide an independent assessment of the results achieved by the project and to generate findings and recommendations for the design and implementation of ongoing and future operations in the country. The PPE will also provide elements for case studies for IOE's ongoing 'Evaluation synthesis on infrastructure in IFAD-supported projects' and 'Thematic evaluation of IFAD's support to smallholder farmers' adaptation to climate change'.

2. This approach paper presents the overall scope and design of the PPE, and the evaluation objectives, methodology, process and timeframe. It identifies key areas and issues that will be explored to validate the results presented in the project completion report (PCR) and to generate additional learning. The paper also sets out a theory of change for the project which will be used to guide the analysis.

II. National context

3. Bangladesh is a densely populated, coastal country with a population of around 163 million people. Once among the poorest countries in the world, over the past three decades Bangladesh has achieved remarkable progress in strengthening the economy, developing the nation's infrastructure, building democratic institutions and improving social and economic outcomes for its people. Sustained economic growth (particularly from 2005 onwards) has led to an increase in per capita national income from USD 880 (purchasing power parity, current international US$) in 1990 to USD 4,570 in 2018.[1] Income-based poverty levels have halved from 48.9 per cent of the population in 2000 to 24.3 per cent in 2016.[2] This has been accompanied by significant improvements in health and nutrition (e.g. under 5 mortality rate down from 144 deaths per 1,000 live births in 1990 to 30 in 2018), education (e.g. primary school completion rate up from 47 per cent in 1989 to 80 per cent in 2014[3]) and access to clean water, sanitation and electricity (e.g. percentage of households with access to electricity up from 12 per cent in 1992 to 88 per cent in 2017). In 2015, Bangladesh achieved lower middle-income status and the Government aspires to reach middle-income status in time for the country's 50th anniversary as an independent state in 2021.

4. Bangladesh faces a number of key challenges in its efforts to make further progress. Although poverty has been markedly reduced, one in eight people still live in extreme poverty – rising to one in seven in rural areas.[4] Over half of the population is considered vulnerable to poverty and the rate of poverty reduction has stagnated in recent years, particularly in urban areas and among rural farming households.[5] Poverty is also higher and has declined less rapidly in the west of Bangladesh, where

[1] World Bank World Development Indicators database: https://databank.worldbank.org/views/reports/reportwidget.aspx?Report_Name=CountryProfile&Id=b450fd57&tbar=y&dd=y&inf=n&zm=n&country=BGD

[2] Poverty headcount using the official upper poverty line which is based on the Cost of Basic Needs. Source: Bangladesh Bureau of Statistics (2017), Preliminary Report on Household Income and Expenditure Survey 2016: https://catalog.ihsn.org/index.php/catalog/7399/related-materials.

[3] UNESCO's UIS statistics: http://data.uis.unesco.org/.

[4] Poverty headcount using the lower national poverty line which is based on the cost of basic food and a few non-food items. Source: Household Income and Expenditure Survey 2016, op. cit.

[5] World Bank (2019), Bangladesh Poverty Assessment: Facing old and new frontiers in poverty reduction: www.developmentaid.org/api/frontend/cms/uploadedImages/2019/10/Bangladesh-PA_-Volume-1.pdf.

there has been less structural transformation, widening a welfare gap between Eastern and Western Bangladesh that had previously been narrowing.[6]

5. Considerable advances have been made in addressing gender inequality, including reduced fertility and maternal mortality rates, increased educational attainment for girls and more women in parliament. In the 2020 Global Gender Gap Index, Bangladesh was ranked 50 out of 153 countries for gender equality (up from 91st in 2006), which is the highest rank of any country in South Asia.[7] However, there are a number of areas in which gender inequality persists. For example, although women's employment rates have improved, largely due to expansion of the garment industry which employs around 3.4 million women, it remains low relative to men (36 per cent of women are in the labour force compared to 81 per cent of men).[8] Social norms often limit women's opportunities in terms of the types of work they do and their access to positions of authority. For women in poor and rural households, issues such as these are typically more acute.[9]

6. Agriculture is the country's largest employer, accounting for nearly half the workforce[10] and has been an important driver of poverty reduction[11]. Although the contribution of agriculture to GDP went down from 22.7 per cent of GDP in 2000 to 13.1 per cent of GDP in 2018[12], the reduction was due to growth in other sectors rather than a decrease in output. The Government is committed to supporting the sector and has made attaining self-sufficiency in food production a national priority. However, average farm sizes are very small and decreasing (from 0.5 ha in 2007 to 0.4 ha in 2014), which places limits on the amount of income people can earn from agriculture, and about 60 per cent of farmers are functionally landless and depend on sharecropping of land owned by others.[13] Yields for major crops such as rice, maize, wheat, jute and potato have increased substantially over time, and Bangladesh is now self-sufficient in rice production, which has helped to overcome the devastating famines that in the past left millions hungry. However, agricultural yield is generally still low due to *inter alia* degradation of natural resources, limited modernization and diversification, weak research extension linkages and technology delivery, high post-harvest losses, problems with market linkages and value chains, scarcity of agricultural labour, food quality and safety problems, inadequate credit and lack of availability of seeds.[14]

7. Arguably the greatest challenge to the agriculture sector and to rural populations is climate change. Most of the country is situated on delta plains of large rivers flowing from the Himalayas and is less than 10m above sea level. Bangladesh is particularly susceptible to extreme weather events including cyclones, floods and storm surges – the frequency and severity of which are increasing as a result of global climate change. This causes regular and widespread destruction of land, roads, houses and other assets.[15] Population density, poverty and high dependence on agriculture exacerbate Bangladesh's vulnerability, with the rural poor with insecure land tenure and women and girls among the most affected populations.[16]

[6] Ibid.
[7] Global Gender Gap Index for 2020: http://www3.weforum.org/docs/WEF_GGGR_2020.pdf.
[8] Ibid.
[9] Asaduzzaman, Kabir and Ali (2016), Gender inequality: Case of rural Bangladesh, LAP LAMBERT Academic Publishing: www.researchgate.net/publication/309633443_Gender_inequality_Case_of_Rural_Bangladesh.
[10] Bangladesh Economic Review 2019, Finance Division, Ministry of Finance: https://mof.portal.gov.bd/site/page/28ba57f5-59ff-4426-970a-bf014242179e/Bangladesh-Economic-Review.
[11] World Bank (2019), op. cit.
[12] World Bank development indicators, : https://data.worldbank.org/indicator/NV.AGR.TOTL.ZS?locations=BD
[13] Hossain, Bayes and Islam (2018), A diagnostic study on Bangladesh agriculture, BRAC Agricultural Economics Working Paper: http://blog.brac.net/wp-content/uploads/2018/11/Agriculture-Report.pdf.
[14] Ibid.
[15] Ministry of Foreign Affairs, of the Netherlands (2018), Climate Change Profile: Bangladesh: https://reliefweb.int/report/bangladesh/climate-change-profile-bangladesh.
[16] Ibid.

III. Project overview

8. **Project goal and objectives.** CCRIP was the outcome of a merger between a project designed by IFAD, the Sustainable Market Infrastructure for Livelihoods Enhancement Project, and a project designed by the Asian Development Bank (ADB) and Kreditanstalt für Wiederaufbau (KfW), the Climate-Resilient Infrastructure Improvement in Coastal Zone Project. Both projects involved the Local Government Engineering Department (LGED) as the implementing agency and had already been accepted by the donor agencies and the Government of Bangladesh when it became clear that they had similar and complementary objectives and modalities and were targeting the same 12 districts in southwest Bangladesh. In June 2012, an agreement was therefore reached between IFAD, ADB, KfW and the Government to combine the projects in order to generate synergies and efficiencies. In practical terms, this mostly meant creating a single Project Management Office and technical team to implement the components financed by each agency in parallel, as supervision was conducted by each financier independently.

9. The overall goal of CCRIP was to achieve 'Improved livelihoods (higher incomes and food security) for poor households (women and men) in selected upazilas of 12 coastal districts'. This was to be achieved through building climate-resilient roads and markets in poor and economically disadvantaged rural areas that were highly vulnerable to natural disasters and climate change. It was expected that improved and climate-resilient road and market infrastructure would enable greater and more consistent access to inputs, services, technology and markets, reduce transport and production costs, increase sales and margins for traders and increase production and prices for producers, and increase access to education and health services. To address the particular vulnerabilities faced by women, and empower them economically and socially, the project also aimed to provide poor women with employment and training opportunities through labour contracting societies that were hired to construct road and market infrastructure – an innovative contracting arrangement (substituting the usual contractors for small infrastructure works with groups of mainly destitute women) that LGED had used with good results in previous IFAD projects[17]. In addition, the project aimed to pilot and demonstrate ways to mainstream climate resilience in rural infrastructure.

10. **Project area and target groups.** Coastal southwest Bangladesh was selected for the project for two reasons. First, this region is extremely vulnerable to monsoon flooding, river erosion and natural disasters (cyclones, storm surges), all of which are being intensified by climate change. Second, the region has high levels of poverty, high dependency on small-scale agriculture and a lack of economic opportunities and infrastructure.

11. Within the 12 project districts, 32 of the least developed and most vulnerable upazilas (sub-districts) were selected using the following criteria: level of poverty; proportion of the population engaged in agriculture; vulnerability to tidal surge, storm, floods and river erosion; remoteness; level of communication (roads); and proportion of undeveloped markets. The second level of geographical targeting involved selecting rural markets and connecting roads in the least developed villages and unions within each upazila, especially rural markets from char, low-lying and disaster-prone and infrastructure-poor communities.

12. The target group was the population in the catchment areas of project markets, with an estimated 3.5 million people expected to benefit from CCRIP in total (including ADB and KfW funded infrastructure). It was expected that small and marginal farmers, small traders and micro-entrepreneurs, landless people and poor women would particularly benefit, given the agriculture-based economy and livelihoods in the selected upazilas. Direct beneficiaries were to include: 5,000 people provided

[17] Sunamganj Community-Based Resource Management Project (SCBRMP) and Market Infrastructure Development in Charland Regions (MIDPCR).

with employment and training through labour contracting societies, of whom at least 80 per cent were to be very poor women (with priority given to women-headed households); 162,400 traders in the markets under the project; 52,600 transport owners; and 235,000 households living in the area of influence of roads and markets.

13. **Project components.** CCRIP comprised three interconnected components: (i) improved road connectivity, (ii) improved market services, and (iii) enhanced climate adaptation capacity.

Component 1: Improved road connectivity. The expected outcome of this component was 'Improved road connectivity for men and women living in project upazilas to access markets and social services'. Using ADB resources, the project aimed to upgrade 130 km of upazila roads, while IFAD funds were to be used to improve or construct 501 km of union roads and village roads, along with associated minor bridges and culverts. Priority was to be given to roads that benefitted the highest number of people and that connected village markets with each other and with growth centres (see below). Three types of roads were to be constructed as appropriate for the conditions: bituminous roads, reinforced concrete cement roads and block roads, all with climate-resilient design features. Block roads would be constructed by labour contracting societies using equipment purchased by the project and owned and rented out by the Local Government Engineering Department (LGED). The labour contracting societies would also plant trees alongside the roads.

14. **Component 2: Improved market services**. The expected outcome of this component was 'Enhanced marketing of farm and non-farm produce in local markets and growth centres'. IFAD funding was to be used to expand and develop 197 community (village) market facilities, encompassing 3 different types of markets: (i) 'special markets' with over 200 permanent shops where specific commodities are transacted in large quantities; (ii) 'medium markets' with more than 100 permanent shops that serve 7-10 villages; and (iii) 'small markets' with 10-50 shops that serve 3-4 villages. Depending on the type of market, this would involve building multi-purpose sheds, fish sheds, open paved/raised areas, women's market sections, toilet blocks, internal roads, drainage, garbage collection pits and truck parking spaces. In addition, IFAD resources were allocated for the construction of 38 boat landing platforms (ghats) to accommodate the fish catch in relevant markets and 5 community collection points for farmers and fishers living in remote locations.

15. As well as funding the "hard" infrastructure, IFAD resources were also to be used to build the capacity of market management committees. These committees involve representatives from Union Parishads, upazila administrations, local traders associations and other market users, in accordance with government regulations. The market management committees were trained to plan and oversee the market improvements, and to manage the market in a sustainable and inclusive way. The project also worked to ensure sustainable financing of markets by promoting enforcement and transparency around the government policy requiring 25 per cent of market lease values to go to market management committees for market maintenance and improvements.

16. ADB funding was designated for the improvement of 88 growth centres and large rural markets at the upazila level. The CCRIP design report recognized that ideally the selection of IFAD-funded markets and village/union roads would be linked to the selection of ADB-funded markets and upazila roads, in order to maximize connectivity and facilitate the integration of rural communities in value chains. However, sites for IFAD-funded infrastructure had already been identified as part of designing the Sustainable Market Infrastructure for Livelihoods Enhancement Project and to prevent a delay in implementation the decision was made to retain this selection. Potential downsides of this decision were offset by the fact that one of the criteria that had been used by IFAD and LGED to select (some) markets was that the

market should be strategically located and serve as an assembly market to connect a number of villages to larger markets and growth centres.

17. **Component 3: Enhanced climate adaptation capacity.** The expected outcome of this component was 'Rural communities and local authorities are able to cope with volatile climate events and meet their basic needs during climatic shocks'. Most funding for this component came from KfW and was allocated to the construction or improvement of 25 cyclone shelters and 5 livestock shelters and upgrading of access tracks to these shelters. In addition, KfW and ADB funds were to be used to enhance LGED's MIS/GIS system, develop a web-portal, establish communities of practice, organize training sessions on climate-proofing of rural infrastructure and knowledge management, develop a climate change assessment and adaptation strategy, and develop a climate-resilient rural infrastructure management plan for LGED.

18. Resources from IFAD were allocated to train labour contracting societies on construction and other income generating activities and to train market management committees to plan and supervise market improvements and to manage the improved markets in a sustainable and inclusive way. In addition, IFAD grant funding was to be used for (i) a rural radio initiative to provide mass information on agricultural, market, climate-related and sociocultural topics, and (ii) action research on sustainable waste management in markets, bio-engineered slope protection for road embankments and quality test protocols for road and market constructions.

19. **Significant changes during project implementation.** There were no significant changes to project design during implementation. There were difficulties acquiring land for the commodity collection points and some community markets and women's market sections, as well as a devaluation of the Special Drawing Right and the US dollar with respect to the Bangladeshi Taka, which reduced the value of project aid. This led to a minor reallocation of IFAD funds (approved in January 2018) and modest adjustments to construction targets at the mid-term review: the number of union and village roads increased from 501 km to 533 km, the number of community markets decreased from 197 to 185, the number of Women's Market Sections decreased from 15 to 14, the number of ghats increased from 38 to 40 and the number of commodity collection points was reduced from 5 to 0.

20. **Timeframe.** CCRIP was approved by the IFAD Executive Board on 10 April 2013 and became effective on 28 June 2013. The project completion date was 30 June 2019 with a loan closing date of 31 March 2020.

21. **Project costs and financing.** CCRIP was initially estimated to have an overall cost of USD 150 million, of which IFAD would provide two loans equivalent to USD 59 million and a grant equivalent to USD 1 million, ADB would provide two loans equivalent to USD 40 million and a grant equivalent to USD 10 million, and KfW would provide a grant equivalent to USD 8.8 million. The remaining USD 31.2 million would be provided by the Government of Bangladesh, covering LGED staff salaries and operating costs, land acquisition and resettlement costs and taxes and duties.

22. Table 1 shows the revised project budget by project component at mid-term review, with a total project cost of USD 154.1 million, of which IFAD would provide USD 56.9 million (comprised of USD 36.2 million highly concessional loan, USD 19.7 million loan and USD 1 million grant), ADB would provide USD 54.9 million, KfW would provide USD 9.7 million and the Government would provide USD 32.5 million. With these revisions, 75 per cent of the total project investment, and 95 per cent of IFAD's investment, would be in road and market infrastructure. According to the design report, this focus on infrastructure was to avoid overwhelming LGED's capacities as an engineering institution, with complementary livelihoods and value chain development activities expected to be provided through a second IFAD-funded project being planned for the same region.

Table 1
Project revised cost at mid-term review by project component and by financier (USD million, 2017)

	ADB	SCF Loan	SCF Grant	IFAD First Loan	IFAD Second Loan		IFAD Grant		KfW	Governm	Total	
	Amount	Amount	Amount	Amount	%	Amount	%	Amount	%	Amount	Amount	Amount	%
A. Improved Road Connectivity													
1. Upgraded Upazila Roads	16.9	15.0	-	-	-	-	-	-	-	-	7.2	39.1	25.4
2. Upgraded Union and Village Roads	-	-	-	29.9	52.4	17.5	30.6	-	-	-	9.7	57.2	37.1
Subtotal	16.9	15.0	-	29.9	31.1	17.5	18.2	-	-	-	17.0	96.3	62.5
B. Improved Market Services													
1. Upgraded Growth Centers and Large Markets	4.7	5.2	-	-	-	-	-	-	-	-	2.3	12.2	7.9
2. Upgraded Community Markets	-	-	-	4.5	59.3	2.1	27.9	-	-	-	1.0	7.6	5.0
Subtotal	4.7	5.2	-	4.5	22.9	2.1	10.8	-	-	-	3.2	19.8	12.8
C. Enhanced Climate Change Adaptation Capacity													
1. Enhanced Capacity and Knowledge Management	-	-	0.9	0.4	12.4	-	-	1.0	35.4	0.3	0.3	2.8	1.8
2. Upgraded Climate Disaster Shelters	-	-	-	-	-	-	-	-	-	8.0	1.7	9.7	6.3
Subtotal	-	-	0.9	0.4	2.8	-	-	1.0	8.0	8.3	2.0	12.5	8.1
D. Project Management	-	1.6	9.9	1.4	5.9	0.1	0.4	-	-	1.5	8.7	23.1	15.0
Total PROJECT COSTS	21.5	21.8	10.8	36.2	23.8	19.7	13.0	1.0	0.7	9.7	30.9	151.7	98.4
Interest During Implementation	0.7	0.1	-	-	-	-	-	-	-	-	1.7	2.4	1.6
Total Disbursement	22.2	21.9	10.8	36.2	23.5	19.7	12.8	1.0	0.7	9.7	32.5	154.1	100.0

Source: Project Completion Report, 2020.

23. According to the PCR, the project achieved an overall disbursement rate of 88 per cent as of June 2019. The disbursement rate for the IFAD loans and grant was 96 per cent at that time (see table 2), with an additional 2 per cent disbursed by the end of 2019.

Table 2
Estimated and actual IFAD and Government costs by project component (USD 000s, at June 2019)

	IFAD Loan (USD 1000)			FDA Additional Loan (USD 1000			IFAD Grant (USD 1000)			GOB (USD 1000)			Total IFAD (Loans + Grant)		
Project Components	Appraisal	Actual	%	Appraisal	Actual	%	Appraisal	Actual	%	Appraisal	Actual	%	Appraisal	Actual	%
Improved Road Connectivity	29,944	27,922	93%	17,499	17,170	98%				16,950	18,907	112%	47,443	45,092	95%
Improved Market Services	4,531	5,231	115%	2,136	519	24%				3,239	4,010	124%	6,666	5,750	86%
Enhanced climate changed adoption capacity	352	530	150%	0			1000	889	89%	1,973	180	9%	1,352	1,419	105%
Project Management	1,354	1,951	144%	83	459	552%				8,717	9,837	113%	1,437	2,410	168%
Total	36,181	35,634	98%	19,717	18,148	92%	1,000	889	89%	30,879	32,934	107%	56,898	54,671	96.09%

Source: Project Completion Report, 2020.

24. **Implementation arrangements.** The implementing agency was LGED which sits in the Local Government Division of the Ministry of Local Government, Rural Development and Cooperatives (MoLGRD&C). A Project Management Office (PMO) was established at the LGED headquarters in Dhaka and coordinated project implementation through three Regional Project Offices and district and upazila LGED offices. A project steering committee provided policy guidance for project implementation. The committee was chaired by the secretary of the Local Government Division and included representatives from LGED, the Roads and Highways Department, the Planning Commission and Implementation, Monitoring and Evaluation Division of the Ministry of Planning, and the Economic Relations Division and Finance Division of the Ministry of Finance.

25. The upazila roads, growth centres, large markets and cyclone shelters funded by ADB/KfW were built by contractors selected through a competitive bidding process. The union and village roads and community markets funded by IFAD were mostly built by contractors recruited by the LGED office in each project district following routine LGED contracting procedures. However, all block roads and medium and small community markets were constructed by labour contracting societies who were recruited, trained and supervised by the project using guidelines developed under a previous IFAD-funded project, MIDPCR (Market Infrastructure Development Project in Charland Regions).

26. The Rural Radio Initiative was managed in collaboration with the Agricultural Information Service, a communication department under the Ministry of Agriculture,

while the action research in support of climate change adaptation was undertaken by the Bangladesh University of Engineering and Technology (BUET).

IV. Evaluation objectives, scope and analytical framework

27. **The objectives of the PPE** are: (i) to provide an independent assessment of the results achieved by the project; (ii) to generate findings and recommendations for the design and implementation of ongoing and future IFAD operations in Bangladesh; and (iii) to identify issues of corporate, operational or strategic interest that merit further evaluative work. In addition, the PPE will provide case study material for two other evaluations being carried out by IOE – one an evaluation synthesis on infrastructure in IFAD-supported projects and the other a thematic evaluation of IFAD's support to smallholder farmers' adaptation to climate change.

28. **The scope of the PPE** has been determined using the following criteria: (i) areas identified through a desk review as in need of further exploration; (ii) issues of strategic importance for IFAD in Bangladesh; (iii) limitations set by the available time and budget – the PPE will be selective in focusing on key issues where value can be added; and (iv) limitations set by the COVID-19 emergency and associated restrictions on travel and meeting in groups. The PPE will concentrate on project activities and performance as pertains IFAD funding and supervision. For areas in which is it not possible to separate out the attribution of results to IFAD, ADB and KfW funding respectively, analysis of the contribution of IFAD will be carried out.

29. The PPE exercise will be undertaken in accordance with IFAD's Evaluation Policy[4] and IFAD Evaluation Manual (2nd edition, 2015). The PPE will evaluate the project performance with regard to the **standard evaluation criteria** of relevance, effectiveness, efficiency, sustainability. **Annex I provides the list of evaluation criteria and associated evaluation questions for CCRIP.**

30. **The analytical framework for the PPE** is the **theory of change** presented in annex II. The PPE theory of change is adapted from the theory of change used by IFAD's Research and Impact Assessment Division (RIA) for an impact assessment of the CCRIP project carried out in 2018. The theory of change shows the anticipated causal pathways from project activities to outputs, outcomes and impacts – in other words, the hypotheses about how impacts would occur. It further defines the assumptions regarding external factors that could influence change along the major impact pathways. Analysis based on the theory of change will enable an assessment of the extent to which the assumptions were validated and CCRIP's goal and objectives were effectively achieved in the manner anticipated.

V. Key issues for further analysis

31. Based on a desk review, the PPE team has identified the following areas as priorities for further exploration and analysis (within the framework of the standard evaluation criteria for a PPE, as set out in annex I): (i) coordination, additionality and scaling up; (ii) sustainability of infrastructure; (iii) rural poverty and livelihoods; (iv) gender equality and women's empowerment; and (v) climate-resilient adaptation.

32. **Coordination, additionality and scaling up.**

- **Coordination with other financiers**. According to the CCRIP design report, the aim of merging the project designed by IFAD with the project designed by ADB and KfW was to generate synergies from (i) a joint focus on rural transport and market infrastructure development, (ii) a common project area, (iii) a reduction of adverse impacts of climate change on livelihoods, and (iv) reduced management costs. While some synergies were realized, the PCR reports that there was little interaction between the different outputs financed by ADB and IFAD. The PPE will examine the coordination between IFAD, ADB and KfW and will assess and validate assumptions on additionality, contribution and synergy, as well as evaluating the effects on project outcomes. It will also assess the

value that IFAD added to CCRIP as a co-financed infrastructure-focused project, taking into consideration possible differences in the priorities and roles played by each of the financing agencies.

- **Coordination with other projects and agencies.** At the design stage, it was expected that coordination between CCRIP and a second project that was being planned at the same time, *Promoting Agricultural Commercialization and Enterprise* (PACE[18]), would enable a more holistic package of support in the project area: CCRIP (implemented by LGED) would provide the infrastructure "hardware" while PACE (implemented by Palli Karma-Sahayak Foundation[19]) would scale up value chain and financial services development in the same area. Project documents indicate that achieving coordination between CCRIP and PACE has been challenging, for example due to minimal overlap between the communities and beneficiaries involved in each project. The PPE will explore the barriers to coordination between CCRIP and PACE, and the extent to which alternative strategies were pursued (such as linking with other projects and agencies operating in the project area).
- **Scaling up.** The 2016 Bangladesh Country Programme Evaluation and the 2018 review of the Bangladesh COSOP 2012-2018 noted a need for IFAD to pay more attention to identifying policy issues and activities to mainstream good practices within and beyond implementing institutions. The PPE will explore the processes, institutions and relationships through which scaling up of CCRIP innovations and good practices has occurred, or is likely to occur, including assessing the degree to which the lessons learned by CCRIP have been mainstreamed in LGED and other relevant government agencies.

33. **Sustainability of infrastructure.** CCRIP aimed to build infrastructure that is both structurally resilient to climate change impacts and economically and socially sustainable. For example, it designed roads and markets around predicted changes in flood levels and frequencies, incorporating climate-resilient features such as higher embankment and plinth levels, added drainage and embankment slope protection through bio-engineering. It also developed the capacity of market management committees and helped to secured funding streams for market management and road maintenance.

34. Building on the evidence presented in the endline studies, PCR and other project outputs, the PPE will assess the likely mid- to long-term sustainability of the infrastructure developed by CCRIP from several angles. It will evaluate the structural sustainability of infrastructure in the face of recurring extreme climate events, as well as the local sustainability and economy of constructing climate-resilient infrastructure. This will include assessing the degree to which the infrastructure is really climate-resilient, based on how it has been built, and whether this extends to being 'disaster-resilient'. The PPE will also assess the performance of CCRIP-built infrastructure in coping with the severity of floods caused by the Amphan cyclone that hit coastal areas in southwest Bangladesh in late May 2020. The PPE will also evaluate how infrastructure is used, managed and maintained, including how well the market management committees are functioning and the extent to which the project has fostered a sense of ownership of infrastructure among local stakeholders - and the factors that determine success in this area (including issues of legal ownership, if relevant). It will also examine how cost-effective the infrastructure is and whether and how commitment to ongoing financial and technical support for infrastructure management and maintenance has been secured at local and national government levels, as this has sometimes been problematic for IFAD-funded infrastructure projects in Bangladesh (see 2016 Country Programme Evaluation).

[18] The original name for this project was MAPP, Micro-enterprise and Agriculture Promotion Project.
[19] The Palli Karma-Sahayak Foundation (PKSF) is an apex development organization established by the Government of Bangladesh. Along with LGED, PKSF is one of the main implementing agencies for IFAD-funded projects in Bangladesh.

35. **Rural poverty and livelihoods.** The goal of CCRIP was to achieve improved livelihoods for poor households in vulnerable and remote upazilas of southwest Bangladesh. It was anticipated that improving roads and markets in these areas would stimulate local investment, reduce transport costs, enable greater and more consistent access to inputs, services, technology and markets, increase sales, increase farm prices (due to increased buyers) and create employment opportunities. Outcome surveys, endline studies and the RIA impact assessment found that many of the predicted outcomes were realized, especially in terms of improved connectivity and creating more vibrant markets with a higher volume of sales. According to the RIA impact assessment, the average improvement in income for households in market catchment areas was moderate (11 per cent) and varied depending on the type and composition of household livelihood strategies. The study found that income for farming households increased more than for non-farming households, but there was no overall increase in agricultural production. Moreover, increased income from selling more crops and fish at markets (rather than consuming or selling them at farmgate) was sometimes offset by reduced income from other sources. In addition, the 2018 supervision mission noted that the distribution of market space may not always favour the poor (e.g. access to covered market sheds, building of permanent shops).

36. To develop an understanding of the impact of CCRIP on rural poverty and livelihoods, the PPE will further explore how different groups experienced the changes brought about by the project and what this meant for the livelihoods and wellbeing of the poorest households. This will include a study of the dynamics of the local economic development and value chain development in the period following project interventions, and comparison of communities that are linked to district roads and/or larger markets with communities that are more isolated. For example, what kinds of new goods and services have become available due to improved roads and markets and who is buying/using them? How have prices for farmers and consumers been affected by the growth in the number of traders? Has the project enabled the creation of a hierarchy of small, medium and large markets operating in synergy? Have communities connected to large markets benefitted more as a result of value chain linkages being established or strengthened? Did communities where community collection points were planned but not constructed fare less well? Overall, who gained most - smallholder farmers, permanent traders, temporary traders, micro-entrepreneurs, consumers, or other groups?

37. **Gender equality and women's empowerment.** CCRIP consistently received high ratings from IFAD missions for its performance on gender equality and women's empowerment, primarily due to the reported successful targeting of poor and very poor women for inclusion in labour contracting societies and the establishment of women's market sections in community markets. Women's market sections were effective for giving women secure places to trade in markets and providing role models for other women, but since only 14 were built there were relatively few women who benefitted directly from the scale of this intervention. Labour contracting societies enabled far greater numbers of poor women (approximately 5,314) to earn much needed income for a period of between four months and two years. To enable labour contracting society members to make the most of this income by investing it in productive activities, a proportion of their wages was paid as a lump sum when the construction activity was completed and they were given one day trainings on popular income generating activities such as poultry and cow rearing. As not all women were able to join labour contracting societies due to family and socio-cultural constraints, the project expanded the one day trainings to non-labour contracting society members and latterly also piloted the Gender Action Learning System (GALS) approach in a number of communities with the goal of transforming gender roles and responsibilities within households. Nevertheless, market infrastructure was still predominantly used by men (according to an outcome study on labour contracting societies, only 12 per cent of market users were women) and the RIA impact

assessment found that the project did not lead to improved incomes or influence for the majority of women within market catchment areas.

38. The PPE will seek to understand women's and men's engagement in production and markets as producers, traders, consumers, service providers, wage workers and contributing family labour, differentiating between women of different ages and income levels. On the basis of this understanding, it will explore differential impacts for women and men resulting from CCRIP. As well as examining women-focused initiatives like women's market sections, labour contracting societies and GALS, the PPE will assess how gender was mainstreamed at all stages of the project cycle from design to evaluation and the evolution of gender-related activities over time. It will also identify institutional or policy level changes that may lead to ongoing gender impacts, such as changes in the capacity, gender composition or operating procedures of LGED, local government or market management committees.

39. **Climate-resilient adaptation.** According to the PCR and other previous reviews, the project implemented the expected measures aimed at enhancing climate-resilient adaptation of coastal road and market infrastructure and people, including strengthening the resilience of local communities against climate-related shocks resulting from a rise in sea levels, higher monsoon season rainfall and increased severity of the impacts of cyclones through investments in road, market and cyclone infrastructure. The project reviews also report that - as a result of these actions - the pressure on natural resources and livelihoods should be reduced in the targeted, densely populated areas and districts in southwest Bangladesh. These efforts are reported to be aligned with investments made previously by the Government and other donors, such as the World Bank and KfW, and include a Rural Radio Initiative to provide agricultural, market and climate information services, and efforts to mainstream climate-resilient infrastructure in LGED planning and activities. An environmental and social assessment was also conducted as part of the environmental review of mitigation and implementation responses by CCRIP.

40. The PPE will assess the difference made by IFAD interventions in terms of the resilience of livelihoods and the ability of communities to adapt to climate change, particularly among groups that are most vulnerable. It will seek to understand which interventions worked and why, and what lessons can be learned from the project. It will also look at the extent to which provision of infrastructure by the project responded to climate change concerns and to the climate resilience of beneficiaries and communities, particularly for sustained use beyond the project end, and to what extent the project has been able to leverage further climate adaptation investments and scaling up successful interventions. In the analysis that will be conducted by the PPE, attention will be paid to whether the project could have generated any social or economic externalities on other sectors that were not immediately evident.

VI. Methodology

41. **Methodological approach.** The PPE will use a theory of change approach to identify impact pathways and to assess the strength of the evidence for causal linkages between CCRIP interventions and observed changes. In doing so, it will assess the contribution of the project relative to other influences on change in the project area, including other government programmes and donor-funded projects as well as economic development at regional and country levels. The PPE will also explore whether there were any unintended impacts and consequences (positive and negative) arising from project interventions.

42. More specifically, the PPE will validate and build on the results presented in the PCR through *inter alia*: (i) assessing the methodological rigour of baseline studies, endline studies, impact assessments and other sources of evidence; (ii) triangulating data and information on topics of interest from a range of sources in order to cross-check findings and capture different perspectives; (iii) identifying gaps in the evidence or analysis and collecting new data to fill those gaps; and (iv) exploring alternative

explanations for 'how' and particularly 'why' changes came about. In line with the purpose of PPEs, this will provide insights into aspects of the design and implementation of CCRIP that were more, or less, successful, with recommendations addressed to IFAD Management and concerned governments.

43. Since PPEs are primarily expected to fill information gaps and use field visits to explore areas or criteria that need verification or that are innovative or problematic, the present PPE will look at the strengths of the project and the reasons behind those, but also validate areas of relative weakness as identified by previous reports and missions.

44. The PPE will take into consideration practical, methodological and ethical issues arising from the COVID-19 crisis, the ongoing monsoon period in the country, and the landfall of the Amphan cyclone in late May 2020. This includes issues related to (i) restrictions on international and in-country travel, (ii) the need to follow social distancing guidelines, (iii) reduced availability of stakeholders and key informants for interviews at both central and local levels, (iv) the financial and psychological stress that many rural households are likely to be experiencing, and (v) the sampling biases that may be introduced as a result of these issues and potential impacts on how people respond to questions during interviews.

45. **Data collection.** The first phase of the PPE will involve a desk review of data and information that is already available. This includes: quantitative data from IFAD's Results and Impact Management System (RIMS) and project M&E; baseline and endline surveys and thematic studies commissioned by the project; IFAD RIA's impact assessment study; project documents such as supervision mission reports, mid-term review and PCR; and secondary data and academic studies of relevance to the project area. This will include the use of GIS maps developed by the project, or by IFAD, and the use of satellite images of CCRIP-built infrastructure to allow a broader visual understanding of characteristics of infrastructure and the geographic validation of infrastructure and market changes in project areas.

46. The second phase of the PPE will involve remote interviews with representatives of government agencies and financing organizations involved with CCRIP and other key informants for the purposes of supplementing and cross-checking evidence provided in project documents and evaluative studies. Interviews will be carried out by the lead consultants for the PPE via telephone or an internet-based platform (WhatsApp, Zoom or Skype), in accordance with interviewees' preferences. Interviewees will include: IFAD staff at headquarters and in the Bangladesh IFAD Country Office; CCRIP Project Director and team members at central and regional levels; representatives from MoLGRD&C and the Ministry of Environment, Climate Change and Forests; LGED officials and executive engineers at central and regional levels; co-financiers of CCRIP and other partner organizations; universities involved in CCRIP-related research and evaluations; and other national and international agencies and funding organizations with relevant expertise and experience in the project area. A list of proposed interviewees is provided in annex III.

47. Assuming that inter-district travel will be permitted by August 2020, the third phase of the PPE will involve national consultants visiting project-supported infrastructure and interviewing local stakeholders at upazila, Union Parishad and village levels, with guidance provided by the lead consultants. The national consultants will spend approximately one week visiting a sample of sites from the project area, taking a case study approach. The aim will be to carry out a visual check of infrastructure standards, to review records kept by market management committees if these are available (e.g. on sales volumes and prices in the market before and after the project), and to interview individuals from each of the following groups at each site: local government representatives; upazila LGED engineers; market management committees; market leaseholders; labour contracting societies; small-scale producers; permanent and temporary traders; other market users. For all groups of

stakeholders, the evaluation team will aim to interview both men and women (usually separately).

48. If inter-district travel is still not possible by August 2020, the national consultants will interview local stakeholders remotely, making use of video-call technology to inspect infrastructure and snowball sampling (in which evaluation subjects recruit subsequent evaluation subjects from among their acquaintances) to obtain contact details for people to interview in each of the selected project locations.[20]

49. Information from the three phases will be analysed and triangulated in order to reach an independent assessment of performance and results of CCRIP and to identify lessons and recommendations for future programming.

50. **Selection of sites for field visits**. The selection of districts and communities (villages/unions) to visit will be made in coordination with the PMO on the basis of selection criteria determined by the evaluation team. The first level of selection is of project districts – 3 out of the 12 project districts will be selected using the following criteria:

    i. *One district that has been moderately visited* by previous IFAD missions and the PMO.

    ii. *One district that has not been visited or has rarely been visited* by previous IFAD missions and the PMO (e.g. because less accessible or it has fewer communities where infrastructure was built).

    iii. *One district that was most affected by the recent Amphan cyclone* to assess the performance of the infrastructure and local emergency response.

51. The second level of selection is of project communities: for each of the three districts, two or three communities will be selected using the following criteria:

    i. *Time since market was completed*: Only include communities where markets were completed at least two years ago, so that enough time has passed for impacts to occur.

    ii. *Remoteness*: Include some communities that are closer to larger towns/cities and some that are more remote, in terms of distance but also of road connectivity. (Ideally, this would include at least one community that is linked to roads and/or large markets funded by ADB.)

    iii. *Climate change vulnerability*: At least 50 per cent of the selected communities should be extremely vulnerable to climate change.

    iv. *Type of market infrastructure*: Include a mix of small, medium and special markets.

    v. *Presence of women's market section*: Include at least two communities where a Women's Market Section was constructed.

    vi. *Strength of results, likelihood of learning lessons*: Include some communities where CCRIP is believed to have had strong results, others where CCRIP was not as successful (e.g. because the market management committee is less effective or other local stakeholders are not supportive), i.e. where lessons can be learned.

    vii. *At least half of the communities should have never been visited before by any IFAD mission*.

52. **Rating system**. In line with the practice adopted in many other international financial institutions and United Nations organizations, IOE uses a six-point rating system to score project performance on a set of standard criteria (as set out in annex

[20] The evaluation team will take into consideration and manage appropriately the selection biases and other impacts on data quality that are introduced when using this type of approach.

I), where 6 is the highest score (''highly satisfactory'') and 1 is the lowest (''highly unsatisfactory'').

53. **Stakeholders' participation**. In compliance with the IFAD's Evaluation Policy, the main project stakeholders will be involved throughout the PPE. This will ensure that the key concerns of the stakeholders are considered, that evaluators fully understand the context in which the project was implemented, and that opportunities and constraints faced by implementing institutions are identified. Regular interaction and communication will be established with IFAD's Country Office in Bangladesh and the Government of Bangladesh. Formal and informal opportunities will be explored during the process for discussing findings, lessons and recommendations.

VII. Process and timeline

54. The evaluation will be jointly led by independent senior IOE consultants Roberto La Rovere (evaluator) and Sally Smith (research, gender and markets specialist). Two senior level national consultants will be recruited to carry out data collection and analysis at the local level: one an engineer with expertise in climate-resilient infrastructure and the other a social scientist with expertise in livelihoods, poverty reduction, gender and social inclusion. Inputs will also be provided by IOE consultant, Nuri Niyazi, who will conduct the case studies of CCRIP for the evaluation synthesis study on infrastructure and the thematic evaluation on smallholders and climate change adaptation. Fabrizio Felloni, IOE Interim Officer-in-Charge, will provide oversight and Laura Morgia, IOE Evaluation Assistant, will provide administrative support.

55. The steps in the process will be:

- **Preparation.** The draft PPE approach paper will be shared with IFAD's Asia and the Pacific Division (APR) and Country Office and with the Government of Bangladesh and finalized once their comments have been received.
- **Desk review and preparation.** The lead consultants will conduct the desk review of the available project documentation and relevant studies, surveys and other background information. They will then prepare a detailed methodology and research instruments for remote interviews and data collection at project sites. National consultants will be recruited and the evaluation team will liaise with the Government and project authorities to set up remote interviews and field visits, in accordance with government regulations and guidelines related to COVID-19.
- **Data collection.** Remote interviews with key informants will take place in July 2020. Visits to project sites for local data collection (or, if travel is not permitted, remote interviews with local stakeholders) will take place from late July to early August.
- **Draft report and quality assurance**. The evaluation team will prepare a draft PPE report and submit it for an internal (IOE) peer review for quality assurance. A revised draft will be sent to the IFAD APR Division and Government authorities for comments by the end of September.
- **Communication and dissemination.** The final report will be disseminated among key stakeholders and the evaluation report published by IOE, online and in print. IFAD Management will prepare a written response on the final report, which will be included in the published version. The recommendations addressed to IFAD will be followed up in the President's Report on the Implementation Status and Management Actions of Evaluation Recommendations.

56. **Tentative timeline** for the PPE process is as follows:

Date	*Activities*
February – May 2020	Preparation of (revised) Approach Paper
June 2020	Desk review and preparation for data collection
July 2020	Remote interviews with key informants
Late July – early August	Visits to project sites and interviews with local stakeholders (or remote interviews)
Mid-September 2020	Draft PPE report sent for IOE peer review
End September 2020	Draft PPE report sent to APR and Government for comments
Mid-December 2020	Final report and audit trail sent to IFAD APR and Government + Management Response received from APR
March 2021	Publication

VIII. Background documents

57. The key background documents for the PPE will include the following:

Project specific documents

- Design Completion Report (2013)
- IFAD President's Report (2013)
- IFAD Mid Term Review Report (2017)
- IFAD Supervision Mission Reports (2015-2018)
- IFAD Project Completion Report (2019)
- IFAD RIA Impact Assessment Report (2019)
- Baseline and midterm outcome surveys by BETS and ABL (2015 and 2018)
- Endline studies by University of Dhaka (ISWR) on (i) CCRIP Training and Workshops, (ii) Households, (iii) Climate Resilience, (iv) Large Growth Centres and Large Rural Markets, and (v) Cyclone Shelters (all 2019)
- Final Report on CCRIP Climate-Resilient Documentation by CEGIS (2019)
- Satellite images and remote-sensing maps of markets and infrastructure built by the CCRIP, ideally from before and after the project and then updated at end May 2020 post-Amphan cyclone

Country specific documents

- IFAD COSOP for Bangladesh (2012)
- IFAD COSOP Review for Bangladesh (2018)
- IOE Country Programme Evaluation (2016)

General and others

- IFAD Evaluation Policy (2011)
- IFAD Evaluation Manual – Second Edition (2015)
- Various IFAD Policies and Strategies, in particular, Strategic Frameworks (2011-2015 and 2016-2025), Climate Change Strategy (2010), Environment and Natural Resource Management Policy (2012), Targeting Policy (2006), Gender Equality and Women's Empowerment Policy (2012).

IX. Evaluation criteria for the PPE

(i) **Relevance.** The PPE will assess to what extent the project was relevant to the strategies, policies and programmes for national rural development, climate resilience, poverty reduction and inclusive growth of the Government of Bangladesh,

and to IFAD's strategic focus in Bangladesh as articulated in the 2012-2018 Country Strategic Opportunities Programme (COSOP).[21]

(ii) The PPE will also evaluate the appropriateness of the project design for meeting the overall goal and objectives. This will include analysis of how project design and implementation responded to the challenges associated with climate change in the project area, and assessing whether assumptions on coordination with other Financiers and IFAD-funded projects were justified.

(iii) **Effectiveness.** The PPE will review the existing evidence base, including the data collected by M&E and RIMS systems and evidence from baseline and endline surveys and impact assessments, to determine to what extent the project achieved its objectives and targets. Drawing on the theory of change, the PPE will analyse whether the activities and strategies of the project were effective for achieving the intended results through the expected impact pathways and if there were any unintended consequences (positive and negative) and external factors that either facilitated or undermined project implementation and results. The PPE will also assess the effectiveness of the targeting strategy for ensuring project benefits reached the intended groups.

(iv) **Efficiency.** The PPE will review data and information related to the disbursement of funds (from the PCR, as well as from supervision mission reports and audit reports as available and appropriate) and assess whether the physical and financial resources were adequate for the successful execution of project activities. It will also review the quality of programme and financial management and will compare the project's programme management costs, internal rate of return (IRR) and loan costs per beneficiary with the estimates made at appraisal and with other IFAD-funded operations in Bangladesh (taking into consideration differences in project designs). The PPE will also review the calculation of IRR and - if needed - update the financial information to determine the final IRR.

(v) **Rural poverty impact.** The PPE will examine the available data and methodologies used in the endline surveys and RIA impact assessment to assess the validity of the PCR results in relation to (i) household income and assets, (ii) human and social capital, (iii) food security, (iv) agricultural production, (v) institutions and policies, and (vi) access to markets. The PPE will gather additional qualitative evidence to validate results and fill gaps in the analysis of how different groups experienced the changes brought about by the project and what this meant for the livelihoods and wellbeing of the poorest households, drawing out lessons for ongoing and future programming in Bangladesh. This will include looking into the dynamics of local economic development and value chain development following project interventions.

(vi) **Sustainability of benefits.** The sustainability of project benefits will be assessed through visits to communities where project-funded infrastructure was completed at least two years previously. It will evaluate whether and how the project ensured the necessary systems, policies and institutions for infrastructure sustainability were in place, taking into account the structural, economic and social dimensions of sustainability. It will also assess the sustainability of project benefits for women and men who participated in labour contracting societies.

(vii) **Gender equality and women's empowerment.** Based on the existing evidence and new information gathered during the field mission, the PPE will evaluate the extent to which the project has addressed gender inequalities and empowered women economically, socially and politically[22]. In doing so, it will take into consideration the different relationships that women have with markets as producers, traders, service providers, consumers, wage workers and family labour

[21] The 2018 review of COSOP 2012-2018 recommended it be extended for two years so that the new COSOP could be aligned with the Governments upcoming Five Year Plan (2021-2025). It is assumed that this extension was agreed.
[22] Political empowerment in this context is linked to the second strategic objective of IFAD's Gender Equality and Women's Empowerment policy: 'Enable women and men to have equal voice and influence in rural institutions and organizations'.

and the influence of factors such as age and marital status on the ways in which women (and men) experience project benefits. The PPE will also assess the quality of gender mainstreaming throughout the project cycle and whether and how CCRIP has contributed to the achievement of IFAD's strategic objectives for gender equality and women's empowerment[23].

(viii) **Innovation.** The PCR identifies the improvement of road and market connectivity at multiple levels (community, upazila and district) as an important innovation in the Bangladesh context. Other innovations include women's market sections with linkages to labour contracting societies and piloting of sustainable waste management in markets, quality test protocols for road and market rehabilitation and climate-resilient slope protection of embankments. The PPE will review project documents and conduct key informant and stakeholder interviews to evaluate the contribution and importance of these and other innovations.

(ix) **Scaling up.** The PCR notes that CCRIP itself scaled up good practices in climate-resilient infrastructure that emerged from a previous IFAD-funded project (MIDPCR) and that through CCRIP additional good practices have been trialled and scaled up by LGED. The PPE will examine the processes, institutions and relationships through which scaling up of CCRIP innovations and good practices has occurred or is likely to occur, including assessing the degree to which lessons learned by CCRIP have been mainstreamed in LGED and other relevant government agencies.

(x) **Environment and natural resource management.** CCRIP did not place much emphasis on environment and natural resource management, with no major concerns raised at the design stage. The PCR notes that climate change adaptation measures in the design of roads and markets are likely to have reduced pressure on the natural resource base, but sustainable waste management in markets remains problematic. The PPE will examine the evidence regarding the promotion of sound environment and natural resource management, taking into account government regulations and IFAD's Environment and Natural Resource Management policy[24], and will assess whether there were any unintended consequences for the environment and natural resources arising from project interventions or outcomes.

(xi) **Adaptation to climate change.** CCRIP was designed to build resilience to climate change among some of the poorest and most affected communities in Bangladesh. Adaptation to climate change will therefore be a central theme across all aspects of the evaluation and project performance in multiple areas (such as relevance, effectiveness, sustainability, rural poverty impact) will inform the PPE's assessment of the degree to which the project achieved its objectives in this area. The PPE will seek to understand which interventions worked and why, and what lessons can be learned. It will also look at the extent to which provision of infrastructure by the project responded to climate change concerns and to the climate resilience of beneficiaries and communities, particularly for sustained use beyond the project end, and to what extent the project has been able to leverage further climate adaptation investments and scaling up successful interventions.

(xii) **Overall project achievement.** The PPE will provide an overarching assessment of the project, drawing upon the analysis and ratings for all above-mentioned criteria.

(xiii) **Performance of partners**. The PPE will assess IFAD's performance in terms of *inter alia* supervision and disbursement responsibilities. It will also examine the role of the

[23] IFAD's Gender Equality and Women's Empowerment policy has three strategic objectives: (i) Promote economic empowerment to enable rural women and men to have equal opportunity to participate in, and benefit from, profitable economic activities; (ii) Enable women and men to have equal voice and influence in rural institutions and organizations; and (iii) Achieve a more equitable balance in workloads and in the sharing of economic and social benefits between women and men. See: https://www.ifad.org/documents/38711624/39417906/genderpolicy_e.pdf/dc871a59-05c4-47ac-9868-7c6cfc67f05c.

[24] See: https://www.ifad.org/en/document-detail/asset/39761750?inheritRedirect=true.

Government in undertaking their respective responsibilities in financial and project management and in implementation.

X. Interviews list: People / organizations to be interviewed

A. People/organizations to interview remotely

i. IFAD Country Director, Country Programme Officer, CCRIP Project Manager and other relevant IFAD staff
ii. Ministry of Local Government Rural Development and Cooperatives (MoLGRD&C) Ministry of Environment, Climate Change and Forest (MoECCF) – senior officials
iii. LGED senior officials and Executive Engineers (including at least one women)
iv. CCRIP Project Director, M&E Officer, Gender Specialist, Regional Officers, Field Monitoring Officers, and other team members
v. ADB and KfW representatives for CCRIP
vi. Rural Radio Initiative and Agricultural Information Service representatives
vii. Agencies that provided training to Market Management Committees and Labour Contracting Societies
viii. Bangladesh University of Engineering and Technology (BUET) – people involved in the three pieces of research funded by CCRIP
ix. University of Dhaka – people involved in CCRIP endline studies
x. BETS, ABL – people involved in CCRIP baseline and midterm outcome surveys
xi. IFAD Research and Impact Assessment Division – in CCRIP impact assessment
xii. Palli Karma-Sahayak Foundation representative for PACE project
xiii. Other national and international agencies with expertise and experience relevant to CCRIP, e.g. World Bank (Coastal Embankment project), International Centre for Climate Change and Development (ICCCD), Green Climate Fund (Climate-Resilient Infrastructure Mainstreaming Project)

B. People/organizations to interview during field visits / remotely if internal travel is prohibited

i. Market management committees (representatives from Union Parishad, upazila administration, local traders association and other market users)
ii. Market leaseholders
iii. Labour contracting society members
iv. Men and women producers involved in crop production, fishing and/or livestock (including crop and fish processing and milk production)
v. Market users, male / female permanent traders, temporary traders, consumers
vi. Local government division of the MoLGRD&C
vii. LGED upazila engineers (including at least one women)

Modified PPE approach as a result of COVID-19 pandemic

1. **Context considered in conducting the PPE, and limitations**: The PPE took place during the worst period of the COVID-19 pandemic in Bangladesh. The preparations took place in February 2020 with the development of an approach paper and the preparation of a field mission that was due to take place in March 2020. However, the initial signs of the global pandemic, and of the worsening of the health situation in Bangladesh, caused repeated postponements of the field mission until June 2020, by when the situation in the country had worsened to the point that the pandemic had reached its peak. At that point the in-person field mission was substituted by a very different – and innovative - approach for field data collection and validation that took into consideration the several practical, methodological and ethical issues that were being determined by the COVID-19 crisis. These include issues related to (i) increasingly stringent restrictions on international and in-country travel, (ii) the need to follow social distancing guidelines, (iii) the reduced availability of stakeholders and key informants for interviews at both central and local levels, (iv) the financial and psychological stress that many people were likely experiencing also in rural areas, and (v) the sampling biases that risked to be introduced as a result of these issues and the potential impacts on how people respond to questions during interviews. The revised approach also represented a natural experiment since it had to take into account not only the health considerations, but also the more than exceptional climate and extreme weather conditions that affected Bangladesh in the first half of 2020. First, in May 2020 the Amphan cyclone made landfall in South Western Bangladesh; this offered one more way to test the performance of CCRIP-built infrastructure under the conditions determined by the Amphan cyclone in some of the target districts of the CCRIP. And second, severe floods affected parts of CCRIP areas after the project end, although they didn't affect the same areas of the Amphan cyclone. These natural, yet exceptional, events can be seen as a stress test for climate proof infrastructure. The PPE gathered as much as possible data to assess performance and sustainability of CCRIP-built infrastructure.

2. As a result of the above events and considerations, the final PPE approach and process for the data collection and field validation was therefore redesigned to include two phases: 1. Desk review of available data, reports and other information, and 2. Data collection and validation by remote interviews conducted simultaneously by both the international consultants and the national consultants.

3. The **first phase** involved a desk review of available data and other information, and included reviewing and gathering: quantitative data from IFAD's Results and Impact Management System (RIMS) and project M&E; the baseline, endline, and thematic studies commissioned by the project; the IFAD RIA's impact assessment study; project documents such as supervision mission reports, mid-term review and PCR; and secondary data and academic studies of relevance to the project area. This also included using GIS maps developed by CCRIP and IFAD, to inform a subsequent phase of generation and analysis of satellite images of CCRIP-built infrastructure to allow a broader visual understanding of the characteristics of infrastructure and the validation of the performance of infrastructure and market changes in project areas.

4. Specifically, during this desk review phase the PPE primarily filled information gaps and used different types of validations – in alternative to field visits - to explore areas or criteria needing verification. The PPE looked at project strengths and at the reasons behind those but also validated areas of relative weakness as identified by previous reports and missions. Key issues for further analysis that had been identified through the desk review based on the standard evaluation criteria for a PPE, as set out in the Approach Paper) included the following:

   (i) coordination, additionality and scaling up;

(ii) sustainability of infrastructure;

(iii) rural poverty and livelihoods;

(iv) gender equality and women's empowerment;

(v) climate-resilient adaptation.

5. The **second phase** involved remote data collection and interviews conducted by the international consultants as well as by the national consultants. The *international consultants* held interviews[140] with government agencies and financing organizations involved with CCRIP and other key informants for the purposes of supplementing and cross-checking evidence provided in project documents and evaluative studies. Interviews were carried mostly via Zoom, Skype and WhatsApp, in accordance with interviewees' preferences and considering the complex pandemic period of the country and applying all ethical and common-sense considerations. The interviewees included: IFAD staff at headquarters and in the Bangladesh IFAD Country Office; CCRIP Project Director and members at central and regional levels; representatives from MoLGRD&C and Ministry of Environment, Climate Change and Forests; LGED officials and Executive Engineers at central and regional level; co-financiers of CCRIP and other partner organizations; universities involved in CCRIP-related research and evaluations; and other national and international agencies and funding organizations with relevant expertise and experience in the project area. The *national consultants* interviewed local stakeholders remotely, also using video-calls and imagery technology to inspect infrastructure, and adopted a snowball sampling approach (in which evaluation subjects recruit subsequent evaluation subjects from among their acquaintances) to obtain contact details for people to interview in each of the selected project locations. In doing so they made us of GIS data and spatial imagery to visually review quality and performance of IFAD-built infrastructure, interviewing local stakeholders at upazila, Union Parishad and village level, and address livelihood and socio-economic aspects according to IFAD evaluation criteria. The methodology for community site selection and for spatial data collection is described in annex VII. All in all, over the 9 selected sites, the PPE collected from the ground 103 images and 11 videos on the examined CCRIP built or renewed infrastructure, as well several more maps and aerial images allowing a before and after CCRIP, and before and after Amphan cyclone, visual assessment in all selected sites, as well as a technical review of the quality of the infrastructure.

6. The final list of 75 people interviewed by both the international as well as the national consultants, is provided in annex IV. The information was analysed and triangulated to reach an independent assessment of performance and results of CCRIP and to identify lessons and recommendations for future programming.

[140] Interviewees included (see Interviews List: Type of people/organizations interviewed, Annex VIII): CCRIP Project Director and team members; representatives of MoLGRD&C and Ministry of Environment, Climate Change and Forests; LGED officials and Executive Engineers; co-financiers of CCRIP or partner organizations; universities involved in CCRIP-related research and evaluations; and other national and international agencies with relevant expertise and experience in the project area. Interviewees in field included regional CCRIP staff; Local Government representatives; LGED engineers; Market Management Committees; market leaseholders; Labour Contracting Societies; small-scale producers; permanent and temporary traders; other market users.

Evaluation Matrix CCRIP PPE		
Evaluation criteria	**Evaluation questions**	**Data sources**
	A. **Project performance and rural poverty impact**	
A1. Relevance	– To what extent were the objectives and design of CCRIP consistent and relevant with national needs and priorities, and with national rural development, climate resilience, poverty reduction and inclusive growth strategies, policies and programmes of the country? – How relevant was CCRIP to IFAD's focus in the country, as articulated in the 2012-2018 Country Strategic Opportunities Programme (COSOP)? – Were the project design and implementation arrangements appropriate for achieving CCRIP's objectives? – To what extent did the project design use consultations with communities, governments, and implementing partners at local level? How was local knowledge reflected in project design? – Were recommendations and changes made at Midterm Review (MTR) time, and subsequently to it, timely and appropriate for addressing the issues that had been identified? – Were assumptions on coordination with other Financiers and IFAD-funded projects justified? – What is IFAD's (strategic or main) approach to addressing the funding gap on infrastructure at country level? What is IFAD's comparative advantage in providing infrastructure?	– Project design documents – Midterm Review report – Supervision reports – Project Completion Report – COSOP 2012-2018 Review – Country Programme Evaluation – Interview IFAD country management team – Interview country authorities, implementing agencies – Interviews with Co-Financiers – Interviews/discussions with beneficiaries, grassroots institutions, partner organization
A2. Effectiveness	– To what extent were project activities executed as planned, and were expected results achieved in project districts, in line with the stated CCRIP objectives and targets? – Were project activities and results (both positive and negative) adequately tracked and measured through effective M&E system? Was the M&E used for making needed corrections? – Which CCRIP activities or strategies were most effective, and why? Which parts worked less well? How could the effectiveness of CCRIP in achieving the main goals have been improved? – How effective was CCRIP's targeting strategy for ensuring that project benefits reached the intended target groups, including the poorest and most vulnerable populations? To what extent did target groups participate in the identification, planning, implementation, operation and maintenance of CCRIP-funded infrastructure? – Were there sufficient investments in "soft" infrastructure (capacities, institutions) to ensure that the "hard" infrastructure was functional and sustainable? How did infrastructure complement the non-infrastructure parts of the project? – What lay behind the difficulties acquiring land for some community markets, Women's Market Sections and community collection points, and what effect did this have on project outcomes? – Which external factors facilitated or undermined project implementation and CCRIP results? How did coordination challenges (with ADB, PACE) affect project outcomes? Were there any unintended consequences from the project (positive, negative)? – Was the climate-resilient infrastructure able to withstand the extreme climate events and stay operational through the climate hazard? Did the infrastructure follow construction standards appropriate to resist to weather events? If there were disruptions, how long did they last?	– Project design documents – Midterm Review report – Supervision reports – Project Completion Report – Project M&E, RIMS, GIS map data – Baseline data, endline data, RIA impact assessment, other studies or reviews – Interview IFAD country management – Interview country authorities, implementing agencies – Interviews/discussions with beneficiaries, grassroots institutions, partner organizations – Direct observations

A3. Efficiency	– Did project implementation start and proceed as it was originally planned? If not, why? – Were physical and financial resources adequate for successful execution of project activities? – How efficient were the processes and systems behind the disbursement of CCRIP funds? – Were project costs in general terms commensurate with the overall project achievements? – Is the Internal Rate of Return (IRR) reported in the final PCR report based on sound analysis, and does it remain still valid at the date of financial project closure (31 March 2020)? – Was the programme and financial management sound in terms of management costs, of the IRR, of loan costs per beneficiary (also as compared with estimates at design stage and with other IFAD-funded operations in Bangladesh)?	– Project design documents – Midterm Review report – Supervision reports – Project Completion Report – Country Programme Evaluation – Interview IFAD country management – Interview country authorities, implementing agencies – Interviews partner organizations
A4. Rural poverty impact	– Did CCRIP contribute to overall rural poverty reduction? what evidence exists for this in terms of its impacts on: (i) household income and assets; (ii) human and social capital; (iii) food security; (iv) agricultural production; (v) institutions and policies; (vi) access to markets? – To what degree can changes in CCRIP project areas (e.g. in terms of livelihoods, of cost of living, wellbeing of target households, general local economic development, market and value chain development) be attributed to CCRIP project activities? How reliable is the evidence? – What was the magnitude of the benefits generated by the project (How many benefited)? – How did impacts and benefits vary across different groups in rural communities (e.g. wage workers, producers, permanent / temporary traders, microentrepreneurs, consumers)? – Did impacts vary depending on degree to which smaller community markets connect with larger markets? – Are there any good practices that were implemented and learned in terms of pro-poor or of gender responsive infrastructure provision	– Project Completion Report – Project M&E data, RIMS data – Endline surveys, RIA impact assessments, and other studies – Interview country authorities, implementing agencies – Interviews/discussions with beneficiaries, grassroots institutions, partner organizations – Direct observations
A5. Sustainability of benefits	– How sustainable are the results of the project? – To what extent has CCRIP built the capacity of Market Management Committees, of Local Government and LGED to build and manage rural infrastructure in a sustainable way? – To what extent is the road and market infrastructure - built through the project - resilient to climate change and natural disasters? – How effective are measures introduced by CCRIP to ensure funding is available for road and market maintenance? – What have been the most effective strategies for ensuring that systems, policies, institutions underpinning infrastructure sustainability are in place and ensuring that target groups will continue to benefit in the future? – To what extent has participation in Labour Contracting Societies led to sustainable benefits for poor women and men in rural communities?	– Project Completion Report – Project M&E, RIMS data, GIS maps – Endline surveys, impact assessments and other studies – Interview country authorities, implementing agencies – Interviews/discussions with beneficiaries, grassroots institutions and partner organizations – Direct observations

	B. **Other performance criteria**	
B1. Innovation	– What are the key innovations that were brought about by CCRIP? – In which ways the key innovations were 'innovative'? What represented 'real' innovations? – Have successful innovations been documented and shared? – What potential do these innovations hold for promoting rural poverty reduction and women's empowerment elsewhere (in Bangladesh, in other IFAD or others' projects, other countries)?	– Project Completion Report – Interview country authorities, implementing agencies – Interview IFAD country management team – Interview with beneficiaries, grassroots institutions, partner organization
B2. Scaling up	– Which project strategies and activities have been scaled up by government or other entities? Has the quality of these strategies/activities been maintained during scaling up (if any)? – Which lessons learned through CCRIP were mainstreamed in LGED and other government agencies? – Have CCRIP innovations and lessons been adequately documented and shared? Which processes, institutions, relationships have been most effective for scaling up and why? What more could have been done to enable scaling up and policy influence?	– Project Completion Report – GIS maps (on markets, infrastructure) – Interview IFAD country management – Interview country authorities, implementing agencies – Interview with partner organizations
B3. Gender equality, women's empowerment	– To what extent CCRIP addressed gender inequalities in the project areas and empowered women (taking into consideration different relationships of women with markets as traders, producers, microentrepreneurs, service providers, consumers, wage workers, family labour)? Do results vary according to e.g. age, marital status, social group, and socio-cultural context? – Which project strategies and activities have been most effective for delivering benefits to poor rural women? – What has been the extent and quality of gender mainstreaming throughout the project cycle? Has this led to any lasting changes in the capacities, policies and practices of institutions involved in the project (e.g. LGED, Local Government, Market Management Committees)? – How CCRIP contributed to the achievement of IFAD's strategic objectives for gender equality and women's empowerment?	– Project Completion Report – Project M&E data, RIMS data – Endline, RIA assessment, other studies – Interview country authorities, implementing agencies – Interview with beneficiaries, grassroots institutions and partner organizations – Direct observations
B4. Environment and natural resource management	– Has CCRIP promoted sound environment and natural resource management? How and why? – What positive and/or negative impacts has the CCRIP had on the environment and on natural resources? Were there any unintended consequences, in terms of the environment and of the management of natural resources, arising from CCRIP project interventions or outcomes?	– Project Completion Report – Project M&E, RIMS data, GIS maps – Endline, RIA assessment, other impact studies, and links with other IOE studies – Interview with country authorities, implementing agencies – Interview with beneficiaries, grassroots institutions, partner organization – Direct observations
B5. Adaptation	– How frequently do the target areas face extreme climate events (e.g. floods and cyclones)?	– Project Completion Report

to climate change	– What were the effects of extreme climate events on the livelihoods of different target groups? (esp. vulnerable: elderly, women, children, poor…)? Did the project address these differently? – To what extent did CCRIP build resilience to climate change in project areas or communities? – Which interventions worked to build resilience? Why and what can be learned from those? – To what extent did provision of infrastructure by CCRIP respond to climate change concerns and to the climate resilience of beneficiaries and communities, particularly for use beyond project end? To what extent was CCRIP able to leverage further climate adaptation investments and scaling up of successful interventions? What are relevant examples of this, if any?	– Project M&E, RIMS data, GIS maps – Endline, RIA assessment, other impact studies, and links with other IOE studies – Interview country authorities, implementing agencies – Interview with beneficiaries, grassroots institutions, partner organizations – Direct observations
	C. **Overall project achievement**	
	– What were the most significant achievements of CCRIP? – What are overarching CCRIP lessons for ongoing and future programming in the country?	- Also based on summary findings from other criteria
	D. **Performance of partners**	
D1. Performance of IFAD	– How satisfactory was IFAD's performance in terms of quality of project design, supervision and disbursement of funds? – How did IFAD manage the fiduciary, environmental and social risks in relation to provision of infrastructure? To what extent did IFAD provide the required technical expertise (engineering, financial and social) along the project cycle?	– Project design documents – Midterm Review report – Supervision reports – Project Completion Report – Interview IFAD country management – Interview country authorities, implementing agencies – Interview partner organizations
D2. Performance of partners, government	– To what extent did the partner organizations (LGED, ADB, KfW) meet expectations in terms of contribution and performance? – What were the reasons behind the lower disbursement rates of co-financing partners (as of June 2019)? Did this affect the outcomes of CCRIP? – How satisfactory was the overall government's performance in supporting the CCRIP project? – How satisfactory did the government discharge its responsibilities? in terms of: e.g. quality of project design, fiduciary, environmental and social standards, financial management, project management, project audit, and overall support to project management and implementation?	– Project design documents – Midterm Review report – Supervision reports – Project Completion Report – Interview IFAD country management – Interview country authorities, implementing agencies – Interview partner organizations
	E. **Assessment of the quality of the Project Completion Report**	
	– How good is the Project Completion Report in terms of scope, quality, candour and lessons?	– Project Completion Report

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