Combined Project Information Documents / Integrated Safeguards Datasheet (PID/ISDS)

Appraisal Stage | Date Prepared/Updated: 16-Feb-2021 | Report No: PIDISDSA31511

BASIC INFORMATION

A. Basic Project Data

Country	Project ID	Project Name	Parent Project ID (if any)
Bangladesh	P161534	Climate-Smart Agriculture and Water Management Project	
Region	**Estimated Appraisal Date**	**Estimated Board Date**	**Practice Area (Lead)**
SOUTH ASIA	28-Jan-2018	09-Mar-2021	Agriculture and Food
Financing Instrument	**Borrower(s)**	**Implementing Agency**	
Investment Project Financing	People's Republic of Bangladesh	Bangladesh Water Development Board, Department of Agricultural Extension, Department of Fisheries	

Proposed Development Objective(s)

To enhance climate resilience and productivity of irrigated agriculture and fisheries in targeted schemes

Components

Improved Climate Resilience of Flood Control, Drainage and Irrigation Infrastructure Systems
Climate-Smart Agriculture and Fisheries Production and Marketing
Project Management Support
Contingency Emergency Response

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	155.31
Total Financing	155.31
of which IBRD/IDA	120.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Development Association (IDA)	120.00
IDA Credit	120.00
Non-World Bank Group Financing	
Counterpart Funding	35.31
Borrower/Recipient	35.31

Environmental Assessment Category

B-Partial Assessment

Decision

The review did authorize the team to appraise and negotiate

B. Introduction and Context

Country Context

1. **Bangladesh has made rapid social and economic progress in recent decades, reaching lower-middle income status by 2015.** Gross domestic product (GDP) growth averaged close to 6 percent annually since 2000 and, according to official estimates, accelerated to over 8 percent in FY19. Strong labor market gains contributed to a sharp decline in poverty, with the national poverty rate falling from 48.9 to 24.3 percent between 2000 and 2016, while extreme poverty declined from 34.3 to 12.9 percent[1]. However, the pace of poverty reduction slowed in recent years even as growth accelerated, particularly in urban areas and in the west of the country. Similarly, the progress on shared prosperity slowed between 2010 and 2016 after a decade of improvements, with annual consumption growth of the bottom 40 percent trailing that of the overall population (1.2 versus 1.6 percent). Bangladesh entered the COVID-19 crisis with a relatively strong macroeconomic position. Garment exports and remittances narrowed the external deficit in recent years and international reserves were adequate at the end of April 2020 at US$32.9 billion, equivalent to six months of imports. While tax collections are amongst the lowest in the world, under-execution of the budget has contained the fiscal deficit, which has been below 5 percent of GDP since FY01. As a result, public debt is low and stood at 33.7 percent of GDP at the end of FY19. A key economic vulnerability is in the banking sector where the non-performing loan (NPL) ratio is high at 9.3 percent of outstanding loans in December 2019, and is underestimated considering significant under-provisioning, regulatory forbearance, and gaps in the legal framework.

2. **Growth declined sharply as the COVID-19 pandemic brought about major disruptions to economic activity. In the first half of FY20 (July to December), growth decelerated as slower global trade and deteriorating external competitiveness lowered exports and tighter access to finance constrained**

[1] Household Income and Expenditure Survey, 2000/01 through 2016/17.

private investment growth. With declining ready-made garment (RMG) orders, exports declined by 5.8 percent year-over-year (y-o-y) during this period. A sharp contraction in capital goods imports (3.4 percent, y-o-y) suggests private investment also declined. Growth during the first half of the year was primarily supported by remittance-fueled private consumption. The initial phase of the pandemic in early 2020 disrupted the supply of intermediate goods from China, reducing manufacturing output. As the pandemic intensified abroad, export orders from Europe and the United States declined precipitously and an estimated US$3.2 billion in RMG orders were cancelled or suspended[2]. The government implemented a national shutdown from March 26 to May 30 to control an accelerating domestic outbreak of the virus. Control measures resulted in a sudden stop of many components of the service and industrial sectors. Remittance inflows declined by 23.6 percent y-o-y in April 2020 and exports declined by 82.9 percent in the same period. In FY19, inflation had remained modest at an average of 5.5 percent, primarily driven by a rise in non-food prices. Demand for food surged with precautionary purchases ahead of the national lockdown but has eased more recently as government food distribution programs were implemented. Overall inflation reached 5.4 percent y-o-y by the end of May 2020.

3. **COVID-19 has darkened the economic outlook through domestic economic disruptions, declining exports and remittances, and rising stress in the financial sector.** FY20 GDP growth is projected in a range between 1.6 percent and a downside scenario of 1.0 percent. The downside forecast is based on a situation in which: (i) lockdown measures are extended and mobility remains significantly constrained; and (ii) the global outlook deteriorates further. In FY21, growth is projected between 1.0 and -3.0 percent. In the downside scenario, a second round of infections and a prolonged global recession would result in the realization of some contingent liabilities, especially from the financial sector. The extended national shutdown is likely to depress economic activity across all sectors in the last quarter of FY20, and varying levels of control measures are likely to continue in FY21. Private consumption, the main engine of growth, is expected to slow, and declining remittance inflows expected to reduce household income. The unprecedented uncertainties related to COVID-19 are likely to further dampen private investment. The decline in exports is expected to persist, as developed market recessions depress demand for ready-made garments, Bangladesh's primary export. A shortage of intermediate inputs is expected to lower industrial production, while labor shortages could adversely impact all sectors. Transportation disruptions are expected to dampen agricultural growth, particularly production of perishable products like dairy, poultry, and vegetables. The recovery is expected to be very gradual, with ongoing economic disruptions and increasing fragilities in the banking system. In the medium term, a gradual recovery in growth is expected, with some increase in export demand and higher public spending.

4. **Bangladesh is extremely vulnerable to the effects of climate change.** The Global Climate Risk Index ranks Bangladesh as the world's seventh most affected country over the period 1999-2018[3]. Rising temperatures leading to more intense and unpredictable rainfalls during the monsoon season and a higher probability of catastrophic cyclones are expected to result in increased tidal inundation. It is estimated that a one-meter rise in sea levels would submerge 18 percent of arable land in coastal areas[4]. Recent studies estimate that by 2050 Bangladesh could have 13.3 million internal climate migrants[5].

[2] Bangladesh Garment Manufacturers and Exporters Association (BGMEA), as of May 22, 2020.
[3] Germanwatch (2020) Global Climate Risk Index 2020.
[4] UNFCC (2007) United Nations Framework Convention on Climate Change.
[5] World Bank (2018) Groundswell: Preparing for Internal Climate Migration.

Additional rural-urban migration would have significant consequences for air and water pollution and unsustainable consumption of natural resources, while putting additional pressure on urban labor markets. Addressing climate risks is increasingly becoming urgent to ensure sustainable economic development of the country.

Sectoral and Institutional Context

5. **Although Bangladesh has accelerated its structural shift from agriculture to industry and services in recent years, agriculture (including crops, livestock and fisheries) remains critical to eliminating poverty and boosting shared prosperity in the country.** The sector is: (i) the largest employer - 47.5 percent of the population is directly employed in agriculture and over 70 percent depends on agriculture in one form or another for their livelihood; (ii) a source of most of the country's food requirements; (iii) a source of raw materials for industry; and (iv) a generator of foreign exchange. Agriculture is also the main source of economic linkages in rural areas and thus plays a fundamental role in reducing poverty, which remains a predominantly rural phenomenon. In 2019, the sector contributed about 12.7 percent to the national GDP. While its contribution to the economy is likely to keep declining, agriculture will continue being the single largest contributor to income and employment of the rural population in the foreseeable future.

6. **The sector is characterized by traditional subsistence farming.** Production systems are largely dominated by small and marginal farmers, yet a significant shift towards commercial farming with high value crops, fisheries and animal products has been evident in recent years. Rice is the country's dominant crop[6] (77-80 percent of cultivated land is devoted to paddy) and a key component of the population's diet. The country ranks third and fourth in the world for fisheries and aquaculture production, respectively. Fisheries and aquaculture play a major role in employment: about 17 million people are associated with the fisheries sector, with 5 million people involved in marine fisheries. Pond and seasonal floodplain aquaculture supply over 50 percent of total yearly fish production in the country and are highly profitable relative to many field and commercial crops.

7. **Considerable gender gaps still persist in Bangladesh's agriculture sector.** Despite significant strides towards gender equality overall, and proclamations in myriad key policy documents[7] related to agriculture, rural development, and water resource management, there are still many barriers to women's participation in the agriculture sector. Access to and control over productive resources such as land, irrigated plots, credit, extension support and aquaculture assets (e.g. water ponds, beels) is skewed in favor of men. Often not considered "farmers," in part because they do not own land, women miss out on agricultural extension and information about new technologies, even when these relate to production enterprises (such as vegetable growing) in which women have typically predominated. In addition, socio-cultural norms (e.g. purdah practices) curtail the participation of women in downstream segments of agricultural value chains (e.g. in produce markets), which are generally more lucrative.

[6] Mainly because of the long running policy thrust on rice self-sufficiency.
[7] For example, the National Agricultural Policy, the National Food Policy, National Livestock Policy, the National Water Policy etc.

8. **Overall, from a long-term perspective, the performance of Bangladesh's agriculture has been mixed.** Following independence in 1971, sector growth increased at about 2 percent per year; accelerating to around 4 percent per year during the 1990s and early 2000s. Between 2010 and 2011, remarkable growth of 5.1 percent per year was achieved[8]. This momentum however, quickly fizzled out and the growth rate fell sharply to 2.7 percent in 2012, further decelerating to only 2.2 percent in 2013. In 2019, the growth rate (i.e. 3.9 percent) was still below the 4-4.5 percent growth rates by which the agricultural sector had to grow in order to achieve an average national GDP of 7 percent - often cited as the minimum GDP growth rate needed for Bangladesh to transition into middle-income status by 2021[9].

9. **Among[10] others, low productivity and limited diversification both in the crop and non-crop sector are responsible for the suboptimal performance of Bangladesh's agricultural sector**. Even with improvements over the last decade, the sector is characterized by a significant yield gap for most crops, largely due to limited adoption of modern technology. In the fisheries sector, average productivity for inland capture fisheries stands at 0.28 Mt/ha while that of inland culture fisheries stands at 1.53 Mt/ha, both below the averages observed in similar systems in Asia[11]. Productivity in the livestock sector is also below par, with local cows producing only about 221 kg milk per year and also registering low average fattening rates. In addition, as indicated in Gautam and Rafiquee (2016), over the last three decades, the overall structure of Bangladesh's agriculture has changed little. Rice dominates and drives much of agricultural growth while the contribution of diversification[12] to sector growth has often been low and fading. Diversification in the product mix of agriculture therefore, through a shift toward high-value products, has great potential for accelerating sector growth, contributing to meeting the growing demand for a diversified food supply, better nutrition, and building resilience of agriculture to climate change.

10. **Furthermore, extreme weather events including intense floods, drought and storms are also implicated in undermining the performance of Bangladesh's agricultural sector.** Flooding in Bangladesh is a near-constant phenomenon, only recurring with varying magnitude and intensity both in space and time. While the more regular low intensity floods have usually been beneficial, when they assume extreme proportions, floods result in precipitous crop losses, damages to aquaculture infrastructure and loss of aquaculture fish stocks, livestock death, and rural population displacement, thereby adversely affecting agricultural performance.[13] On the other hand, agricultural droughts, especially in the northern parts of the country frequently lead to crop failure, livestock death, land degradation, and also undermine groundwater replenishment, which is critical to performance of irrigated agriculture in those areas.

[8] This growth was mainly driven by irrigation expansion, modern technology, better road connectivity, more efficient markets and increased mechanization.
[9] Agriculture Sector Development Strategy: Background paper for preparation of Bangladeshi's 7th Five Year Plan.
[10] Other constraints to improved sector performance include but are not limited to low resource use efficiency and increasing loss of arable land.
[11] FAO. 2016. The State of World Fisheries and Aquaculture 2016.Contributing to food security and nutrition for all. Rome.
[12] Defined in this context as reducing the emphasis on rice/cereal and increasing the share of high-value agriculture (horticulture, livestock, and fisheries products).
[13] For example, the 1988 flood resulted in a loss of 2.1 million metric tons of rice, the 1998 flood resulted in a loss of over 3.35 million metric tons of rice, the 2004 flood led to agriculture production loss worth about US$500 million and losses related to the 2007 and 2009 cyclones were estimated at around two million metric tons of rice.

11. **Due to climate change, the frequency and intensity of extreme events in Bangladesh are predicted to increase and so are the impacts of these events on the agricultural sector.** Climate projections for the country point to an increase of 1.6 degrees centigrade in median temperature and an increase of 4 percent in median annual precipitation by the 2050s. Sea level, partly mediated by temperature is projected to rise by 45 cm because of global warming, and this would inundate 10-15 percent of the country, pushing the saline front further inland. Warming of the ground surface will aggravate moisture stress and drought, while excess evaporation of moisture will give rise to wetter peak monsoon.[14] With increasing river flow volume in monsoon, river bank erosion will be aggravated along the braided rivers forcing producers to lose their productive land.[15] The prospect of changing temperatures and precipitation patterns, combined with the uncertainty of the timing and magnitude of extreme events, and rising sea levels will have important impacts on the agriculture sector. Under a changed climate for example, production of rice - a key staple - is predicted to fall by 8 percent by the year 2050,[16,17,18] while that of wheat is expected to decrease by 32 percent. In addition, it is predicted that pulse yields under a changed climate will reduce by 8.8 percent, oilseed-rapeseed by 6.3 percent, vegetables (as a group) by 5.3 percent, and other crops (including jute) by 3.3 percent. With respect to the fisheries sector, increased temperatures will lead to a reduction in the availability of dissolved oxygen, resulting in the reduction in growth and reproduction success of most fish species. In cultured environments, increased occurrence of hypoxic conditions because of temperature increases will mediate a reduction of the growth rate and reproductive output of cultured fish species. Still under these environments, climate change, it is projected, will lead to increased disease spread, competition, parasitism and predation, thus affecting overall aquaculture productivity. Similar deleterious effects are predicted for most of the other agriculture subsectors, with attendant negative impacts and cascading consequences on livelihoods, especially for the poor and marginalized smallholder farmers.

12. **On the other hand, agriculture is the leading source of greenhouse gas (GHG) emissions, responsible for nearly 40 percent of overall emissions in Bangladesh.** About 32 percent of sector emissions accrue from rice production, 31 percent from enteric fermentation, 12 percent from manure and poultry litter management, while the remainder is from five other subsector activities.[19] In a "business as usual" scenario, agricultural emissions are likely to increase from 74.6 MtCO2e in 2012 to 89.2 MtCO2e in 2030, largely driven by enteric fermentation.[20]

[14] Selvaraju, R., and others. 2006. Livelihood Adaptation to Climate Variability and Change in Drought Prone Areas of Bangladesh: Developing Institutions and Options. Rome: Asian Disaster Preparedness Centre (ADPC) and FAO.
[15] CEGIS, 2006. Impacts of Sea Level Rise in the Southwest region of Bangladesh, Center for Environmental and Geographic Information Services (CEGIS), Dhaka, p. 90.
[16] Sarker, Md Abdur Rashid, Khorshed Alam, and Jeff Gow. 2012. "Exploring the relationship between climate change and rice yield in Bangladesh: An analysis of time series data." Agricultural Systems 112: 11-16.
[17] Yu, W.H., Alam, M., Hassan, A., Khan, A.S., Ruane, A.C., Rosenzweig, C., Major, D.C., Thurlow, J., 2010. Climate Change Risks and Food Security in Bangladesh. Earthscan, Washington, DC.
[18] Amin, Md Ruhul, Junbiao Zhang, and Mingmei Yang. "Effects of climate change on the yield and cropping area of major food crops: A case of Bangladesh." Sustainability 7, no. 1 (2015): 898-915.
[19] See http://www.fao.org/faostat/en/#data/GT.
[20] https://www.climatelinks.org/sites/default/files/asset/document/GHG%20Emissions%20Factsheet%20Bangladesh_4-28-16_edited_rev08-18-2016_Clean.pdf.

13. **Addressing these imminent challenges for the agricultural sector demands a new vision and approach that integrates climate variability and climate change considerations into the pursuit of agricultural growth objectives.** Broadly categorized under the rubric of Climate-Smart Agriculture (CSA), such an approach presents opportunities for Bangladesh to achieve the "triple wins" of: (i) sustainably increasing agricultural productivity and farmers' incomes; (ii) adapting and building resilience to climate change; and (iii) reducing and/or removing GHG emissions (where possible) while also enhancing achievement of national food security and development goals.

14. **The Government of Bangladesh (GoB) already has in place several policies, strategies, and plans to foster the adoption of CSA.** In 2005, Bangladesh produced the National Adaptation Program of Action (NAPA) which provides an overarching strategic framework for mainstreaming climate change considerations into national planning and development priorities to achieve climate resilient development. Subsequent to the NAPA, in 2009, the Government prepared the Bangladesh Climate Change Strategy and Adaptation Plan (BCCSAP) which espouses essential action with respect to climate change along six thematic areas[21] and 44 program areas based on the development vision of the country. Through its Intended Nationally Determined Contributions (INDC), Bangladesh has put forth mitigation actions to tackle its growing emissions as a contribution to limiting global temperature rise and a strategy to transition to a low-carbon climate resilient economy. With the support of the World Bank (WBG) and the International Center for Tropical Agriculture (CIAT), Bangladesh produced a country CSA profile which, among others, identifies entry points for investing in CSA at scale. In a reinvigorated effort to address climate change, reduce disaster risks and significantly improve environmental performance, the government is in advanced stages of finalizing an integrated and holistic long-term plan – the Bangladesh Delta Plan 2100 (BDP 2100) to promote safe living through greater resilience and sound economic development. The Bank has financed the preparation of an Investment Plan that transforms the recommendations of the BDP 2100 into implementable concrete actions until 2030 as well as a Bangladesh Climate-Smart Agriculture Investment Plan, which identifies investments with the potential to shift Bangladesh's agriculture sector onto a more productive, more resilient and less emission-intensive growth path.

15. **Current government development plans for the agriculture sector prioritize improving productivity and building resilience to climate change impacts.** The development vision for the agriculture sector under the 7th Five Year Plan (FYP)[22] is to "ensure food and nutritional security, through sustainable intensification and diversification of climate resilient agricultural systems……." Among others, the sector objective is to ensure sustained agricultural growth through more efficient and balanced utilization of land, water and other resources while carefully addressing climate change concerns, especially building resilience of local communities. This operation supports Government's priorities with respect to enhancing agricultural productivity while ensuring climate resilience of production systems. It focuses on the rehabilitation/modernization and improved management of priority Flood Control and Drainage (FCD) and Flood Control Drainage and Irrigation (FCDI) infrastructure for improved flood protection and drainage during the monsoon, increased water use efficiency during the dry season, and

[21] The pillars are a) food security, social protection and health; b) comprehensive disaster management; c) infrastructure development and protection; d) research and knowledge management; e) mitigation and low carbon development; and f) capacity building and institutional strengthening.
[22] The process is underway to produce the 8th FYP.

resilience and adaptation to climate change as well as the diversification, transformation and reorientation of agriculture and fisheries systems in the rehabilitated schemes towards CSA approaches.

C. Proposed Development Objective(s)

Development Objective(s) (From PAD)

16. To enhance climate resilience and productivity of irrigated agriculture and fisheries in targeted schemes

Key Results

17. The key outcome level performance indicators include the following (see Results Framework in Section VI for more details):

(i) area under climate-resilient technologies and practices both under crop production and fisheries (climate resilience);
(ii) farmers adopting improved agricultural technology[23] (climate resilience, and irrigated agriculture productivity);
(iii) increase in productivity of selected agricultural commodities and fishery supported by the project (irrigated agriculture and fishery productivity); and
(iv) number of direct project beneficiaries (gender-disaggregated).

D. Project Description

18. The CSAWMP focuses primarily on: (i) rehabilitating and improving the quality of public FCD and FCDI infrastructure for climate-resilient water resources management; (ii) improving the management and sustainability prospects of FCD and FCDI infrastructure by supporting local communities to play an expanded role at all stages of scheme management (including contributing to Operation and Maintenance -O&M); (iii) promoting more efficient use of water resources through improved storage, on-farm water use efficiency and water productivity in the drought season; (iv) supporting the dissemination and adoption of CSA practices both in crop and fisheries systems; and (v) improving the marketing of agricultural products by the beneficiaries as an incentive for sustained adoption of CSA practices.

Component 1: Improved Climate Resilience of Flood Control, Drainage and Irrigation Infrastructure Systems (US$124.82 million, of which IDA US$97.43 million).

Sub-component 1.1: FCD/FCDI Scheme Rehabilitation and Modernization (US$118.71 million, of which IDA US$91.32 million).

19. Rehabilitation and modernization of selected FCD Schemes/FCDI Schemes.

20. Rehabilitation/modernization will focus on improving the capacity of the infrastructure to modulate the impacts of excess water during the monsoon period on one hand, and water deficits in the post-monsoon period on the other hand as well as on addressing technical hindrances - at least in some portions of the schemes- that have precluded the possibility of the production of many high-value non-cereal crops under irrigated conditions. Already, 19 schemes with a total command area of about 126,200 ha have been identified from a longlist of about 825 Bangladesh Water Development Board (BWDB)

[23] Including fisheries technology.

schemes in need of rehabilitation. To leverage rehabilitation as an incentive for improved performance, schemes that already have WMOs established or that have some form of O&M cost recovery in place (i.e., demonstrable evidence of self-help) were prioritized. Under this sub-component, the project's support will go towards feasibility studies, detailed designs, rehabilitation/construction, quality assurance and supervision of the rehabilitation works.

Sub-component 1.2: Management Transfer and Capacity Building of BWDB and WMOs (US$6.11 million, all IDA).

21. (a) support to facilitate transfer of FCD Schemes/FCDI Schemes management, operations and maintenance to communities, including through establishment and strengthening of WMOs, development of operations and maintenance plans, training of WMOs, preparation of climate change adaptation plans, and management of trade-offs and resolution of conflicts over drainage and water use; and (b) provision of training and capacity building of staff in the Office of Chief, Water Management (OCWM) and other relevant staff in BWDB.

Component 2: Climate-Smart Agriculture and Fisheries Production and Marketing (US$19.71 million, of which IDA US$17.05 million).

Sub-component 2.1: Support to Climate-Resilient Crop Production and Marketing (US$9.98 million, of which IDA US$8.72 million).

22. (a) demonstration and adoption of technology for sustainable crop intensification and climate change resilience, including mobilization and organization of WMO members in farmer field schools; provision of training to climate smart farmer field school- and other farmer field school- participants, lead farmers and extension agents; demonstration and promotion of improved agricultural water management technologies; and sourcing of new adaptation and mitigation technology (including for adoptive trials); (b) diversification of cropping systems at the FCD Scheme/FCDI Scheme level, including awareness creation of diversification among farmers; farmer experimentation with new crops and training/demonstration of relevant production technology; support for availability and access to seeds, germplasm and other inputs for new crops; and postharvest management/quality control; (c) improvement of crop marketing, including support for market intelligence/assessments/information systems; capacity enhancement of selected value chain actors; value addition; promotion of alliances between producers and the private sector; cooperative produce marketing; and infrastructure investments; and (d) support for women to engage in productive activities, and for women traders and entrepreneurs and women in market management.

Sub-component 2.2: Support to Climate-Resilient Fisheries Production and Marketing (US$9.73 million, of which IDA US$8.33 million).

23. (a) mobilization, formation and strengthening of community-based organizations to promote improved aquaculture production and marketing; and provision of support through community-based organizations, including for: deepening cooperatively owned/leased and managed water bodies and raising associated dykes; improving access to reasonably priced fingerlings of desirable quality; promoting conservation of indigenous species; and improving disease control and management; (b) promotion of coastal aquaculture (including integrated rice- fish/shrimp farming) and other fish farming; (c) strengthening of women's capacity to engage in fisheries value chain, including by increasing their access to new technology, information, skills, assets and equipment, productive networks and funding; and (d) support for fish marketing and postharvest management and preservation including through setting up

of cold storage facilities, provision of training on quality assurance, improvement of physical conditions of local markets, aggregation and onward group sale to bigger off-takers, and improved market information.

Component 3: Project Management Support (US$10.78 million, of which IDA US$5.52 million).

24. Support for project monitoring and evaluation and reporting, including for: impact assessments, financial and procurement management, communication, studies, development of interactive voice response system to promote citizen engagement and community feedback, development of management information system, and installation and use of accounting software, for: activities under Component 1 of the project, activities under sub-component 2.1 of the project, and activities under sub-component 2.2 of the project.

Component 4: Contingency Emergency Response (US$0.00 million).

25. Providing immediate response to an Eligible Crisis or Emergency, as needed.

E. Implementation

Institutional and Implementation Arrangements

26. **The project implementation will be the joint responsibility of the Ministry of Water Resources (MoWR), Ministry of Agriculture (MoA) and the Ministry of Fisheries and Livestock (MoFL)**, respectively working through their implementing agencies, namely, BWBD, the Department of Agricultural Extension (DAE) and the Department of Fisheries (DoF). Each implementing entity - BWDB, DAE and DoF – will take the lead on project elements under their respective institutional mandate, capacity and skills endowment. In this case, BWDB will take the lead on activities related to project Component 1; DAE will be the lead entity on subcomponent 2.1; while activities targeting the improvement of fisheries production as defined under subcomponent 2.2 will be led by the DoF.

27. **There will be a Project Coordination Unit (PCU) at BWDB charged with overall coordination across all project activities.** The PCU will be headed by a Project Coordination Director and will be staffed with a Procurement Specialist, Financial Management Specialist, and M&E experts. The DAE and DoF will each establish a Project Implementation Unit (PIU) responsible for implementation of their respective components and coordinating with the PCU. Each of the PIUs will be headed by a Project Director (PD) and will also be staffed with a Financial Management Specialist, and a Procurement Specialist and M&E Specialist on an as needed basis. Both the PCU and PIU will be established within one month of project effectiveness. Short-term Technical Assistance/consultancy services will be sought to fill specific skill gaps during project implementation, as need arises.

28. **A Project Steering Committee (PSC) with representation from different ministries/agencies (as per GoB directive) will be established to provide overall policy guidance during project implementation.** The PSC will include members from MoWR, MoA, MoFL, Ministry of Land, Ministry of Local Government, Rural Development and Cooperatives, Irrigation Wing of Planning Commission, Implementation Monitoring and Evaluation Division (IMED) and ERD and will have the Senior Secretary/Secretary, MoWR as its Chair. The PSC will meet at least twice a year to review overall implementation progress and PCU will serve as its Secretariat. To ensure a fully integrated approach to implementation as envisaged in the design, there will be a Project Implementation Committee (PIC) overseeing the project technical functions including reviewing and integrating workplans and budgets, and reconciling tensions between crop and

aquaculture land uses as is anticipated in some schemes. The PIC will be chaired by the Directors General of BWDB, DAE, and DoF on a rotational basis.

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F. Project location and Salient physical characteristics relevant to the safeguard analysis (if known)

The proposed project is a follow-on of the Water Management Improvement Project (WMIP), another Bank-financed operation and will have national coverage. The project will mainly focus on rehabilitation of already existing Flood Control Drainage and Irrigation schemes, and dissemination and promotion of uptake of Climate Smart Agriculture technologies for both crop and aquaculture production in the rehabilitated schemes. The exact schemes and their location are not known but will be selected in batches from the 9 BWDB zones by using a set of selection criteria that combine more efficient use of water with increased resilience of production systems. The Project has taken a framework approach as the safeguards compliance issues will be known during implementation when subprojects have been identified and designed at the implementation stage. The project is classified as Category B.

G. Environmental and Social Safeguards Specialists on the Team

Md. Akhtaruzzaman, Social Specialist
Iqbal Ahmed, Environmental Specialist
Md Istiak Sobhan, Environmental Specialist

SAFEGUARD POLICIES THAT MIGHT APPLY

Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/BP 4.01	Yes	The project is expected to undertake similar physical interventions as were implemented under the recently completed WMIP. The Project does not envisage any significant or irreversible environmental and social impacts and overall, is expected to generate significant positive environmental and social impacts. The environmental impacts that could arise due to the project are mainly from the construction related activities. OP/BP4.01 is triggered to avoid any potential adverse environmental impacts, avoid or minimize adverse social impacts and enhance

		positive environmental and social development outcomes of the many individual sub-projects. Exact locations, activities and design of the subprojects under the project will only be known at the implementation stage, and therefore, the Project has taken a framework approach of identification, design and implementation. BWDB has carried out partial environmental and social assessment of the proposed project at the preparation stage and to guide environmental and social issues including safeguards at the implementation level, prepared an Environment Management Framework (EMF) and a Social Management Framework (SMF) including Resettlement Policy Framework (RPF) and Small Ethnic Community Development Framework (SECDF), an Inclusion and Gender Action Plan, Consultation and Participation Plan, and Social Monitoring and Evaluation Framework. Also, the Environmental, Health, and Safety (EHS) Guidelines of the World Bank Group are applicable to the project.
Performance Standards for Private Sector Activities OP/BP 4.03	No	
Natural Habitats OP/BP 4.04	No	The project is not expected to cause impacts on any natural habitat formed largely by native plants and animal species.
Forests OP/BP 4.36	No	It is not expected that the project will have any impact on the management, protection, or utilization of natural forests or plantations.
Pest Management OP 4.09	Yes	The project is expected to finance agricultural activities. In this case, synthetic chemical pesticides may be used and the policy has been triggered. A standalone Pest Management Plan (PMP) has been prepared to promote the use of biological or environmental control methods and reduce reliance on synthetic chemical pesticides.
Physical Cultural Resources OP/BP 4.11	No	No physical cultural resources will be affected. However, in case of chance finds, special precautions will be taken to avoid damaging cultural heritage sites and property.
Indigenous Peoples OP/BP 4.10	Yes	The project will cover FCD and FCDI schemes across the country and there is the likelihood that some of the project activities might touch upon areas inhabited by indigenous communities officially recognized as small ethnic communities. The SMF

		therefore, includes an SECDF to provide guidance for social screening and preparation and implementation of site specific Small Ethnic Community Development Plan (SECDP) where applicable. The framework is fully cognizant of local and cultural nuances associated with designing and proposing alternative livelihood measures, grievance redress processes and all other project interventions including free, prior and informed consultation process.
Involuntary Resettlement OP/BP 4.12	Yes	The project is expected to limit its activities within existing available lands without encumbrances for rehabilitation of embankments and construction of water control structures. However, in special circumstances of riverbank erosion and retirement of small embankment sections and replacement of water control structures, acquisition of private land might be required. Besides, resectioning of existing embankment sections in few cases, can displace informal settlers on the existing embankments. Hence OP 4.12 is triggered and a RPF has been prepared as part of the SMF to provide guidance for the preparation and implementation of site specific Resettlement Action Plans (RAP) where required. The SMF provides guidance on site specific social impact assessments of subproject interventions and preparation of RAPs.
Safety of Dams OP/BP 4.37	No	The Project will not finance any dams, nor do project activities depend on any existing dams.
Projects on International Waterways OP/BP 7.50	Yes	The policy is triggered since the proposed project will rehabilitate existing irrigation and drainage infrastructure schemes in a downstream riparian country. However, the project falls under the exception of OP7.50 as it only involves additions or alterations that require rehabilitation, construction, or other changes that: (i) will not adversely change the quality or quantity of water flows to the other riparians; and; (ii) will not be adversely affected by the other riparians' possible water use. Therefore, in accordance with the Bank Procedures, the Regional Vice President approved a waiver to notification to the riparian countries.
Projects in Disputed Areas OP/BP 7.60	No	There are no disputed areas in the project area of influence.

KEY SAFEGUARD POLICY ISSUES AND THEIR MANAGEMENT

A. Summary of Key Safeguard Issues

1. Describe any safeguard issues and impacts associated with the proposed project. Identify and describe any potential large scale, significant and/or irreversible impacts:
This PID/ISDS is an updated version of the previous version cleared and disclosed publicly on January 29, 2018 prior to appraisal. Updates are limited only to aligning the Country and Sector context to the Project Appraisal Document and inclusion of changes that were agreed at negotiations mainly regarding financing parameters; but environment category, safeguard impacts and management measures remain the same as previously cleared and disclosed PID/ISDS.

The project is expected to limit its activities within existing available lands and does not envisage any significant environmental/social impacts. No large scale or new infrastructure development is envisioned. The environmental impacts of the project are expected to be mostly construction related. The key impacts and issues include, disturbance to the aquatic habitat, changes in land form and land use, operation of construction machinery, air quality deterioration, noise generation, worker's health and safety, contamination of land and water, loss of trees etc. Also proper management is required to dispose the excavated soil from canals and collection of fill material for embankment. Only in special circumstances of retirement of embankment sections and replacement of structures, acquisition of private land might be required. Besides, resectioning of existing embankments may also involve displacement of informal settlers. Land may also be taken through voluntary donation/dispossession. The project will be implemented through out the country and may therefore impact on the indigenous peoples dispersed in the plain lands. However, the expected potential environmental and social impacts can be mitigated through proper design and implementation of the environmental and social management plans.

2. Describe any potential indirect and/or long term impacts due to anticipated future activities in the project area:
Project activities are not expected to cause any long-term or irreversible environmental and social impacts and the anticipated impacts will be largely limited within the scheme rehabilitation boundary and time-frame. The project will support improvement in environmental practices and health-safety standard in microenterprises as a follow-on of recently closed WMIP and will mainly focus on activities related to rehabilitation of existing flood control, irrigation and drainage schemes and promotion of CSA technologies for improved crop and aquaculture production. Any social and environmental safeguards related issues will be addressed following local laws and practices in compliance with the Bank safeguards requirements.

3. Describe any project alternatives (if relevant) considered to help avoid or minimize adverse impacts.
There are no relevant alternatives that could be considered. However, the project will prioritize environmentally sensitive and/or areas that are vulnerable to impacts of climate change and will avoid involuntary displacement of people to minimize impacts and strengthen resilience.

4. Describe measures taken by the borrower to address safeguard policy issues. Provide an assessment of borrower capacity to plan and implement the measures described.
Given the limited impacts, the project is rated as Category B. The safeguard policies Environment Assessment (OP 4.01) and Pest Management (OP 4.09) have been triggered. There might be land acquisition at a limited scale, displacement of people - largely informal settlers/squatters- and project activities may also impact on areas inhabited

by small ethnic communities (Indigenous Peoples). Thus both OP 4.12 and OP 4.10 are triggered. In view of the limited information (subproject nature, location, design etc.), a framework approach to environmental and social management has been adopted for the project.

BWDB has prepared an Environmental Management Framework (EMF), Environmental Management Plan (EMP) and Social Management Framework (SMP) including Resettlement Policy Framework (RPF), Small Ethnic Community Development Framework (SECDF) and Pest Management Plan(PMP) in accordance with Environment Conservation Rules 1997 (ECR 1997) and ARIPA 2017 of Bangladesh and the Safeguard Policies of the World Bank and the Environmental, Health and Safety Guidelines of the World Bank Group/International Finance Corporation (IFC). The EMF and SMF also incorporate institutional frameworks and current practices of BWDB and other implementing agencies including the Department of DAE and DoF.

BWDB and DAE are familiar with the World Bank safeguards policies as they have implemented a number of World Bank-financed projects. Recently, BWDB successfully completed the WMIP, the Emergency 2007 Cyclone Recovery and Restoration Project (ECRRP) and Coasta Embankment Improvement Project (CEIP) where they gained knowledge and experience in environmental and social safeguards management and monitoring for community level interventions. DAE is acquainted with Bank policies as implemented through the National Agricultural Technology Program (NATP) and Integrated Agricultural Productivity Project (IAPP). Under the project, the PCU at BWDB and the PIUs at DAE and DoF will be staffed with Environmental Specialists and Social Specialists to oversee safeguards compliance during implementation.

Specific training on the EMF, SMF and SECDF as well as on preparing site specific Environment Impact Assessments (EIAs), Environment Management Plans (EMPs), RAPs, SECDP, social inclusion and gender, communication, participatory scheme cycle management and monitoring and evaluation will be arranged for field level staff responsible for screening, documenting and reporting on safeguards, as well as other relevant people responsible for the preparation and implementation of the Plans.

5. Identify the key stakeholders and describe the mechanisms for consultation and disclosure on safeguard policies, with an emphasis on potentially affected people.

The EMF and SMF documents were prepared in consultation with the key stakeholders including the field level staff of BWDB, DAE and DoF, and communities. Consultation with communities has been made mandatory for environmental/social screening/assessment of each subproject. The objective of the consultations is to disseminate information about the project and understand stakeholder's concerns and views. The safeguards documents have been disclosed on December 22, 2020 in BWDB, DoF, DAE and Bank's operational website. Hardcopies have also been made available at the Headquarters of the implementing agencies as well as the relevant offices of project areas.

B. Disclosure Requirements

Environmental Assessment/Audit/Management Plan/Other

Date of receipt by the Bank	Date of submission for disclosure	For category A projects, date of distributing the Executive Summary of the EA to the Executive Directors
22-Dec-2020	24-Dec-2020	

"In country" Disclosure

Bangladesh

22-Dec-2020

Comments

Resettlement Action Plan/Framework/Policy Process

Date of receipt by the Bank	Date of submission for disclosure
22-Dec-2020	24-Dec-2020

"In country" Disclosure

Indigenous Peoples Development Plan/Framework

Date of receipt by the Bank	Date of submission for disclosure
22-Dec-2020	24-Dec-2020

"In country" Disclosure

Bangladesh

22-Dec-2020

Comments

Pest Management Plan

Was the document disclosed prior to appraisal?	Date of receipt by the Bank	Date of submission for disclosure
Yes	22-Dec-2020	24-Dec-2020

"In country" Disclosure

Bangladesh

22-Dec-2020

Comments

If the project triggers the Pest Management and/or Physical Cultural Resources policies, the respective issues are to be addressed and disclosed as part of the Environmental Assessment/Audit/or EMP.

If in-country disclosure of any of the above documents is not expected, please explain why:

C. Compliance Monitoring Indicators at the Corporate Level (to be filled in when the ISDS is finalized by the project decision meeting)

OP/BP/GP 4.01 - Environment Assessment

Does the project require a stand-alone EA (including EMP) report?
Yes
If yes, then did the Regional Environment Unit or Practice Manager (PM) review and approve the EA report?
Yes
Are the cost and the accountabilities for the EMP incorporated in the credit/loan?
Yes

OP 4.09 - Pest Management

Does the EA adequately address the pest management issues?
Yes
Is a separate PMP required?
Yes
If yes, has the PMP been reviewed and approved by a safeguards specialist or PM? Are PMP requirements included in project design? If yes, does the project team include a Pest Management Specialist?
Yes

OP/BP 4.10 - Indigenous Peoples

Has a separate Indigenous Peoples Plan/Planning Framework (as appropriate) been prepared in consultation with affected Indigenous Peoples?
Yes
If yes, then did the Regional unit responsible for safeguards or Practice Manager review the plan?
Yes
If the whole project is designed to benefit IP, has the design been reviewed and approved by the Regional Social Development Unit or Practice Manager?
Yes

OP/BP 4.12 - Involuntary Resettlement

Has a resettlement plan/abbreviated plan/policy framework/process framework (as appropriate) been prepared?
Yes

If yes, then did the Regional unit responsible for safeguards or Practice Manager review the plan?
Yes

OP 7.50 - Projects on International Waterways

Have the other riparians been notified of the project?
NA

If the project falls under one of the exceptions to the notification requirement, has this been cleared with the Legal Department, and the memo to the RVP prepared and sent?
Yes

Has the RVP approved such an exception?
Yes

The World Bank Policy on Disclosure of Information

Have relevant safeguard policies documents been sent to the World Bank for disclosure?
Yes

Have relevant documents been disclosed in-country in a public place in a form and language that are understandable and accessible to project-affected groups and local NGOs?
Yes

All Safeguard Policies

Have satisfactory calendar, budget and clear institutional responsibilities been prepared for the implementation of measures related to safeguard policies?
Yes

Have costs related to safeguard policy measures been included in the project cost?
Yes

Does the Monitoring and Evaluation system of the project include the monitoring of safeguard impacts and measures related to safeguard policies?
Yes

Have satisfactory implementation arrangements been agreed with the borrower and the same been adequately reflected in the project legal documents?
Yes

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