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IDA/R2018-0320/1

September 18, 2018

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| <p><b>Closing Date: Friday, October 5, 2018<br/>at 6 p.m.</b></p> |
|---|

FROM: Vice President and Corporate Secretary

**Bangladesh - Sustainable Coastal and Marine Fisheries Project**

**Project Appraisal Document**

Attached is the Project Appraisal Document regarding a proposed credit to Bangladesh for a Sustainable Coastal and Marine Fisheries Project (IDA/R2018-0320), which is being processed on an absence-of-objection basis.

Distribution:

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Report No: PAD2473

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED CREDIT

IN THE AMOUNT OF SDR 171.3 MILLION  
(US\$240 MILLION EQUIVALENT)

TO THE

PEOPLE'S REPUBLIC OF BANGLADESH

FOR A

SUSTAINABLE COASTAL AND MARINE FISHERIES PROJECT

September 14, 2018

Environment and Natural Resources Global Practice  
South Asia Region

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## CURRENCY EQUIVALENTS

(Exchange Rate Effective April 30, 2018)

Currency Unit = Bangladesh Taka (BDT)

BDT 83.81 = US\$1

US\$1.401390 = SDR1.000000

## FISCAL YEAR

July 1 - June 30

## ABBREVIATIONS AND ACRONYMS

|         |  |
|---------|--|
| AIGA    | Alternative-Income-Generating Activity                             |
| AIS     | Automatic Identification System                                    |
| BFDC    | Bangladesh Fisheries Development Corporation                       |
| BOB-IGO | Bay of Bengal Inter-Governmental Organization                      |
| BFRI    | Bangladesh Fisheries Research Institute                            |
| BSCMFP  | Bangladesh Sustainable Coastal and Marine Fisheries Program        |
| CAG     | Comptroller and Auditor General                                    |
| CDD     | Community -driven Development                                      |
| CDR     | Climate and Disaster Risk  |
| CFW     | Community Finance Window   |
| CPUE    | Catch Per Unit of Effort   |
| DA      | Designated Account   |
| DOF     | Department of Fisheries  |
| ECFC    | Empowering Coastal Fishing Communities through Livelihood Security |
| EcoFish | Enhanced Coastal Fisheries   |
| ECOP    | Environmental Code of Practices                                    |
| EEZ     | Exclusive Economic Zone  |
| EIRR    | Economic Internal Rate of Return                                   |
| ESIA    | Environmental and Social Impact Assessment                         |
| ESMF    | Environmental and Social Management Framework                      |
| FAO     | Food and Agriculture Organization                                  |
| FAPAD   | Foreign Aided Project Audit Directorate                            |
| FM      | Financial Management   |
| FMP     | Fisheries Management Plan  |
| FMS     | Financial Management Specialist                                    |
| FVG     | Fishing Village Group  |
| GOB     | Government of Bangladesh   |
| IOTC    | Indian Ocean Tuna Commission                                       |
| IPDP    | Indigenous Peoples Development Plan                                |
| IUFR    | Interim Unaudited Financial Report                                 |
| ISP     | Implementation Support Plan  |

|        |  |
|--------|--|
| IUU    | Illegal Unregulated and Unreported Fishing         |
| M&E    | Monitoring and Evaluation                          |
| MCS    | Monitoring, Control, and Surveillance              |
| MFA    | Marine Fisheries Academy                           |
| MFV    | Model Fishing Village                              |
| MMD    | Marine Mercantile Department                       |
| MOFL   | Ministry of Fisheries and Livestock                |
| MOU    | Memorandum of Understanding                        |
| NGO    | Nongovernmental Organization                       |
| NPV    | Net Present Value                                  |
| OCAG   | Office of the Comptroller and Auditor General      |
| PDO    | Project Development Objective                      |
| PIC    | Project Implementation Committee                   |
| PIP    | Project Implementation Plan                        |
| PSC    | Project Steering Committee                         |
| PMU    | Project Management Unit                            |
| POM    | Project Operations Manual                          |
| PPSD   | Project Procurement Strategy for Development       |
| PRSP   | Poverty Reduction Strategy Paper                   |
| RAP    | Resettlement Action Plan                           |
| RPF    | Resettlement Policy Framework                      |
| SDF    | Social Development Foundation                      |
| SOE    | Statement of Expenditure                           |
| SOP    | Series of Projects                                 |
| SPF    | Specific Pathogen Free                             |
| STEP   | Systematic Tracking of Exchanges in Procurement    |
| TOR    | Terms of Reference                                 |
| TTL    | Task Team Leader                                   |
| UNCLOS | United Nations Convention on the Law of the Sea    |
| UNDB   | United Nations Development Business                |
| USAID  | United States Agency for International Development |
| USDA   | United States Department of Agriculture            |
| VMS    | Vessel Monitoring System                           |
| WARFP  | West Africa Regional Fisheries Program             |

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## DATASHEET

**BASIC INFORMATION**

|              |   |                                   |
|--------------|---|-----------------------------------|
| Country(ies) | Project Name  |                                   |
| Bangladesh   | Bangladesh Sustainable Coastal and Marine Fisheries |                                   |
| Project ID   | Financing Instrument                                | Environmental Assessment Category |
| P161568      | Investment Project Financing                        | B-Partial Assessment              |

**Financing & Implementation Modalities**

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

|                        |                       |
|------------------------|-----------------------|
| Expected Approval Date | Expected Closing Date |
| 27-Sep-2018            | 31-Dec-2023           |

Bank/IFC Collaboration

No

**Proposed Development Objective(s)**

The series of projects' Development Objective is to increase coastal and marine fisheries' contribution to the economy, poverty reduction, and environmental stability. The proposed PDO of the first project under the series (Phase 1) is to improve management of coastal and marine fisheries and aquaculture.

**Components**

| Component Name  | Cost (US\$, millions) |
|---|-----------------------|
| Enabling Activities for Sustainable Fisheries Sector Investments and Growth | 71.20                 |
| Improving Infrastructure and Production Practices                           | 135.60                |
| Community Empowerment and Livelihoods                                       | 52.30                 |
| Project Management and Monitoring   | 22.50                 |

**Organizations**

|                      |  |
|----------------------|--|
| Borrower:            | Republic of Bangladesh                                       |
| Implementing Agency: | Ministry of Fisheries and Livestock, Department of Fisheries |

**PROJECT FINANCING DATA (US\$171.300, Millions)****SUMMARY**

|                    |        |
|--------------------|--------|
| Total Project Cost | 281.60 |
| Total Financing    | 281.60 |
| of which IBRD/IDA  | 240.00 |
| Financing Gap      | 0.00   |

**DETAILS****World Bank Group Financing**

|   |        |
|---|--------|
| International Development Association (IDA) | 240.00 |
| IDA Credit                                  | 240.00 |

**Non-World Bank Group Financing**

|                     |       |
|---------------------|-------|
| Counterpart Funding | 41.60 |
| National Government | 41.60 |

**IDA Resources (in US\$, Millions)**

|              | Credit Amount | Grant Amount | Total Amount  |
|--------------|---------------|--------------|---------------|
| National PBA | 240.00        | 0.00         | 240.00        |
| <b>Total</b> | <b>240.00</b> | <b>0.00</b>  | <b>240.00</b> |

**Expected Disbursements (in US\$, Millions)**

| WB Fiscal Year | 2019  | 2020  | 2021  | 2022   | 2023   | 2024   |
|----------------|-------|-------|-------|--------|--------|--------|
| Annual         | 10.55 | 34.29 | 47.83 | 56.38  | 61.09  | 29.85  |
| Cumulative     | 10.55 | 44.84 | 92.68 | 149.06 | 210.15 | 240.00 |

**INSTITUTIONAL DATA****Practice Area (Lead)**

Environment &amp; Natural Resources

**Contributing Practice Areas**

Agriculture

**Climate Change and Disaster Screening**

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

**Gender Tag****Does the project plan to undertake any of the following?**

|   |     |
|---|-----|
| a. Analysis to identify Project-relevant gaps between males and females, especially in light of country gaps identified through SCD and CPF | Yes |
| b. Specific action(s) to address the gender gaps identified in (a) and/or to improve women or men's empowerment                             | Yes |
| c. Include Indicators in results framework to monitor outcomes from actions identified in (b)   | Yes |

**SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)**

| Risk Category               | Rating     |
|-----------------------------|------------|
| 1. Political and Governance | ● High     |
| 2. Macroeconomic            | ● Moderate |



|   |               |
|---|---------------|
| 3. Sector Strategies and Policies                               | ● Substantial |
| 4. Technical Design of Project or Program                       | ● Substantial |
| 5. Institutional Capacity for Implementation and Sustainability | ● High        |
| 6. Fiduciary  | ● Substantial |
| 7. Environment and Social                                       | ● Moderate    |
| 8. Stakeholders   | ● High        |
| 9. Other: Climate and Disaster Risk                             | ● High        |
| 10. Overall   | ● Substantial |

## COMPLIANCE

### Policy

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

☐ Yes ☒ No

Does the project require any waivers of Bank policies?

☐ Yes ☒ No

| Safeguard Policies Triggered by the Project                    | Yes | No |
|--|-----|----|
| Environmental Assessment OP/BP 4.01                            | ✓   |    |
| Performance Standards for Private Sector Activities OP/BP 4.03 |     | ✓  |
| Natural Habitats OP/BP 4.04                                    | ✓   |    |
| Forests OP/BP 4.36   |     | ✓  |
| Pest Management OP 4.09  | ✓   |    |
| Physical Cultural Resources OP/BP 4.11                         |     | ✓  |
| Indigenous Peoples OP/BP 4.10                                  | ✓   |    |
| Involuntary Resettlement OP/BP 4.12                            | ✓   |    |
| Safety of Dams OP/BP 4.37                                      |     | ✓  |
| Projects on International Waterways OP/BP 7.50                 |     | ✓  |
| Projects in Disputed Areas OP/BP 7.60                          |     | ✓  |



## Legal Covenants

### Sections and Description

Institutional Arrangements (FA Section I.A of Schedule 2). By no later than one (1) month after the Effective Date, the Recipient shall establish and maintain throughout the implementation period of the Project a Project steering committee, Project Management Unit, with a mandate, composition and resources satisfactory to the Association. By no later than three (3) months after the Effective Date, the Recipient shall (i) hire a project management consultant for a three year period with qualifications and terms of reference satisfactory to the Association; (ii) establish and maintain throughout the implementation period of the Project, a Technical Implementation Group and a Citizen Engagement Forum with a mandate, composition and resources satisfactory to the Association; and (iii) through SDF, establish and maintain throughout the implementation period of the Project, a management unit with a mandate, composition and resources satisfactory to the Association.

Project Operations Manual, Grant Manual, and Community Operations Manual (FA Section I.B of Schedule 2/(PA Section I.B)). The Recipient and where applicable SDF shall carry out the Project in accordance with the Project Operations Manual, the Grant Manual, and the Community Operations Manual in a manner satisfactory to the Association.

Monitoring, Control and Surveillance (FA Section I.C of Schedule 2). By no later than eighteen (18) months after the Effective Date, the Recipient through DOF shall enter into a memorandum of understanding with the relevant agencies/entities related to the Recipient's maritime domain, under terms and conditions satisfactory to the Association, which shall include, inter alia: (a) the terms and conditions for establishing a joint MCS center; and (b) the roles and responsibilities of the aforementioned agencies/entities for jointly carrying out MCS activities under said center.

Sub-projects under Part 2 and Part 3 of the Project (FA Section I.D of Schedule 2/(PA Section I.C)). For purposes of carrying out the Sub-projects under Part 2 of the Project, the Recipient shall: (a) review and appraise all the Sub-projects' proposals in accordance with the terms and conditions of the Grant Manual; and (b) make a Sub-grant under a Sub-project Agreement with the respective selected Beneficiary under terms and conditions acceptable to the Association. For purposes of carrying out Sub-projects under Part 3 of the Project, the SDF shall: (a) review and appraise all the Sub-projects' proposals in accordance with the terms and conditions of the Community Operation Manual; and (b) make a Sub-grant under a Sub-project Agreement with the respective selected Beneficiary under terms and conditions acceptable to the Association.

Subsidiary Grant Agreement and Memorandum of Understanding under Part 3 of the Project (FA Section I.E of Schedule 2). The Recipient shall: (a) make part of the proceeds of the Financing available to the Social Development Foundation (SDF) under a subsidiary grant agreement between the Recipient and SDF, under terms and conditions acceptable to the Association; and (b) through DOF shall enter into a memorandum of understanding with SDF, under terms and conditions acceptable to the Association.

Safeguards (FA Section I.F of Schedule 2/ PA Section I.D). (a) The Recipient and where applicable SDF, shall ensure and cause to ensure that the Project is carried out in accordance with the provisions of the ESMF, the RPF, the SECDF and all Safeguard Assessments and Plans and the requirements of the Grievance Redress Mechanism. To this end, the Recipient shall ensure, and cause SDF to ensure, that the appropriate review, clearance and public disclosure, and implementation of all Safeguard Assessments and Plans as required by the ESMF, the RPF and the SECDF.

Other covenants (FA Section I.G. of Schedule 2).



(1) Vessel Licensing. The Recipient shall, throughout the period of implementation of the Project: (a) until the publication of the national marine fisheries management plan, abstain from the issuance of new vessel or vessel replacement licenses in the trawl (excluding purse seiners and long liners) fisheries industrial sub-sector; and (b) ensure that the fishing capacity for industrial vessels does not exceed the limits set out in the national marine fisheries management plan on a yearly basis, starting from the publication of the first national fisheries management plan under the Project, all in a manner satisfactory to the Association.

(2) Fisheries Enforcement Unit. By no later than forty-eight (48) months after the Effective Date, the Recipient shall establish a fisheries enforcement unit on the basis of the recommendations of the Project steering committee to be established under terms of reference of a memorandum of understanding between the Recipient's agencies satisfactory to the Association.

(3) Registration and Licensing. The Recipient shall, throughout the period of implementation of the Project, complete the registration, in accordance with mercantile marine specifications, and licensing, in accordance with DOF regulations, of the entire existing industrial, artisanal mechanized, and artisanal motorized fishing vessel fleets in accordance with the agreed milestones; all in a manner satisfactory to the Association

Exclusions (FA Section III.C of Schedule 2). The Recipient shall ensure that proceeds out of the Financing are not used for any expenditure for goods, works, services, Incremental Operating Costs and Training intended for: (a) any military purpose; (b) any criminal investigation, prosecution or proceeding related to fishing violations; (c) any detention and imprisonment proceeding; (d) any domestic procedure or proceeding incompatible with Article 73 of UNCLOS; (e) other purposes unrelated to the objectives of the Project; and/or (f) acquiring vessels other than eight (8) vessels approved by the Association.

## Conditions

| Type                 | Description   |
|----------------------|---|
| Effectiveness        | Article 5.01 of the Financing Agreement: The Additional Condition of Effectiveness consist of the following: (a) the Project Operations Manual has been issued and put into effect in a manner satisfactory to the Association; and (b) the Subsidiary Grant Agreement has been executed in a manner satisfactory to the Association.   |
| Type<br>Disbursement | Description<br>Section III. B.1 of the Financing Agreement: No withdrawal shall be made: (a) for payments made prior to the Signature Date; (b) under Category (2) until the Recipient submits evidence satisfactory to the Association that the Grant Manual has been issued by DOF, in a manner satisfactory to the Association; and (c) under Category (3) until SDF submits evidence satisfactory to the Association that: (i) the Community Operations Manual has been issued by SDF in a manner satisfactory to the Association; and (ii) the memorandum of understanding referred to in Section I E.2 of this Schedule has been executed under terms and conditions satisfactory to the Association. |



## **I. STRATEGIC CONTEXT**

### **A. Country Context**

1. Bangladesh's physical and cultural characteristics and the livelihoods of nearly 165 million people are defined by the Ganges-Brahmaputra-Meghna delta—the world's largest, most densely populated delta and one of the richest in aquatic resources. Bangladesh has progressed in reducing extreme poverty and boosting prosperity through human development and employment generation, with poverty incidence (based on international US\$ 1.9 per capita per day poverty line and measured using the purchasing power parity exchange rate) declining from 44.2 percent in 1991 to 13.8 percent in 2016. Gross domestic product has grown above the average for developing countries, averaging 6.5 percent per year since 2010,<sup>1</sup> with an officially projected growth of 7.65 percent in fiscal 2018, driven by manufacturing and services.

2. Recognizing the country's land resource limits and in the face of increasing soil salinity and other climate-related threats, the Government of Bangladesh (GOB) regards coastal and marine fisheries as a new source of growth. Because of its unique geography, Bangladesh is one of the most disaster-prone countries in the world, with coastal areas particularly susceptible to cyclones, flooding, and tidal inundation affecting coastal fisheries and aquaculture practices and value chains, fishers' safety, and coastal communities' livelihoods and well-being. People living in the coastal areas are especially vulnerable to poverty because of job and livelihood losses due to natural disasters and longer-term climatic changes. Seven of the twelve districts in Bangladesh in the highest quintile of extreme poverty<sup>2</sup> are coastal, as are four of the ten districts in the highest quintile for the percentage of severely undernourished children.<sup>3</sup> The proportion of fishers living in poverty and extreme poverty is 23.9 and 13.2 percent, respectively. Growing overfishing and resource degradation can lead to the collapse of fisheries and the livelihoods dependent on them in the longer term.

### **B. Sectoral and Institutional Context**

3. Fisheries are vital for Bangladesh's food supply and food security and are central to the livelihoods of millions of fishers and stakeholders along the production chain. The sector has emerged as a major growth driver, consistently contributing close to 4 percent of gross domestic product for the last decade (3.7 percent in 2014–15). With close to US\$ 638 million in export generation, fisheries have also become the second largest foreign currency earner after the garment industry. In 2015, the sector employed 18.20 million people, or 11 percent of the population, including 1.4 million women. As the least carbon-intensive protein source, fish contributes up to 60 percent of all animal protein consumed in the country, making Bangladesh one of the highest fish consumers in the world.<sup>4</sup>

4. The sector comprises three subsectors: aquaculture (56 percent of total production), inland capture fisheries (28 percent), and marine and coastal capture fisheries (16 percent), with total value

<sup>1</sup> World Bank. 2017. DataBank. At <http://data.worldbank.org/country/bangladesh?view=chart>.

<sup>2</sup> Bangladesh Bureau of Statistics, World Bank and World Food Programme (WFP). Bangladesh Poverty Maps, 2014.

<sup>3</sup> World Food Programme. 2012. Indicators based on the 2012 Bangladesh Child and Mother Nutrition Survey and the 2011 Health and Morbidity Status Survey.

<sup>4</sup> Department of Fisheries (DOF), Ministry of Fisheries and Livestock (MOFL). National Fish Week 2014. Compendium (in Bengali), Page 144.



estimated at US\$3.68 billion.<sup>5</sup> Historically the most developed, in part through past World Bank support, Bangladesh's inland aquaculture and capture fisheries subsectors are ranked 4th and 5th in the world, respectively.<sup>6</sup> In contrast, coastal aquaculture contributes only 20 percent of all aquaculture output and offers significant scope for growth, with productivity per hectare trailing neighboring countries by 3 to 9 times. The least developed subsector, the marine fish production was only around 0.6 million tons in 2014–15 (US\$515 million, first sale value), taken mainly from nearshore areas and far less than the 6 million tons harvested by other Bay of Bengal countries. Hilsa accounts for nearly 42 percent and shrimp for 8 percent of the overall catch, with other commercial species, including Bombay duck, Jewfish, and sardines.

5. Lack of marine fisheries governance led to a harvesting boom in the 1990s, followed by depletion of traditional stocks and structural changes of the sector's labor force. Available landing data, albeit limited, suggest that the demersal fishery is at or near collapse, fishing is moving down the ecosystem ladder to lower-valued species, and overharvesting by industrial and semi-industrial/artisanal fleets is causing stock depletion. In the process, the economic profile of fishers in the industrial and motorized artisanal fleets has also changed. Control of productive assets has moved largely away from professional fishers into the hands of investors and middlemen, de facto converting traditional fishers into hired labor. Both small- and large-scale fishing operations are now linked to Bangladesh's national and international trade in seafood, operated through a complex system of multiple merchants and middlemen that brings little added value and comes at excessive cost for fishers and consumers alike.

6. Gender inequalities and social norms disadvantage women's participation in the sector. Women contribute at different points in the fisheries and aquaculture value chains, constituting 8.5 percent of the 17.8 million people dependent on fishing, farming, fish handling, and processing.<sup>7</sup> Yet, female labor is largely concentrated in the lower production segments or takes the form of casual or unpaid work, and women's roles remain marginal in the community and in institutional decision making.<sup>8</sup> The lack of sustainable alternative livelihood options makes women and men in rural fishing communities vulnerable. Conservative gender norms, however, further restrict women's access to finance and income-generating opportunities. An analysis of the Bangladesh Integrated Household Survey finds that lack of control over assets and income together with low gender parity within the household and weak leadership in the community are key drivers of women's disempowerment.<sup>9</sup>

7. As in most other developing countries, Bangladesh's coastal and marine fisheries economic model continues to be driven by targeting ever-increasing volumes, despite the current lack of stock data to back up the expansion. Following stagnated catch volumes and a near 50 percent collapse of the industrial fisheries catch rate between 2000 and 2010, the volumes are increasing again as both industrial and semi-industrial artisanal fleets have switched to lower-value small pelagic fish. However, even with catch

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<sup>5</sup> DOF 2013–14.

<sup>6</sup> FAO Fishery and Aquaculture Country Profiles. 2014. *Bangladesh Country Profile Fact Sheets*.

<http://www.fao.org/fishery/facp/BGD/en>.

<sup>7</sup> Bangladesh Foreign Trade Institute. 2016. *A Study on Sector-based Need Assessment of Business Promotion Council*.

<http://www.bfti.org.bd/pdf/Fishery.pdf>.

<sup>8</sup> Md. Mostafa Shamsuzzaman, et al. 2017. "Fisheries Resources of Bangladesh: Present Status and Future Direction." *Aquaculture and Fisheries*.

<https://www.sciencedirect.com/science/article/pii/S2468550X16300260#bib5>.

<sup>9</sup> USAID (United States Agency for International Development), and International Food Policy Research Institute (IFPRI). 2013. *The Women's Empowerment in Agriculture Index: Results from the 2011–2012 Bangladesh Integrated Household Survey*.

<http://ebrary.ifpri.org/utils/getfile/collection/p15738coll2/id/127504/file/127715.pdf>.





volumes rebounding, the catch per unit of effort (CPUE) has continued to decline except for the Hilsa fishery, where enforcement of strict seasonal controls helped stabilize the stock while improving economic performance.

8. An in-depth analysis of the political economy of the Hilsa fishery,<sup>10</sup> which is also applicable to the rest of the coastal and marine capture fisheries, points to the lack of access to finance as a major challenge to improving the subsector's performance, including in terms of increased postharvest value added in the domestic market. At the same time, transition to improving access to fisheries sector financing and sustainable sector growth is unlikely to work unless related core challenges and market failures that prevent responsible investors from participating in sustainable fisheries are addressed first.<sup>11</sup> In the Bangladesh context, these include the following:

- (a) Information asymmetry. At present, there are no reliable monitoring data on stock status or catch by type and volumes to allow for investment risk assessment and mitigation. Bangladesh's last comprehensive stock assessment dates to the 1980s, while limited landing facilities and control points, coupled with lack of clear access and management rights, contribute to as much as 50 percent of the marine catch likely remaining unreported.<sup>12</sup> The absence of quality data on fish populations, fishing effort, and risk pricing limits private investors' abilities to understand stock status and gauge the potential investment returns.
- (b) Weak governance and management to set, monitor, and enforce sustainable catch levels and tenure rights. The sector is largely unregulated and with open access to the common fisheries resource. Existing fisheries governance<sup>13</sup> and management regimes, which are unable to curb domestic illegal unregulated and unreported (IUU) fishing,<sup>14</sup> have led to unsustainable fishing levels and sector underperformance. At the same time, the lack of secure tenure and monitoring and enforcement to ensure resource sustainability to generate investment returns renders most of Bangladesh's demersal fisheries financially unviable. At present, over 200 industrial trawlers and about 68,000 artisanal vessels operate within a limited coastal waters belt, often using destructive gear to exploit multiple species. Both industrial and artisanal fleets are treated as a single multispecies fishery,<sup>15</sup> but only the former is subjected to some measure of practical monitoring. Licensing and monitoring is severely inadequate due to limited institutional capacity, with less than 3 percent of the artisanal fleet currently holding valid licenses and only about 50 percent of the industrial fleet subject to partial monitoring, control, and surveillance (MCS) coverage. At the same time, opportunities to expand community co-management into coastal capture fisheries are

<sup>10</sup> Ewhurst-Richman, et al. 2016. *Balancing Carrots and Sticks: Incentives for Sustainable Hilsa Fishery Management in Bangladesh*. ResearchGate. <https://www.researchgate.net/publication/301691313>.

<sup>11</sup> World Bank. 2017. *Developing Impact Investment Opportunities for Return-Seeking Capital in Sustainable Marine Capture Fisheries*.

<sup>12</sup> Landed value of 2010 catch in real 2005 U.S. dollars, from University of British Columbia Sea Around Us Project. Estimates are for reported catch and then estimated additional unreported catch from the Exclusive Economic Zones (EEZs). At <http://www.seaaroundus.org/data/#/eez>.

<sup>13</sup> Fisheries governance may be defined as a systemic concept relating to the exercise of control or influence over fishing activity by political, economic and social institutions, and the organizations emerging from them, and articulating policies to implement or change them or establish new rules.

<sup>14</sup> Fisheries management, here in the context of fisheries governance, may be defined as the process of developing and enforcing rules to govern fisheries.

<sup>15</sup> Department of Fisheries (DOF), Ministry of Fisheries and Livestock (MOFL). National Fish Week 2014. Compendium (in Bengali), Page 144.



yet to be fully explored. Comparable in size to the entire West African artisanal fishing fleet, Bangladesh's artisanal fleet continues to grow, with too many small mechanized and motorized boats chasing fewer and fewer fish.

- (c) Lack of access to reliable infrastructure and equipment to transport and keep high-value catch. The inadequate quality of landing sites and postharvest handling facilities constrains the prospects for growth and private-sector investment in the capture fisheries sector. This also limits the market opportunities along the value chains and prevents stakeholders from making decisions to their competitive advantage. The Bangladesh Fisheries Development Corporation (BFDC) operates six artisanal fleet landing centers in the coastal districts,<sup>16</sup> with the majority in need of major upgrade and rehabilitation to meet basic sanitary standards. The coastal aquaculture subsector faces similar infrastructure constraints, particularly in terms of electricity and water access, as well as adequate postharvest collection and service centers. The latter are considered critical for allowing smallholder farmers competitive market access and ability to aggregate steady supply for the shrimp-processing plants. Addressing the public infrastructure gaps, in conjunction with improved postharvest practices and marketing as well as effective management regimes, can boost markets, reduce losses, and increase catch value, thus making the sector more attractive to private investments.
- (d) Lack of access to finance. There is a growing economic gap between poor fishers, boat owners, and middlemen. Fisher households are among the most vulnerable to poverty, due to their particularly high exposure to natural disasters and economic shocks. Without support for transitioning to sustainable fisheries, cash-dependent fishers are unlikely to respond to institutionalized control over fisheries resources. The lack of access to responsible finance is also closely linked to the absence of postharvest value-added in the domestic market. In the capture, and even the coastal culture sectors, the financing gap is currently filled by middlemen who use it to lock in fish landings (and smallholder shrimp production) at sub-market values and thus have little incentive to invest in quality, let alone value addition.
- (e) Paucity of viable, investment-ready enterprises that can absorb responsible financing even if it was available. The capacity of public and private sectors is a major constraint and could significantly diminish the effect of regulatory improvements. Conversely, addressing externalities by improving the capacity of institutions and stakeholders along the value chain and by awareness building, technical assistance, and inclusion in fisheries co-management could augment the effect of public infrastructure investments and income-generating support.

9. Climate change further increases sector challenges by affecting the abundance, distribution, recruitment, and migration of various fish species. Currently, attention to environmental sustainability and climate change impacts in the fisheries sector is limited and has not been translated into practical adaptation and livelihood transformation solutions. Yet, climate change can adversely impact the productivity of marine and coastal fisheries, affecting future catch levels and rates of recovery for fisheries, due to shifts in the availability of food, habitat, and appropriate ocean conditions for fish stocks. Given these potential impacts, sector growth models should incorporate climate change variables into management and financing priorities. In parallel, climate adaptation and resilience measures are needed

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<sup>16</sup> Chittagong, Cox's Bazar, Khulna, Barisal, Patherghata, and Khepupara.



to support the most vulnerable communities in their transition from the highest risk areas and unsustainable fishing practices into alternative, more resilient livelihoods.

10. The sector's institutional context is characterized by multiple agencies with often overlapping mandates. The DOF is the principal agency responsible for managing Bangladesh's fisheries resources. The DOF's Marine Fisheries Wing, based in Chittagong, has regulatory responsibility for marine fisheries. The MOFL oversees the activities of the DOF and its sister agencies, such as the BFDC and the Bangladesh Fisheries Research Institute (BFRI). In addition to managing landing sites, the BFDC is also responsible for processing and marketing of fish in large urban centers (DOF 2010). The BFRI is responsible for scientific research and training in both capture and culture fisheries. Its capacity, however, is concentrated largely on culture and inland fisheries, with very little attention to marine capture outside Bangladesh's iconic Hilsa fishery. Finally, the Bangladesh Marine Fisheries Academy (MFA) trains future industrial fishermen and vessel officers. Other agencies that exercise various levels of fishery management-related responsibilities include the Department of Land, the Department of Forest, the Department of Environment, the Department of Agriculture, and the Bangladesh Water Development Board, as well as the Marine Mercantile Department (MMD), the Navy, and the Coast Guard.

11. Community and industry associations are also actively involved in the marine and coastal fisheries. Among them is the Bangladesh Jatiyo Matshojibi Shamobay Samity, which is the principal union of inland fishers. Similar associations for the marine fishers include the Mechanized Boat Owners Association, the Non-Mechanized Boat Owners Association, the Fish Trawler Owners Association, the Bangladesh Frozen Food Exporters Association, the Fish and Shrimp Processors Association, and the Shrimp Hatcheries Association, among others. Similarly, think tanks, such as the Bangladesh Shrimp and Fisheries Foundation, are actively engaged in developing policy and industry recommendations for improving aquaculture productivity and competitiveness.

12. The sector is governed by the 'Marine Fisheries Ordinance 1983', which designates the Marine Fisheries Wing Director as the responsible party for executing functions related to management, conservation, supervision, and development of marine fisheries (Part II, Article 5). A new draft Fisheries Act, currently under consideration by the cabinet, is expected to allow for more sustainable fisheries management and improved enforcement as well as address legal conflicts with the United Nations Convention on the Law of the Sea (UNCLOS), to which Bangladesh became a party in 2001. In addition, key elements of the GOB's vision for the fisheries sector are reflected in the Seventh Five-Year Plan (2016–20), promoting sustainable resource conservation, management, and exploitation and outlining measures for improvement of open-water fisheries management, inland aquaculture, and shrimp and coastal aquaculture. Concurrently, the GOB's 'Vision 2021' is looking at opportunities for an ambitious sector transformation that leverages coastal and marine resources to reduce poverty.

13. The Blue Economy Initiative of the GOB has prioritized the sector issues that need to be addressed to enable responsible private sector-led growth. These include (i) attracting responsible private sector investments, (ii) addressing public infrastructure gaps, (iii) improving the sector governance and management framework to enable sustainable investments and growth, and (iv) enhancing the fisheries management capacity of the public and private sectors to promote optimal productivity. On a more granular level, the Blue Economy Initiative aims to address the imminent challenges through concrete multisector-level actions such as (i) carrying out a rapid assessment of fisheries stocks in the country's newly expanded EEZ; (ii) formulating/updating the National Marine Fisheries Policy; (iii) combating IUU fishing; (iv) identifying conservation needs and implementable methods; (v) building the institutional capacity of concerned agencies; (vi) promoting technologies for culturing marine fish and seaweed; (vii)



launching a collaborative effort for distant water fishing, targeting tuna and other large pelagic species (within the EEZ and in areas beyond national jurisdiction); and (viii) strengthening the country's fisheries export growth potential. Collectively, these actions underscore the need for a larger transformation of fishery sector management, paving the way for a departure from the historic pursuit of catch volume and focusing instead on maximizing its economic value and social benefits.

14. With the GOB's and partners' attention to date largely focused on inland fisheries and some coastal aquaculture,<sup>17</sup> the marine capture fisheries subsector has both the largest capacity and management deficit and the most significant growth opportunities. The MOFL and DOF are looking for opportunities, with the assistance of international financial institutions, to increase the role that coastal and marine fisheries and aquaculture play in meeting the objectives of the Seventh Five-Year Plan (2016–20) by boosting their share of revenue and export earnings while ensuring sustainable stock management and improving citizen welfare. The proposed Bangladesh Sustainable Coastal and Marine Fisheries Program (BSCMFP) is fully aligned with the sector goals of the Seventh Five-Year Plan and Vision 2021 and will contribute to their achievement. The project will also contribute to the attainment of Bangladesh's commitment to the Sustainable Development Goals, especially to the goals linked to poverty (#1); hunger and nutrition (#2); inclusive growth and employment (#8); and conservation and sustainable use of oceans, seas, and marine resources (#14).

### **C. Relevance to Higher Level Objectives**

15. The BSCMFP directly supports the objectives of the FY2016–20 World Bank Country Partnership Framework's<sup>18</sup> Focus Areas: growth and competitiveness, social inclusion and gender equality, and climate and environment management. The program will contribute to these pillars through enhanced export-led blue growth (Objective 1.4 - Enhanced Business Environment and Trade Facilitation); creating jobs and improving livelihoods for millions of poor fishers (Objective 2.4 - Enhanced Rural Income Opportunities for the Poor); improved management of valuable aquatic resources, pollution loads, and climate resilience (Objective 3.1 - Increased Resilience of Population to Natural Disasters in Urban and Coastal Areas); and improved food security and nutrition through climate-smart and sustainable production of fish protein (Objective 3.3 - Increased Adoption of Sustainable Agricultural Practices). In addition, the proposed program will support several of the key transformational (Regional and Global Integration and Adaptive Delta Management) and foundational priorities (Institutions and Business Environment) identified by the Systematic Country Diagnostic. The program also advances Pillar III of the World Bank's Regional Strategy for South Asia, promoting collaborative management of shared natural resources. The project is consistent with the World Bank Group's twin goals of ending extreme poverty and boosting shared prosperity in a sustainable manner and is designed in line with the strategic vision on fishers (PROFISH) promoting fisheries' contribution to economic growth and poverty reduction.

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<sup>17</sup> Such as the Economic Incentives to Conserve Hilsa Fish in Bangladesh and a series of World Bank-supported projects, including the Oxbow Lakes Fishery, the Shrimp Culture, and the Third and Fourth Fisheries Projects, and, more recently, the National Agricultural Technology Program II.

<sup>18</sup> Report No. 103723-BD; April 5, 2016.



## **II. PROJECT DESCRIPTION**

### **A. Project Development Objective**

16. The proposed Series of Projects development objective (PDO) is to increase coastal and marine fisheries' contribution to the economy, poverty reduction, and environmental stability. The proposed PDO for this first project under the series (Phase 1) is to improve management of coastal and marine fisheries and aquaculture.

#### **PDO-level Indicators**

- (a) Issuance of industrial fishing licenses in line with precautionary principle
- (b) Share of industrial and motorized artisanal vessels with installed and functioning vessel monitoring and distress communication equipment
- (c) Share of landed catch and aquaculture production in targeted coastal belt fisheries in safe handling, according to defined criteria
- (d) Targeted households with access to project-promoted livelihood activities outside of capture fisheries (disaggregated by sex)

### **B. Results Chain**

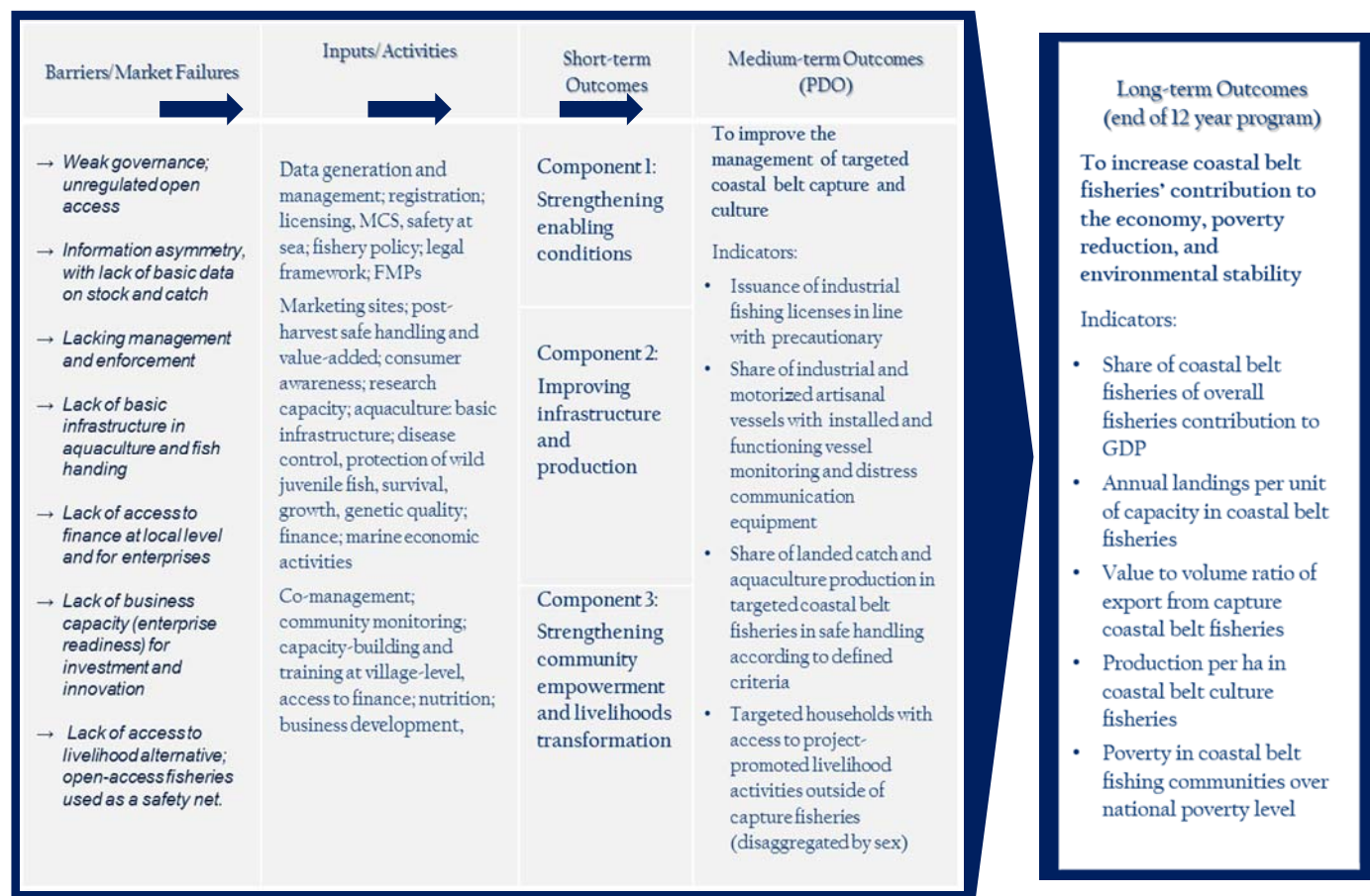
17. Recognizing the need for a long-term commitment and support to effectively strengthen the country's coastal and marine fishing sector and address rural poverty, the BSCMFP is designed as a two-phase series of projects (SOP). The two-phase design provides the GOB with the space and resources to not only initiate needed sector reforms (SOP I) but also to deepen and scale up implementation for longer-term sustainability (SOP II). The World Bank's prior experience in supporting Bangladesh's transformation into a leading global inland fisheries and aquaculture producer has demonstrated that fisheries management improvement, along with the accompanying large-scale community-level engagement necessary for its success, can only be achieved through a sustained, multiyear commitment. To this end, the SOP adopts a logical phasing of activities, with flexibility and room for experimentation built into SOP I, to identify effective approaches to be consolidated and scaled up during SOP II (figure 1).

18. The primary focus of the BSCMFP Phase I (the project) will be the establishment of effective fisheries governance and management systems for sustainable utilization of coastal and marine fishery resources, as a critical precondition for the stimulation of poverty reduction and economic growth. To avoid the risk of escalating, rather than abating, the ongoing fisheries-depleting 'race to the bottom', the project is carefully sequencing critical governance and management reforms and capacity building with support for postharvest value chain improvements and expanding access to finance. Concurrently, incentives and livelihood diversification alternatives to offset restrictions from more effective fishery access management will be sought, recognizing that the success of sector reforms, especially in artisanal fishery, will depend on the strength of the fisher-community engagement and buy-in. In this manner, Phase I is intended to help the GOB reorient the sector's performance from 'Volume to Value'—based on sustainable management of a natural asset that currently provides economic and social returns far below its potential.





Figure 1. Theory of Change: From Issues to Outcomes



19. Building on the enabling conditions and investment models established by this project, BSCMFP Phase II will bring to scale investments in community and value chain improvements, with focus on Maximizing Finance for Development through mobilization of responsible private sector financing to further improve the sector's performance. Specifically, SOP II is expected to (i) consolidate the sector reforms, building on the fisheries management improvements under SOP I; (ii) bring to scale successful pilots to improve coastal communities' and fishers' livelihoods; and (iii) close the infrastructure and technological gaps to enable sustainable private sector participation, with the objective of generating higher-value capture from domestic and export-oriented capture and culture fisheries. In addition to meeting the sector demand for more reliable core infrastructure systems, BSCMFP Phase II is also expected to focus significant attention on building a robust pipeline of investment-ready enterprises that engage in sustainable seafood production. The second phase project is further expected to maintain the same component structure while significantly shifting its focus and resource allocation to scale up the support for (ii) and (iii) above. Inputs for the definition of specific investments will be drawn on the outputs of Phase I activities, based on a comprehensive assessment of implementation progress, lessons learned, and impacts to date. Reflecting the BSCMFP's dependence on the successful implementation of the reform program put in place under SOP I, the following milestones will determine the readiness to launch SOP II:

- National fisheries legal framework aligned with the provision of UNCLOS, the Code of Conduct for Responsible Fisheries, and the FAO Guidelines for Small Scale Fisheries.



- Fisheries management plans for all commercial species in place, updated, and published annually.
- Industrial fishing vessels' licensing in compliance with fisheries management plans.
- Motorized artisanal fisheries vessels of 30 hp and over are registered with the DOF and maritime, have fishing licenses, and are operating in compliance with fisheries management plans.

### **C. Project Beneficiaries**

20. The primary target group of direct project beneficiaries are the fishermen and poor fisheries-dependent households and smallholder aquaculture producers in 10 coastal districts. The project will support the establishment and empowerment of community co-management associations that can make decisions on fisheries management and enable the fisheries-dependent poor to adopt supplementary and alternative livelihoods. The definition of poor beneficiaries will be established through a process that allows the villagers to self-identify based on observable and objective household assets (e.g., house construction material and livestock ownership) and characteristics (e.g. female-headed, livelihood type, and food consumption patterns). Additional benefits will accrue to fishers and the GOB from more productive and better performing institutions and, over time, better services and effective co-management in the fisheries sector. The project will also directly benefit the GOB agencies that will use the MCS systems financed by it (DOF, Coast Guard, Chittagong Port Authority, Bangladesh Police, and Bangladesh Customs).

21. Dedicated attention is given to supporting women and youth empowerment as a precondition for the interventions' success and sustainability. Increased institutional capacity and sector investments are designed to enable gender-sensitive and socially inclusive growth. Project activities will address identified social and gender gaps by i) enabling gender balance in fisheries management, with particular attention to developing leadership and decision-making capacity among female employees and sector stakeholders; ii) expanding new economic opportunities for female workers in high-value subsectors of fisheries value chains; and iii) addressing the severe socio-economic constraints women and youth face in high-poverty coastal villages through a community-driven approach that will include targeted alternative livelihoods support, skills development, and nutrition awareness. The project will further consider and address potential issues of 'maladaptation' associated with supporting poor fisheries-dependent households and communities in the face of intensifying climatic shocks and stresses.

### **D. Projects Components**

22. The BSCMFP Phase I project components will support the GOB in designing, establishing, and effectively operating fisheries management systems for sustainable utilization of coastal and marine fishery resources. Project financing will be provided for fisheries governance and management systems, infrastructure, and other value chain investments aimed at improving the sector's resource base and increasing its productivity. The project will focus on bringing fisheries policies, regulations, and management capacity up to a level needed to enable stock recovery and responsible private sector investments in the sector. Phase I project has four components, as outlined below.



**COMPONENT 1: Enabling Activities for Sustainable Fisheries Sector Investments and Growth (US\$71.20 million of which IDA US\$50.1 million)**

23. Component 1 supports the GOB commitment to sustainably develop the country's enlarged EEZ<sup>19</sup> through (a) more effective management of coastal fisheries, with responsibilities shared between the DOF and artisanal fishing communities; (b) improved sector transparency, integrity, and accountability; and (c) gender-balanced institutional development. The component aims to strengthen the enabling environment for infrastructure improvements and technology investments through support to policy and institutional development, research, and measures for strengthening the MCS, improving safety of life at sea, and enabling effective fisheries management. Specifically, funding will be provided for policy and regulations development, stock assessments, analysis for defining sustainable fishing levels, preparation of management plans, training, design and implementation of control and monitoring systems, and procurement and installation of equipment and infrastructure for the DOF and other national fisheries research institutions. Recruitment of qualified female staff will be prioritized for new technical positions as part of the MCS, vessel monitoring, and data management systems, alongside the provision of capacity building for women's enhanced leadership and decision making in fisheries management. In addition to strengthening artisanal fishers' safety in the face of growing climate variability, the component will also integrate and promote climate and disaster risk reduction into the sector policies, plans, and management tools supported by the project. Activities are grouped in three subcomponents supporting the DOF with regulatory, institutional, and financial frameworks and incentive mechanisms for increased sector growth. To enable the proposed MCS development and fisheries management reform, the DOF will maintain a moratorium on new and renewed industrial fishing licenses for the duration of the project.

24. **Subcomponent 1.1: Stock assessment and development of national fishery management plans (US\$16.1 million of which IDA US\$11.0 million)** will support the DOF in establishing the data and analytical foundations for evidence-based fisheries management that uses updated stock data and analysis for optimizing fisheries production, including by better monitoring, analyzing, and adapting to ongoing climate change impacts on the country's fisheries, for example, through monitoring of commercial species distribution and adjustment of fishing effort.

25. The subcomponent will support the DOF in (i) carrying out stock surveys and assessments for shrimp, demersal, and pelagic stocks; (ii) strengthening the catch monitoring systems for both industrial and artisanal fisheries; and (iii) preparing updating and implementing national fisheries management plans on a participatory manner and following international principles and standards, including the "precautionary principle". For (i) and (ii), funds will be provided for knowledge exchange, capacity development and training, fishery surveys and stock assessments, and electronic equipment upgrades for the DOF's research vessel. Support for the catch and monitoring systems will cover onboard observers for industrial and semi-industrial vessels, catch measurement at both industrial and artisanal landing sites, and stock and catch data management. Funding will be provided for design, supply, and installation of equipment and recruitment of extension agents for catch data collection and calibration of existing monitoring systems. For (c) the project will provide technical assistance for updating and participatory preparation of national FMPs (zonal and/or species based). Plan development and implementation will be carried out based on the 'precautionary principle' in conjunction with stock assessments and in consultation with key stakeholders. The development of FMPs will inform the nation's fisheries policies and regulations based on scientific evidence and will address existing gaps in fleet control, MCS, legal enforcement, co-management, and conflict resolution among stakeholders in the sector. Technical

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<sup>19</sup> See the 'Sectoral and Institutional Context' section of the Project Appraisal Document.





assistance will be provided for preparation of the management plans, capacity training for expanding the DOF's expert base, community outreach, and stakeholder engagement.

26. **Subcomponent 1.2: Enabling investments in sustainable fisheries (US\$25.1 million of which IDA US\$17.1 million)** will support DOF to strengthening the fishery policies, regulatory framework, and institutional capacity following international principles and standards, to reducing investment risks due to regulatory and enforcement gaps; and conducting awareness-raising programs. Activities under this subcomponent will be carried out in consultation with different fishers' and boat owners' associations (industrial and artisanal) and relevant government entities, such as the Coast Guard, Navy, Police, Chittagong Port Authority and Customs, and other stakeholders. Interinstitutional coordination will be critical for the development of rules to implement the new Bangladesh Fisheries Law, currently under legislative review. Institutional and regulatory capacity building will address existing gaps to allow alignment with UUCLOS and enable improvements in (a) vessel registration and fleet capacity management; (b) licensing management system; (c) stock monitoring; (d) MCS, including joint coordination (e.g. information sharing and division of responsibilities) with other government entities; (e) co-management by small-scale fishers' associations; and (f) enforcement and conflict resolution among different fishers (e.g., to address illegal trawler entry into coastal waters). Technical assistance will be provided for the establishment of a legal team in the DOF and for specialized training for judges and court staff on marine fisheries management and mariculture, co-management, and licensing and enforcement. Funding will be directed for targeted awareness-raising and behavioral-change programs on fisheries control issues for effective law enforcement and prosecution, to be carried out in parallel with the institutional capacity development. The DOF's capacity for citizen engagement and conflict resolution will be strengthened, including through the establishment of a functional grievances redress mechanism for fishers. This subcomponent will assist in improving the DOF's presence and operations in the coastal area for more effective monitoring and enforcement by establishing and equipping a network of coastal fisheries monitoring posts.

27. **Subcomponent 1.3: MCS development and IUU fishing reduction (US\$30 million of which IDA US\$ 22.0 million)** will support (i) expansion and strengthening of fishermen identification and fishing boat registration and (ii) development and deployment of integrated MCS capabilities. It will support DOF for expansion of the current fisher ID card system and improved vessel registration and licensing. It will also support linking a fishing craft database to a geographic information system (GIS) platform to produce visual reports on the size and location of vessels as well gear used. The fisher ID card database will be similarly georeferenced to show locations of artisanal fishermen. Project-supported measures will further help improve the coordination and effectiveness of the registration responsibilities currently split between the DOF and MMD.

28. A joint MCS centers, managed by the DOF and connecting other relevant marine and coastal authorities exclusively for civilian purposes, will be established to coordinate domestic MCS functions, including patrolling and information sharing, for improved reporting, search and rescue, and enforcement. The project will support the design, purchase, and installation of physical and communications infrastructure; provision of licenses; and technical assistance and services for capacity development and training, as well as development of protocols and guidance manuals for information sharing and division of responsibilities among the DOF and the other JMC SC. Project funds for (b) will be further directed for design, deployment, and training for the integrated MCS coverage aimed at improving safety of life at sea and effective fisheries management. This will allow upgrading and providing 100 percent coverage to the industrial fleet's vessel monitoring system (VMS), including software, hardware, and transponders, and



will introduce the automatic identification system (AIS)<sup>20</sup> or compatible units for the artisanal fleet. The AIS, is expected to significantly improve search and rescue capabilities, which are becoming critical for hundreds of thousands of artisanal fishermen, as increased climate variability and change lead to more and more extreme weather events in the Bay of Bengal. It will further support integration of the AIS and VMS with the fisher ID and vessel databases, and with the land-based catch monitoring system under Subcomponent 1.1. Funding will also be directed for technical assistance for MCS training to respective authorities and training for fishers' and boat owners' associations on MCS information technologies.

**COMPONENT 2: Improving Infrastructure and Production Practices (US\$135.60 million of which IDA US\$122.1 million)**

29. This component supports closing of basic infrastructure and technical capacity gaps to promote integrated value chain development and compliance with standards. It will support measures for improving genetic quality, biosecurity, and disease control in shrimp hatcheries that are expected to significantly reduce coastal aquaculture exposure to devastating disease outbreaks and production crashes. These measures are expected to generate productivity increases of up to 20 percent to reduce the taking of juvenile fish as a by-product of the harvest of wild shrimp seed. Infrastructure support will be implemented to incentivize private sector investments, where feasible, and will be phased in together with the progress of sector management reforms supported by the project. Such sequencing is important to avoid generating additional overfishing pressure by increasing the sector's value. In capture fisheries, the initial efforts will focus on the semi-industrial and motorized artisanal fleet and will be extended to the industrial fleet in sync with the progress of management reforms. All infrastructure investments will be subject to detailed disaster and climate risk screening. Where feasible, the project will promote green infrastructure technologies for seafood production that support broader ecosystem services and coastal defenses, such as mangrove rehabilitation, sea grass, and oyster beds. Importantly, the design of coastal infrastructure will aim to optimize adaptation benefits and avoid maladaptation, including by linking fish habitat restoration to nature-based coastal protection solutions and ensuring climate-resilient value chain infrastructure development. Investments in value chain development will include mapping, identification, and piloting of new economic opportunities for female workers, who currently operate on the margins and in less remunerative segments of the fisheries value chains. Technical services for design and supervision and works will also be financed under this component. Component 2 includes the following subcomponents:

30. **Subcomponent 2.1: Infrastructure improvements for capture and culture fisheries (US\$96.2 million of which IDA US\$86.2 million)** will focus on providing support for (i) inputs for prioritization of productive infrastructure improvements and (ii) infrastructure for increased productivity. Specifically, under (i), funds will be provided for stakeholder consultations and analyses to identify options for improving existing harvest-to-retailer chains in capture and culture fisheries, including for enhancing women's employment and promoting investor dialogue at international and local investment forums. It will also design and test access-to-finance facility and capitalization scheme for fishers and aquaculture smallholders—including a communication and awareness campaign—with the objective of deploying them at scale, as enabling data availability, sector management, infrastructure, and absorption capacity preconditions start materializing.

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<sup>20</sup> In addition to its primary safety of life at sea functions, AIS allows vessels' compliance to be monitored at low cost and with fewer staff.



31. Under item (ii), it will pilot infrastructure improvements, including engineering services for design and supervision, and construction of one industrial landing site as well as up to 16 small-scale artisanal landing clusters (capture) with postharvest facilities in each of the southeast, central, and western coastal regions. Assistance will be provided for improving the postharvest quality and value added, including ice and cold-storage facilities<sup>21</sup> constructed at different cluster sites as demonstration investments, to be further scaled up at other locations in the central and western coastal regions in BSCMFP Phase II.

32. This subcomponent will further support aquaculture cluster development and cluster farming productivity increase, targeting up to 600 new clusters, including deployment of extension agents for clusters producer mobilization and technical assistance for development of business/infrastructure plans. Grant funds will be made available on a competitive basis for targeted cluster subprojects aiming at increasing productivity and the postharvest value added of up to 200 graduating clusters. As an incentive for expansion of aquaculture cluster production, the grant resources will further target (a) enterprise improvements and input shifts to more disease-resistant and higher-yield production, as well as (b) enabling access to basic utilities to overcome one of the major obstacles to increasing aquaculture yields per unit area that is, the limited availability of three-phase electricity for pond aeration with potential rise in farm incomes by up to 25 percent in the short term. In parallel, it will support works for canal desilting and rehabilitation of selected canals supporting shrimp aquaculture in the southwest coastal belt. Technical assistance will be provided for consulting services for salinization mapping, hydrological survey, and canal rehabilitation design for scaling up these investments under Phase II, to increase survival and growth rates and improve the intensification of aquaculture production throughout the entire coast.

33. **Subcomponent 2.2: Value chain and food safety development (US\$10.1 million of which IDA US\$9.1 million)** will focus on capacity measures for increasing the postharvest value of catch and compliance with food safety standards, including adoption of good aquaculture practices that are critical to sustaining the value of capital infrastructure improvements. Project support will be provided for (i) improving seafood safety and competitiveness, (ii) promoting research and innovation, and (iii) boosting coastal aquaculture productivity.

34. Under item (i), technical assistance and services will be provided to bridge the regulatory capacity and skills gap. Funds will be provided for seafood safety needs assessment, for example, through hazard analysis and critical control points for processing plants; training in food safety for processing plants, industrial trawlers, and large mechanized boats; a sensitization and promotion campaign for seafood safety consumer awareness; international and domestic food safety inspection training for the GOB staff; and support for seafood safety policy implementation, including a food safety pilot for domestic markets (sampling and analysis). In parallel, it will finance the introduction of a robust e-traceability system, in line with current US and EU import requirements, including system design and equipment.

35. Learning opportunities will be provided through a ‘training of trainers’ model on best practices for the enforcement of handling and safety regulations. The model will help train fishers, port and landing site and market operators in best practices for fish handling and food safety. A longer-term capacity solution will be sought in partnership with the MFA and major local universities. Training support will cover a range of practices and topics that are critical to maintaining postharvest quality and food safety.

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<sup>21</sup> Chill stores hold products at 0–4°C, with fish normally stored in ice in plastic bins. Cold stores hold products at below –18°C, with fish normally wrapped in plastic inside cardboard cartons. Cold stores should not be used to freeze products. Blast, plate, or individual quick freezers should be used for this purpose.



36. Activities under item (ii) will support expanding Bangladesh's marine science and technology capacity by strengthening the GOB-academia-industry interface. It will support the preparation of a comprehensive marine spatial plan to allow for scaling up of mariculture and help initiate targeted mariculture research in partnership with the BFRI. It will also facilitate partnerships on research and development through the National Skills Development Council and other capacity-development institutions and universities for delivery of vocational training programs on topics such as aquaculture, fishing, postharvest practices, food safety and quality, marketing, environmental safeguards, and social and business skills of direct relevance to the long-term development of the fisheries and aquaculture.

37. **Subcomponent 2.3: Boosting coastal aquaculture productivity (US\$29.3 million of which IDA US\$26.8 million)** will (i) leverage private sector initiatives to pilot and commercialize mariculture and boost export earnings from aquaculture and (ii) support strengthening of the DOF's capacity to monitor and sanction biosecurity compliance.

38. Specifically, the subcomponent will establish a DOF-managed challenge grant facility with two dedicated windows for mariculture (including cage culture) piloting and commercialization and one dedicated grant window for mobilizing private sector subprojects to address the poor growth performance and disease burden attributable to wild brood stock currently sold and used by a large portion of the aquaculture farmers. The grant facility will leverage private sector finance targeting the implementation of a discrete set of climate-smart aquaculture investments to improve biosecurity and increase productivity, while reducing juvenile fish mortality in the coastal zone. Private sector contributions can be in the form of in-kind or cash basis, with the grant facility manual specifying the details and basis of payments in the case of the latter as needed over the duration of the project. The mariculture windows will support applied mariculture research, technology innovation, market studies, and production piloting, while the aquaculture window will focus on piloting domestic mud crab and finfish hatcheries and on the commercialization of specific pathogen free (SPF) shrimp hatcheries/multiplication facilities enhancement, targeting the introduction of up to 10 new SPF hatcheries in the country. The latter is also expected to enhance the employment potential for female workers. This pilot work in mariculture, hatchery technology, and disease control will inform adaptation to the ongoing sea-level rise and salinity regimes change, for subsequent scaling up in Phase II.

39. The subcomponent will also support the construction and equipment of a dedicated SPF brood stock facility, as well as quarantine and food security laboratories for shrimp and fish products. In conjunction with safety and value chain enhancement measures under subcomponent 2.2, this will strengthen the GOB's regulatory and oversight capacity in the monitoring and control of infectious crustacean diseases. Investments will target (a) upgrading of lab facilities for polymerase chain reaction and other relevant testing, (b) training of laboratory and field staff in sampling protocols and handling, (c) establishing a routine inspection and monitoring system, (d) establishing an early warning system for disease outbreaks, and (e) establishing a functioning private hatchery certification program.

### **COMPONENT 3: Community Empowerment and Livelihoods (IDA US\$52.3 million)**

40. The component uses a community-driven development (CDD) approach and a package of investment and financial support aiming at strengthening community fisheries management and transforming livelihoods in poor fishing communities by reducing dependence on fishing. Pilot activities will focus on up to 450 villages and include the establishment of up to 100 model fishing villages (MFVs), which, if successful, will be scaled up in Phase II. A household approach will enable targeting of resources and financial and training support for women's and men's asset creation and will enhance the coping



capabilities for disaster mitigation. The establishment of village-level community institutions will especially focus on increasing women's economic participation and involvement in decision making in the community, where gender gaps are particularly strong. Participatory approaches and gender-sensitive strategies will be employed throughout, using citizen engagement, consultations, co-management, women's savings groups, and other community institutions. By providing a holistic response to a set of dynamic issues faced by poor, vulnerable coastal fishing communities, the project is expected to generate benefits for households and individual members, especially the most disadvantaged—that is, the poorest men and women, female-headed households, widows, and the elderly in these communities. Women and children alike will benefit from the support for consumption, production, processing, and marketing of high-protein content small fish. Ultimately, transformations promoted by the project will be critical not only to achieve poverty reduction in fishing communities but also to reduce fishing efforts and destructive fishing practices and thereby enable more sustainable fisheries management. Activities for livelihood diversification and/or managed retreat for improving the climate resilience of target coastal fisher communities will be further screened to minimize climate and disaster risk, including to direct flooding, connectivity disruption, and salinity regime changes that can reduce the likelihood of engaging in aquaculture as an alternative to fishing. Component 3 activities are structured in two subcomponents to be co-implemented by the Social Development Foundation (SDF), an autonomous organization under the Ministry of Finance, Financial Institutions division in collaboration with the DOF. Project funds will be allocated for technical assistance and services, direct costs, savings-and-loans groups, and small grants to promote co-management of nearshore coastal fisheries.<sup>22</sup>

41. **Subcomponent 3.1 Fishing community institutions and alternative livelihoods development (IDA US\$34.0 million)** will support (i) fishing communities to establish community institutions and strengthen their capacity; (ii) community training on fisheries management, nutrition, climate and disaster risk reduction, and livelihood diversification; (iii) designation and development of up to 100 MFVs; and (iv) piloting of fisheries co-management and community enforcement.

42. Under item (i), project funds will support up to 4,450 fishing communities in establishing and building the capacity of village institutions, including Fishing Village Groups (FVGs) and FVG sub-committees to manage the day-to-day affairs of the FVG, and a revolving Institution Development Window (IDW) loan fund for fishers' livelihoods. Poor communities will benefit from project financial support for transition from capture fishing to alternative livelihoods and for practicing more sustainable and legal fishing. Funds will be allocated as (a) one-time grants (OTG) to the poorest and most vulnerable fisher households to allow them to purchase key household livelihood assets and reduce their dependence on outside moneylenders; (b) community savings groups for fishing households, with particular attention to the establishment of women's savings groups, to ensure that women are the direct recipients of livelihood support; and (c) credit and loan funds through the Livelihood Finance Window (LFW) a revolving fund to support fisher households in adopting livelihoods outside capture fishing as well as sustainable fishing practices using legal and nondestructive technologies.

43. Training and development of core skills necessary for village institutions and community members during the transition out of fisheries will be delivered through extension agents and qualified trainers to

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<sup>22</sup> Component 3 co-management activities will initially focus on social mobilization of poor fishers, including training to build awareness of fisheries management and regulations. Once the enabling regulatory environment and an artisanal MCS system (Component 1) are in place, then additional co-management activities, such as boat and gear buy-backs can be implemented without the risk that owners will use the buy-back funds to purchase more boats/gear. Completing the legal reforms to recognize the resource-management rights of fishing communities early on into the project's implementation will be critical to providing communities with an incentive to participate in fisheries monitoring and enforcement.





inform community members on a variety of topics essential for improving community fisheries, livelihoods, and health as well as enhancing fisheries' resilience to climate change and natural disasters. Awareness-raising and behavioral-change interventions will be targeted toward women to promote improved dietary practices during critical stages of the life cycle, including pregnancy, breastfeeding, early childhood, and adolescence, when nutrition plays a formative role in health and developmental outcomes. These interventions will aim to increase the households' knowledge of nutritional needs and locally available nutrient-rich foods/supplements, especially for women and adolescent girls.

44. Under item (iii), funds will be provided for up to 100 prototype MFVs to be established as a foundation for participatory community-led fisheries co-management. Fisheries Co-Management Committees (FCMCs) with members from several adjacent villages will be supported to engage with the DOF in the preparation and implementation of fisheries co-management plans (see Component 1). The committee members will prioritize the project support by completing participatory mapping of fisheries resources as an input for preparation of the fisheries co-management plans. In conjunction, the communities will identify, procure, build, and manage the MFV community infrastructure and/or productive activities for transformation of livelihoods, to be financed through grants drawn from a Community Infrastructure Support Window (CISW).

45. **Subcomponent 3.2 Business development and market linkages for alternative livelihoods (IDA US\$18.3 million)** will focus on (a) providing grant support to business development for livelihood diversification; (b) building/strengthening producer organizations in fishing communities; (c) facilitation of market linkages with producers in fishing communities; (d) large-scale vocational training; and (iv) providing opportunities for youth in fishing households to access wage employment. It will also support a framework for scaling up co-management and livelihoods diversification under BSCMFP Phase II.

46. The subcomponent will provide direct support to fisher households, and to young women and men, to transit out of fishing through a holistic package of business development, financial support, and facilitated access to job-related training and employment resources in and outside their home villages. Activities will be anchored in the capacity of community institutions and will, therefore, start in year 2 or 3 of the project. These activities aim to optimize the passive retreat out of fishing and improve the long-term sustainability and adaptive capacity of fishing communities. The FVG members will benefit from project support to establish producer groups and acquire skills to enhance their ability to obtain competitive prices for their inputs and products. The subcomponent will target entrepreneurs whose financing needs exceed the LFW capacity and will support them in accessing affordable finance from outside financial institutions. Vocational training and skills development will be provided to fisher households, targeting youth in the FVG member households to start their own businesses. Vocational training will also be extended outside the pilot communities, reaching fishers who migrate to work on the semi-industrial (artisanal) fleet. To do so, the project will enhance the partnerships with private firms and associations with vocational training programs and skills development/job creation initiatives.

#### **COMPONENT 4: Project Management and Monitoring (US\$22.50 million of which IDA US\$15.5 million)**

47. This component will provide funds for establishment and operation of the project management and monitoring and evaluation (M&E) structure within the DOF, that is also integrated within the institutional capacity assistance under Component 1. Specifically, project financing will be directed for (i) operation of Project Management Unit (PMU) staff and consultants hired as experts on an as-needed basis; (ii) retaining a general consultant to manage day-to-day project implementation while strengthening the DOF's capacity during the initial three years of the project; (iii) establishment and



operation of financial management (FM) and procurement management systems acceptable to the World Bank; (iv) PMU recurrent costs; (v) implementation of communication plans and activities related to access to information; (vi) development and implementation of governance and accountability and FM actions and third-party audits and implementation of the project's Environmental and Social Management Framework (ESMF); (vii) gender-informed project implementation; and (h) M&E, stakeholder coordination, and special evaluation studies.

#### **E. Rationale for Bank Involvement and Role of Partners**

48. The economic cost of transition from current practices to sustainable fishing will be substantial and requires public sector support and financing to create the conditions for responsible private sector investments in sustainable fisheries. The rationale for World Bank financing support is anchored in the premise that early on in the transition from ineffectively managed, open-access regimes to sustainable sector management, the public sector has a decisive role to (i) improve the governance and management of the marine and coastal fishing industry and resources through a transparent, participatory, and evidence based process and (ii) improve conditions for responsible private sector actors to take part in the seafood value chain and related industries in ways that contribute to a successful blue economy with increased economic and social benefits that are also gender inclusive.

49. The World Bank has a strong comparative advantage in financing the proposed program. From the 1980s to the early 2000s, the World Bank's programmatic support enabled Bangladesh to become a leading global aquaculture and inland fisheries producer. The wealth of knowledge and critical lessons from that work—both positive and negative—has informed the BSCMFP development and will guide its implementation. Moreover, in the last decade the World Bank has emerged as a leading development agency to implement large-scale fisheries sector wide transformation programs that link technological innovation, improved economic performance, and community livelihoods to sustainable fisheries management reforms. For example, under the West Africa Regional Fisheries Program (WARFP), which focuses on fisheries with a structure like the one in Bangladesh, the World Bank's support has helped stem rampant IUU industrial fishing from an estimated 30–40 percent of all catch to a near halt, in conjunction with advancing critical sector reforms. The BSCMFP has also been directly informed by and benefited from the World Bank's unique partnership with leading global technology providers to pilot new satellite-based MCS systems for semi-industrial and artisanal fishing vessels that improve safety at sea, while enabling comprehensive coastal fisheries management. Similarly, in partnership with GEF, FAO, and UNDP, among others, the World Bank is leading the development of new investment industry guidelines for sustainable fisheries and is working with the Bay of Bengal Inter-Governmental Organization (BOB-IGO) to pilot business models for such investments in the region.

50. The BSCMFP Phase I preparation has been carried out in close collaboration with the FAO, BOB-IGO, UNIDO, and the EU delegation to Bangladesh, as well as bi-lateral partners such as USAID and USDA. Moreover, the project is directly building upon and leverages past and ongoing development support by the FAO (subcomponent 1.1) and the Islamic Development Bank (subcomponents 1.1 and 1.2), as well as USDA (subcomponent 2.2) and USAID (subcomponent 3.2). Moving into implementation phase, it is expected that these and other partners will continue playing an active role and will contribute to achieving the project's objectives, including in terms of Bangladesh's productive engagement in regional integration platforms, such as the BOB-IGO and the Indian Ocean Tuna Commission (IOTC). In partnership with the FAO, IOTC, BOB-IGO, and others, the BSCMFP will further support the GOB in undertaking the reforms needed to meet the requirements of relevant international conventions.



## **F. Lessons Learned and Reflected in the Project Design**

51. The BSCMFP design reflects key lessons learned—including on effective approaches to co-management and alternative livelihoods to support small-scale fishers—from fisheries projects such as the WARFP-A1 in Cabo Verde, Liberia, Senegal, and Sierra Leone as well as other global experiences supporting transformation from unregulated to sustainably managed fisheries. Co-management of fisheries has shown a strong potential for regulating fishing effort but also requires significant legal and institutional reforms and capacity building to introduce and sustain good practice harvesting, local surveillance, and conservation and stock enhancement measures. In turn, any infrastructure interventions to enhance postharvest handling and increase profits will require effective rules and oversight to reduce the risks of overexploitation.

52. The design of Component 3 combines lessons learned from CDD, support to alternative income-generating activities (AIGAs), and community-based fisheries co-management globally and in Bangladesh. It is influenced by demonstrated approaches developed by the SDF under the Social Investment Program Project (SIPP I and II) and Nuton Jibon Livelihood Improvement Project, WorldFish and the DOF under the Enhanced Coastal Fisheries (EcoFish) Project, FAO/UNDP/DOF under the Empowering Coastal Fishing Communities through Livelihood Security (ECFC) Project, and the previous DOF projects supporting community-based inland fisheries co-management and AIGAs.

53. Taking a step further, BSCMFP Phase I is adapting the successful SDF CDD model with the experience from the EcoFish Project, ECFC Project, and two decades of co-management of inland fisheries in Bangladesh. Linking social mobilization, livelihoods development support, and regulatory reforms establishing community fishery rights will enable the project to pilot at scale co-management of coastal fisheries in Bangladesh, to be further expanded by BSCMFP Phase II.

## **III. IMPLEMENTATION ARRANGEMENTS**

### **A. Institutional and Implementation Arrangements**

54. The implementation of BSCMFP Phase I is designed to address the complexity of the project by tapping into the DOF's technical expertise and in partnership with other organizations. The DOF will be the implementation agency for the project and will house the PMU responsible for day-to-day project implementation. Based on the recommendations of the project's fiduciary assessments, and mindful of DOF's lack of recent experience managing World Bank project financing, the DOF will further engage the services of a project management consultancy for the first three years of the project, to both support the PMU core project management and fiduciary functions and provide on-the-job training and capacity building to the DOF/PMU staff.

55. At the GOB interagency level, the project implementation oversight will be carried out by a Project Steering Committee (PSC), established by an Order of the Minister, MOFL, and chaired by the Secretary of Recipient's Ministry of Fisheries and Livestock. The PSC will provide overall policy guidance and will facilitate inter-ministerial coordination and collaboration on the sector reform agenda supported by this project.

56. The DOF will also form a Technical Implementation Group, consisting of the DOF technical staff from respective line departments (marine fisheries department, aquaculture department, and so on) to





provide technical advice to the project on an as-needed basis. The overall goal of establishing a Technical Implementation Group is to ensure technical quality and consistency of approaches and knowledge exchange and address the capacity and staff constraints in the DOF, especially in coastal districts where most technical staff are inland fisheries and aquaculture specialists. As necessary, the PMU will engage internationally recognized specialists with extensive experience in marine fisheries.

57. The DOF will house PMU, with functions and resources satisfactory to the World Bank and with staff in adequate numbers and with qualifications, experience and terms of reference satisfactory to the World Bank. The PMU will be: (a) headed by one full-time Project director and comprising three full-time deputy project directors and having adequate numbers of financial management and procurement specialists; (b) supported by three satellite offices in Chittagong, Khulna and Barisal, each headed at the deputy project director level with staff in adequate numbers and with qualifications, experience and terms of reference satisfactory to the World Bank. These positions will be financed by the GOB and located in the PMU and satellite offices. The satellite offices in Chittagong, Khulna, and Barisal will be led by regional DPD with responsibility for implementation of the project activities in the respective geographic areas. The PMU will hire specialized international and domestic expertise on technical issues as needed. Competitive grants for value chain research and commercial investments on Small and Medium Enterprises (SMEs) under Component 2 will be managed by a grant manager based on approved grant operational guidelines. The grant manager will be supported by one grant officer in each of the satellite offices.

58. The DOF's substantial experience with citizen engagement will be employed to facilitate stakeholder outreach. Due to the highly technical nature of the marine capture fisheries sector reform, the DOF is establishing a 'Citizens Engagement Forum (an open house)' and a process to support citizen engagement and participation on matters related to the project. The platform will employ a formal process for organizing consultations presided by the director general twice a year. The consultations will be organized in various locations under the logistical support of the PMU. The Citizens Engagement Forum will be established by the minister to facilitate citizen engagement and inform governance and technical issues and will include representatives from government, private sector, academia, and civil society.

59. The PMU will operate based on a Project Operations Manual (POM) and a Grants Manual approved by the World Bank. The POM will be updated as necessary during midterm implementation review. It will include an indicative implementation plan guiding the sequence of project activities and investments, with a level of detail to ensure that there are no capacity bottlenecks. The POM will include details on institutional and implementation responsibilities, technical aspects of all components and activities, implementation guidance related to measuring results, M&E, financing and FM aspects, supervision and reporting provisions, applicable procurement rules and plans, and access to information and governance provisions related to the project. Documents related to environmental and social safeguards and legal agreements will be annexed to the POM.

60. Project Components 1 and 2 will be implemented directly by the DOF through the PMU, using the agreed implementation provisions of the POM. Component 3 will be implemented with the support of the SDF (an autonomous organization specialized in CDD projects) as a co-implementing agency. A Memorandum of Understanding (MOU) between the DOF and SDF will establish the project implementation responsibilities. Execution modalities will be detailed in a Manual of Operations (adopted by the DOF and SDF for Component 3. The MOU will be approved by the MOF and MOFL and will also include provisions for involvement of local community-based organizations and NGOs. The SDF may further engage local NGOs and/or community-based organizations with experience in participatory



education, community development activities, and grassroots awareness building to ensure that project interventions are deployed and accepted by a large group of stakeholders.

61. The POM will build on existing manuals, such as the ones used for the Social Investment Program Project/Nuton Jibon Livelihood Improvement Project, to ensure accountability, transparency, and alignment with oversight responsibilities. Operational aspects to be covered include organization of work, coordination and oversight, eligibility criteria for financing alternative livelihood activities, fiduciary responsibilities, reporting requirements, financing modalities, flow of funds, audit arrangements, and screening for social and environmental impacts. The POM will also provide the standard terms and legal templates of financing agreements with the project's beneficiaries for core types of CDD support for alternative livelihoods (e.g., community grants and loans) for all types of eligible livelihood activities.

62. The DOF will prepare and present progress reports, including procurement and FM, to the PSC every six months. A mid-term project implementation report in year 3 will be prepared by the DOF, at the request of the World Bank, to take stock of implementation progress, gaps, and results based on the agreed results monitoring framework. The midterm review will advise on readiness for the second phase of the program and include proposals for immediate and/or longer-term remedy of issues (including modifications of the focus of the second phase), as needed. The DOF will carry out a functional review to identify and address the areas where building adequate administrative and technical capacity of the DOF staff is required, both at central and district levels, to enable effective management and enforcement.

## **B. Results Monitoring and Evaluation Arrangements**

63. The PMU will use a results-based management approach to alien implementation with the achievement of the project's expected outcomes. Results monitoring will be carried out to focus on assessing the progress as mentioned by PDO and intermediate indicators, and as inputs to determine the outlook of meeting desired project outcomes over the project life. Indicators and respective performance targets will be included in the Annual Work Plan and Budget, which is the key planning document for project progress monitoring. It will serve as the instrument for identifying and integrating management priorities for implementation, forecasting procurement requirements, and facilitating the mobilization of technical inputs, staff, and resources when needed. It will act as an iterative management tool to control costs and assess achievements. In terms of assessing the longer-term outcomes (impacts) and to address the challenge posed by lacking baseline stock and catch data, the project will adapt the use of Fisheries Performance Indicators.<sup>23</sup> The project will be building the necessary technical capacity in the DOF and among Bangladesh's academic institutions for the broader application of Fisheries Performance Indicators in the country's fisheries management.

64. Key elements of the project Monitoring and Evaluation (M&E) system are included in the POM as follows: (a) an M&E manual describing the PDO and indicators, reporting responsibilities and structure, staffing, capacity-building plan, budget, and M&E-related activities with timeframe and budget; (b) annual M&E plans; (c) WB reporting requirements: semi-annual updates on progress of each indicator in the project RF; (d) explanation of baseline, mid-term and completion targets; (e) outline of annual and semi-annual reports to be submitted to WB ; (f) risk assessment and exit strategy; and (g) list of thematic studies if needed to fill in data gaps. To this end, the PMU will hire dedicated M&E Unit staff responsible for: (a) activity and process monitoring; (b) process monitoring; (c) participatory monitoring to generate

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<sup>23</sup> Anderson, J., et.al. 2015. *The Fishery Performance Indicators: A Management Tool for Triple Bottom Line Outcomes*. World Bank Report # 102488.



feedback by stakeholders and beneficiaries on a range of activity-related topics; (d) outcome monitoring; and (e) impact monitoring. The capacity for project M&E will be fully integrated in the institutional capacity-building assistance. Project results will be monitored semi-annually with inputs from DOF and validated based on agreed data sources and methodology. World Bank implementation support missions will be carried out twice a year to collect and review relevant information for assessing progress on interim targets and to agree on corrective measures.

### **C. Sustainability**

65. As is the case with other fishery sector reform efforts, this operation faces significant sustainability challenges. The BSCMFP's sustainability rests on its programmatic approach providing the time and continuity of engagement necessary to bring needed sector reforms and related community livelihood diversification processes to a successful conclusion. It will depend on, first, getting the policies and incentives right and, second, on the project delivery mechanism to engage fishing communities through, among others, awareness building, skills development, and access to finance and alternative livelihood opportunities. While activities are tailored to the needs of local communities, operationally they are tied to a set of policy and regulatory reforms that will ultimately determine the economic and environmental outcomes of Phase I and the scaling-up of effective activities in Phase II. Such a phased approach will minimize the risks associated with the transition to a sustainable blue economy. Ultimately, however, the extent to which the BSCMFP's achievements will be sustained depends on the GOB's commitment to implement the reform and institutional measures in a timely and decisive manner.

## **IV. PROJECT APPRAISAL SUMMARY**

### **A. Technical, Economic and Financial Analysis (if applicable)**

#### **(i) Technical Analysis**

66. The BSCMFP is a two-phase SOP stimulating sectoral reforms and institutional strengthening, supported by critical investments for enabling wider community participation in co-management and the gradual advancement of good practices and reduced fishing pressure. These goals require a sustained effort and significant resources. The choice of instruments for longer-term support allows time for building the capacity of governments to drive the reforms and of communities to respond to new incentives for behavioral change. International examples also point to the importance of sequencing investments in postharvest value-added improvements with the establishment of an effective harvest management system and MCS to further increase accountability, transparency, and good governance in the sector and ensure that the increased sector value does not lead to overfishing or elite capture.<sup>24</sup> The choice of SOP for this investment operation is based on these considerations.

67. BSCMFP Phase I focuses on bringing fisheries policies, regulations, and management capacity up to a level needed to enable stock recovery and opening the space for responsible private sector investments. Following stagnated catch volumes and a near 50 percent collapse of the industrial fisheries catch rate between 2000 and 2010, the successful recovery of the Hilsa stock has demonstrated the commitment of the GOB to address the depletion of fisheries stock and enhance its social and economic benefits through a sequence of policy, regulatory, and management improvements and public

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<sup>24</sup>Turkewitz, J. 2015. *G20 ACWG Note: Addressing Corruption in Forests and Fisheries*. Unpublished draft.



investments. The project supports fisheries governance and management systems, infrastructure, and other value chain investments aimed at increasing the sector's productivity.

68. Project investments are sequenced in such a way as to address the challenges to private sector participation while at the same time stimulating 'sustainability' improvements across the value chain of both the capture fisheries and coastal aquaculture. Infrastructure support, where justified, will solidify the results of the governance reforms supported by the project. Targeted infrastructure will be designed to be commensurate with the scale and pace of the reforms to avoid incentivizing expansion of unsustainable fishing. Significant part of the investments will be directed toward enhancing the institutional and policy environment for sustainable marine and coastal fisheries management by supporting the capacity of government fisheries and research institutions.

69. Sector governance will be strengthened through wider citizen engagement in policy formulation and management of common resources. In turn, this will improve the sector's sustainability and lead to generation of significant economic value and benefits and poverty reduction. The transition from Phase I to Phase II will be assessed based on the achievement of selected project indicators that will determine the readiness for scaling up of sector investments.

70. The effect of such measures will take time, which justifies longer-term investment plans in conjunction with institutional and management improvements. Postharvest handling of catches, both onboard fishing boats and on shore, can reverse the current negative trends in the quantity and quality of products.<sup>25</sup> These measures along the value chain could reduce spoilage and increase both the nutritional and market value of catches. Building capacity to address the many challenges that the sector faces can reduce public and private losses, augment the sector's economic value, and make it more attractive to private investment.

71. A WorldFish (2016) analysis estimates that improved coastal and marine fisheries management can generate up to a million jobs, including for women as processors and producers, and increase incomes for about 270,000 fishers. Priority aquaculture investment needs include rehabilitation of degraded water supply systems and expansion of pathogen-free hatchery capacity and brood stock availability. In the coastal sector, investment is needed to scale up contract-grower schemes and expand producers' training in quality assurance and application of the international hazard analysis and critical control points system, as well as in environmental management. Shrimp production, which is the sector's strongest export revenue generation driver, faces structural challenges that severely undermine the sector's environmental outcomes,<sup>26</sup> productivity, and economic growth potential.

72. At a global level, there is growing interest among investors in sustainable food systems, although the examples of commercial private capital contributing to sustainable fisheries remain few and far between. The BSCMFP design benefits from the international experience and recent WBG research on the challenges that keep return-seeking investors from participating in sustainable fisheries (i) lack of fishery data, (ii) ineffective fisheries management, (iii) unreliable infrastructure systems, and (iv) paucity of investment-ready enterprises, and the need for targeted public-sector support for addressing these challenges.

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<sup>25</sup> World Bank. 2017. *Developing Impact Investment Opportunities for Return-Seeking Capital in Sustainable Marine Capture Fisheries*.

<sup>26</sup> FAO. *National Aquaculture Sector Overview: Bangladesh*. At [http://www.fao.org/fishery/countrysector/naso\\_bangladesh/en#tcN700C5](http://www.fao.org/fishery/countrysector/naso_bangladesh/en#tcN700C5).



## **(ii) Economic Analysis**

73. The economic analysis is based on analysis of individual project components. Due to data constraints, quantitative analysis with summary efficiency measures, net present value (NPV), and economic internal rate of return (EIRR) was undertaken only for Components 2 and 3 for a 20-year period and using a discount rate of 10 percent, while a detailed qualitative analysis was carried out for Component 1. The results are summarized as follows:

- (a) Component 1. The business-as-usual scenario is one of an unmanaged resource with extensive overcapitalization, continuously declining CPUE, and unsustainable levels of fishing, especially of high-value demersal fish, as indicated by several existing studies. The main benefit of this component will be establishment of key building blocks for effective fisheries management by the Government, including data for key commercial stocks, stronger policies, legal and regulatory framework, management plans, enhanced registration system for fishers and boats, and an effective MCS system. In the medium and long run, these elements, along with those supported under Component 3 and together with Phase II activities, are expected to result in reduced overfishing, increased CPUE, improved quality and marketability, and higher overall catch value due to the reestablishment of high-value demersal fish stocks.
- (b) Component 2. NPV of US\$58.71 million and EIRR of 21.71 percent. The main expected benefits are increased incomes to producers and the economy, resulting from reduced postharvest losses in capture and culture fisheries; increased aquaculture productivity through increased survival and growth rates; and improved food safety compliance in capture and culture product handling and processing, which, in the case of aquaculture, will ensure maintenance of Bangladesh's direct access to lucrative EU markets. The followings were estimated: (i) the annual increase in the gross value added from the current US\$1.25 billion of the marine capture fisheries subsector due to project activities and (ii) total incremental net benefits to aquaculture farmers in select 600 clusters with 4,500 ha, which will benefit from availability of freshwater due to canal dredging, availability of better quality seed, and improved food safety and quality services along the value chain.
- (c) Component 3. NPV of US \$17.13 million and EIRR of 19.35 percent. Targeting 450 fishing villages, the expected main benefits of this component include transformation of livelihoods away from subsistence fishing and improved fisheries management by communities. The following were estimated: (i) increased household incomes through AIGAs funded by the community-managed revolving funds in 450 fishing villages and complemented by support to producer organizations and facilitation of market links in 100 MFVs and (ii) incomes from wage employment outside the capture fisheries of youth and fishers trained by the project in 450 pilot villages.

74. Overall, the analysis shows that the project is economically viable based on the quantified benefits of Component 2 and Component 3 alone, resulting in a project-wide EIRR of 12.10 percent, even though at this time it is not possible to quantify the Component 1 benefits (which are expected to be positive). Thus, experiences from other World Bank operations, such as from the WARFP, financing similar fisheries and similar sector reform measures as those envisioned under Component 1, have demonstrated that such investments can generate significant economic benefits. At the country level, WARFP support has achieved close to 68 percent increase in stock and 25 percent increase in economic performance, with a further 27 percent increase expected under its second phase.



## **B. Fiduciary**

### **(i) Financial Management**

75. An FM capacity assessment of the DOF, the lead implementing agency, as well as of the SDF, responsible for implementing Component 3, was completed following World Bank's standard guidelines. The assessment took stock of the strengths and weaknesses of the two agencies in terms of their capacity in rendering necessary FM services, which will be required for effective implementation of the project. Based on the assessment, the associated FM risk is determined as 'Substantial'.

76. **FM arrangements.** The following FM arrangements will be in place: (aa financial management specialist (FMS) and one accounts officer will be recruited, with terms of reference (TOR) agreed with the World Bank. Due to the absence of a DOF FM unit with appropriate staffing, the FMS recruitment is crucial. Both the DOF and SDF should get the FMS on board by project effectiveness; (b) a POM will be prepared outlining all relevant FM policies and procedures to implement the project; (c) a Designated Account (DA) in the form of Convertible Taka Account will be opened with a nationalized commercial bank acceptable to IDA to receive and disburse funds for implementation of the relevant components of the project; (d) all expenditures related to the relevant components/expenditure categories will be recorded at the DOF; (e) an off-the-shelf accounting software will be installed to ensure accuracy and integrity in accounts; (f) an annual external audit will be carried out by the Comptroller and Auditor General (CAG) of Bangladesh, through its Foreign Aided Project Audit Directorate (FAPAD), and the report will be submitted to the World Bank within six months after the close of each financial year; (g) a set of interim unaudited financial reports (IUFs) will be prepared and submitted to the World Bank within 45 days after the close of each calendar quarter for reporting expenditures pertaining to relevant components; (h) following determination of a ceiling, disbursement will be made on an advance and replenishment basis, based on submission of statements of expenditure (SOEs). The World Bank will review the FM performance, as and when deemed fit, to determine eligibility to convert from SOE-based disbursement modality to that of IUFs.

77. For Component 3, the following arrangements will be in place in the SDF: (a) an FMS will be recruited, with TOR agreed with the World Bank; (b) a DA in the form of CONTASA will be opened with a nationalized commercial bank acceptable to IDA to receive and disburse funds; (c) a set of IUFs will be prepared and submitted to the World Bank within 45 days after the close of each calendar quarter for reporting, documentation, and seeking advance based on a six-month forecast of fund requirements.

78. **Planning and budgeting.** A budget, with detailed breakdowns for each fiscal year related to each component and cost category, will be prepared for the entire duration of the project. The annual work plan and the Procurement Plan of the project will be used to prepare annual budgets comprising source of funding and planned application of funds. A full-time budget planning officer will be seconded to the PMU and paid by the GOB.

79. **Accounting and reporting.** The country system, as outlined in the Project Accounting Manual of the Ministry of Finance, will be complied with in the discharge of accounting and reporting functions. Both the DOF and SDF will be required to maintain mandatory books of accounts and prepare quarterly and yearly financial statements.

80. **Internal control.** Proper internal control ensures effective maintenance of book of accounts and accounting records, safeguarding of assets of the project, and their optimum usage. A POM will be





prepared outlining the financial rules and procedures to be followed with respect to all project-related activities as well as project-specific controls.

81. **Internal and External audits.** An external professional auditing firm, recruited by the project based on a TOR agreed with the World Bank, will carry out internal audits of the project. The internal audit will be conducted at least twice during the lifetime of the project, one year after project effectiveness and one year before credit closing. With respect to external audit, there are no pending audit reports under either of the implementing agencies. The Office of the Comptroller and Auditor General (OCAG) is acceptable to IDA as the independent external auditor for the DOF part. The FAPAD under the OCAG will conduct audit of the annual financial statements within six months from the end of each fiscal year. The project director is entrusted with the responsibility to conduct regular audit follow-up, arrange bipartite meetings with the FAPAD to resolve audit observations, and take necessary remedial actions, if needed. For the SDF, the annual entity audit report is acceptable to IDA. The following audit reports that would be monitored by the World Bank Project Risk Management.

**External Audit Reports**

| Implementing Agency | Audit Type                  | Auditor         | Deadline    |
|---------------------|-----------------------------|-----------------|-------------|
| DOF                 | Project Financial Statement | CAG             | December 31 |
| SDF                 | Entity Audit Report         | Private auditor | December 31 |

82. **Disbursement.** Two DAs, one to be operated by the DOF and the other by the SDF, in the form of CONTASA, will be opened to receive IDA disbursement. The SDF DA will require concurrence from the DOF, in the form of joint signatory arrangement, for requesting funds and for documentation of expenditures. For the DOF, the disbursement will be based on SOEs. The authorized limit for the DA and the minimum application size for direct payment will be agreed with the loan department of World Bank and will be reflected in the Disbursement and Financial Information Letter (DFIL). For the SDF, disbursement will be based on IUFRRs, with six months forecast for fund requirement.

83. **Counterpart contribution.** The GOB will provide US\$41.60 million as counterpart contribution, which is expected to finance on a parallel basis (i) small infrastructure works under Component 2; (ii) project operations cost, such as transportation and fuel; and (iii) staff support, including both staff deputation to the project and hiring of DOF staff to fill in vacant functions related to the project's activities, such as stock assessment scientists or fishing inspectors. The estimated taxes are expected to be below 15 percent.

84. **Flow of IDA funds.** An MOU between the DOF and SDF would govern the activities to be carried out by the SDF and funds will flow to the SDF DA to implement the agreed-upon activities. The MOU will outline the modality to be adopted by the SDF for downstream transfer of funds up to the community level. There will be reporting of expenditures to the DOF and SDF for all activities covered under sub-grants, before reporting to IDA by the DOF and SDF. The project director of the DOF and, in his/her absence, the deputy, will be the authorized person for operating the DA-DOF to implement relevant components of the project. The PMU will be responsible for making all payments against the invoices/bills received from the cost centers, based on approved work plans. Separate operating accounts will be maintained at the level of divisional deputy director offices at Khulna, Barisal, and Chittagong, to ensure smooth project implementation. The three regional offices will have dedicated accountants who will work as an extended arm of the PMU and will review and verify invoices/bills received from respective jurisdictions for payment from the DA. Advances based on three months' requirement can be transferred to the three operational accounts for day-to-day operational expenses and are then expected to be



accounted for within three months. The regional offices will send monthly SOE in an agreed format to the PMU for the advances made. A monthly reconciliation should be done between the DA and operational accounts to ensure accuracy of the closing balance.

85. **Eligibility of expenditures.** No allowance shall be handed out as cash payment to trainees/participants and trainers/resource speakers in training, knowledge transfer, or other capacity building activities (including workshops, seminars, and others). Instead, all such allowances (except for sit-in allowances, which are not eligible for IDA financing) should be paid via the banking system and at the official rates of the GOB at the time of the event. An attendance register for all local training must be maintained by the project and made available for future audit.

## **(ii) Procurement**

86. **Applicable procurement framework.** Procurement under the project will be carried out in accordance with the World Bank Procurement Regulations for IPF Borrowers, July 2016, revised November 2017 and August 2018, and the provisions of the Project Procurement Strategy for Development (PPSD) and the procurement plan that may be updated from time to time with the World Bank's approval. The DOF will be the overall implementing agency and all the procurement will be done centrally at the DOF PMU. The SDF will work in partnership with the DOF to mobilize communities and transform livelihoods of fishermen using a CDD approach. They will have limited goods and services contracts at the headquarters level.

87. **Procurement capacity and risks.** A detailed procurement capacity assessment has been carried out for the DOF and SDF. The assessment indicates 'Substantial' risk in procurement operations and contract management. The main risk drivers are associated with the capacity constraint of the DOF in terms of identifying irregular bidding practices undertaken by the bidders and delays in performing procurement contract management of related activities.

88. **Managing procurement risks.** To minimize the procurement-related risks, several mitigations measures are being taken, including: (i) Development and use of a PSD by the DOF and SDF (acceptable to the World Bank) that consider the volume of items to be procured, prevailing market conditions, activity-level risks, and so on. The PSD has been prepared, outlining the appropriate procurement strategy, together with an initial Procurement Plan for each of the DOF- and SDF-implemented project components; (ii) Use of the Systematic Tracking of Exchanges in Procurement (STEP) system to prepare and manage the Procurement Plan and all procurement transactions and of National e-Government Procurement (e-GP); (iii) Training of project officials, including evaluation committee members, on the World Bank Procurement Regulations, country procurement laws, STEP, and other aspects of procurement; (iv) Formation of bid/proposal evaluation committees (acceptable to the World Bank) having the necessary expertise depending on the type of contract and with the mandatory membership of a procurement consultant; (v) Appointment of experienced procurement consultants (with TOR acceptable to the World Bank) for the entire project period for the DOF and a short period for the SDF; (vi) Use of the World Bank's standard procurement documents and standard/model procurement documents satisfactory to the World Bank; (vii) Carrying out of annual Integrated fiduciary reviews/procurement post reviews of a sample of contracts selected depending on the associated risks; and (viii) Other due diligence measures.

89. **Special measures for internationally advertised contracts.** International procurement and technical consultants will be engaged for bid/proposal evaluation for the high-value international





contracts. In addition, provision will be kept for engaging a probity assurance provider in case best and final offer or negotiation is applied.

90. **Procurement Plan.** It will include estimated costs, procurement methods, contract arrangements, prior review requirements, and processing timeframe, among other relevant information. The Procurement Plan and its revisions will need the World Bank's review and approval. A General Procurement Notice will be published on the World Bank's website and the UNDB online once the project is approved.

### **C. Safeguards**

#### **(i) Environmental Safeguards**

91. The World Bank environmental safeguard policies triggered by the project include Environment Assessment (OP/BP 4.01), Natural Habitats (OP/BP 4.04), and Pest Management (OP/BP 4.09). BSCMFP Phase I is classified as Category B, since some of the potential project impacts, while potentially significant, are expected to be spatially limited, site specific, and largely mitigatable and reversible. Specifically, the project will support multiple small-scale infrastructure investments, the cumulative impact of which may be significant. As the locations of these investments will be defined during project implementation, the project has developed a detailed ESMF that was disclosed on February 12, 2018. Full Environmental and Social Impact Assessments (ESIAs) will be carried out in accordance with OP 4.01 for activities with potentially significant impacts, following the ESIA activity guidelines included in the ESMF.

92. The DOF, as lead implementing agency, has limited capacity to address environmental safeguards provisions during preparation and implementation, necessitating capacity-building activities to address this gap. Specific implementation requirements and capacity-building measures are outlined in the ESMF.

#### **(ii) Social Safeguards**

93. The World Bank social safeguards policies triggered by the project include Involuntary Resettlement (OP/BP 4.12) and Indigenous Peoples (OP/BP 4.10), as outlined in the project's ESMF. In the absence of sufficient information on the location of project activities, a Resettlement Policy Framework (RPF) and a Small Ethnic Community Development Framework have been prepared to meet the requirements of OP/BP 4.12 and OP/BP 4.10, respectively, following a preliminary social assessment of the project. These frameworks will guide the DOF and SDF in social screening, social impact assessment, and the preparation of site/activity-specific Resettlement Plans and/or small ethnic communities' development plans acceptable to the World Bank. Public consultations and information disclosure were held during the social assessment and preparation of the frameworks. The DOF has also designed a grievance redress mechanism for managing project-related grievances and suggestions and proposed institutional arrangements for social safeguards management and M&E.

94. **Citizen engagement.** The project explicitly seeks to support engagement of people deriving their livelihood from fisheries. Engagement of target beneficiaries aligns to and supports the project's approach to demand-side social accountability. Through consultative processes, engagement in local-level planning, co-management, and feedback mechanisms, the approach to reorient the sector's performance from 'volume to value' and sustainable management of fisheries will be elaborated and adjusted. Feedback mechanisms will be developed to ensure transparency, accountability, and learning as well as a continuous dialogue with target beneficiaries and other stakeholders. The specific elements of the



framework for citizen engagement include (a) support for engagement of local communities in the targeted coastal districts and development of planning approaches; (b) support for community engagement in determining local investment priorities; (c) support for a feedback mechanism from target beneficiaries; (d) support to build the capacity at local and national structures for engagement with target beneficiaries to address concerns and issues raised as well as to reflect these in the revisions of the FMPs and relevant legislation and to inform fishery policies and approach to co-management; and (e) specific third-party monitoring of project activities that will be supported three times during project implementation (in the first year, at mid-term, and at completion) to ensure transparency and feedback on these activities. It includes a sample-based perception survey administered by a third party and an engagement forum with the target beneficiaries. The protocol and mechanisms for elements of this citizen engagement framework will be detailed in the POM. The quality of its implementation and progress will be monitored both at local and national levels through supervision and dialogue.

### (iii) Grievance Redress Mechanisms

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

## V. KEY RISKS

96. **The overall project risk is Substantial.** The level of risk reflects the challenges of sector governance reform in the context of possible interference by vested interests and limited institutional capacity. The main risks are discussed in the following paragraphs.

97. **Political and governance (rated High).** Reforms to introduce sustainable stock management may be perceived as a threat to vested interests, which could resist change and affect decisions at all levels of government. Recent in-depth political economy studies<sup>27</sup> of the fisheries subsectors in Bangladesh have identified a complex dependency system that places artisanal fishers and aquaculture smallholders in perpetual servitude to well-connected middlemen investors, which in turn fuels overfishing and de-incentivizes postharvest value addition. Improving access to finance is the most effective measure in addressing this sector distortion in the longer term. As this depends first on introducing well-functioning fisheries management, a Governance, Anti-Corruption, and Conflict Filter screening has identified a number of additional risk-mitigating measures, such as the use of consultative and transparent processes to increase the adoption of sustainable fishing practices and improve the control of fisheries; maintaining of strong stakeholder engagement in the design and implementation of reform processes; and

<sup>27</sup> Ibid 12. Also in "The Political Economy of Community-Based Fisheries in Bangladesh", M. H. Khan. 2015. At <http://eprints.soas.ac.uk/id/eprint/19619>.



identification of alternatives and compensation of potential losers. The considerable potential for governance risks in the allocation of access rights to coastal fisheries will be addressed through equally substantial attention to institutionalizing robust transparency, grievance redress, and accountability mechanisms in the management of marine captured fisheries. The project's focus on introducing and scaling up community co-management of coastal fisheries will further contribute to this end.

98. Governance and accountability risks are further related to the expected equipment acquisitions and multiple small-scale infrastructure investments under this project. These risks will be mitigated through transparent procurement, significant strengthening of the DOF/MOFL procurement capacity, and third-party monitoring. Recognizing the inherent high governance risks associated with fisheries reform operations, project implementation will continue to support in-depth governance analysis and associated capacity building.

99. **Sector strategies and policies (rated Substantial).** The historical lack of attention to captured marine fisheries has resulted in weak sector governance and major capacity constraints. In practice, there have been little or no tangible inputs into fisheries management or establishment of a sound MCS regime. Similarly, the shortage of qualified staff at the district level contributes to lack of enforcement. The main BSCMFP Phase I focus will be on supporting sector governance reforms geared toward improved fisheries (co-)management and accountability and providing at-scale technical assistance to build up the DOF capacity to implement and sustain these reforms.

100. **Technical design (rated Substantial).** There is substantial likelihood that factors related to the technical design of the project may adversely affect the achievement of the PDO. This is due to the complexity of the project and the implementation environment. The project has three technical components, including one following a CDD implementation approach, each with a significant number of interdependent interventions and at scale that requires multi-step clearance processes involving multiple GOB agencies. Such operational-level dependence on a high level of interagency coordination and collaboration, including among agencies with competing priorities, presents a core technical design challenge. To address this, substantial upstream stakeholder engagement work was carried. Project management arrangements have been similarly strengthened, including with provisions for additional dedicated senior staff, to ensure effective and uninterrupted interagency processes.

101. **Institutional capacity for implementation and sustainability (rated High).** There are very few marine fisheries experts in either GOB or research agencies, resulting in a weak initial delivery capacity, particularly given the complexity of the multi-species fisheries under their jurisdiction. The limited institutional capacity also increases the risk that the reforms developed and introduced in BSCMFP Phase I might not be fully implemented. The project is addressing this risk by prioritizing and adequately resourcing comprehensive institutional capacity building for delivery of fisheries management reforms as a precondition for downstream investment.

102. **Fiduciary (rated Substantial).** The main risk drivers are associated with the implementing agency's procurement and FM capacity constraints. The DOF will employ the services of a qualified project management consulting company to support overall project implementation and reporting functions during the first three years of the project while strengthening its in-house capacity. The project is also providing significant training opportunities for responsible DOF and MOFL officials at all levels.

103. **Stakeholders (rated High).** Evidence from fisheries sector reforms elsewhere indicates that resistance to these reforms can be strong, both from public fisheries institutions and private sector actors,



including fishing communities. This is especially the case when reforms seek to delegate user rights and fisheries management responsibilities to fishing communities. At the district level, the lack of sufficient qualified staff to oversee the operation of fisheries management systems reduces the DOF's ability to resist vested interests in the sector. Likewise, artisanal vessel registration is unlikely to be maintained without strong buy-in from the fishing communities. To mitigate these risks, the project is (a) investing in a robust sensitization campaign reaching out to community civil and religious leaders; (b) incorporating proactive, gender-sensitive citizen engagement throughout its design and implementation; and (c) carrying out a detailed institutional capacity assessment to inform project capacity-building activities for both the DOF and local communities.

104. **Other: Climate and disaster risk (rated High).** Given the project's focus on coastal ecosystems and communities, preliminary climate and disaster risk screening indicates high exposure to, and risk from, weather-related natural disasters. A recent World Bank analysis of the potential impacts of increased riverine salinity in the southwest coastal region of Bangladesh concluded that the fish species in these areas will face adverse impacts on their reproductive cycle, reproductive capacity, spawning area, feeding, breeding, and longitudinal migration. Projected climate change may significantly affect the project's objectives and sustainability in the longer term by adversely affecting the productivity and distribution of marine and coastal fisheries. To mitigate these risks, the project's preparation has already initiated basic capacity-building efforts (to be scaled up during implementation) and identified specific investments for additional climate screening to maximize adaptation benefits—for example, by supporting the diversification of coastal communities' livelihoods, integrating mariculture development and fish habitat rehabilitation activities with nature-based coastal protection solutions, and supporting climate-resilient value chain infrastructure development.



## VI. RESULTS FRAMEWORK AND MONITORING

### Results Framework

#### Project Development Objectives(s)

The Series of projects development Objective is to increase coastal and marine fisheries' contribution to the economy, poverty reduction, and environmental stability.

The proposed PDO of the first project under the series (Phase 1) is to improve management of coastal and marine fisheries and aquaculture.

| PDO Indicators by Objectives / Outcomes  | DLI | CRI | Unit of Measure | Baseline | Intermediate Targets |   |        |        | End Target |
|--|-----|-----|-----------------|----------|----------------------|---|--------|--------|------------|
|  |     |     |                 |          | 1                    | 2 | 3      | 4      |            |
| Improve management of targeted coastal belt capture and culture fisheries  |     |     |                 |          |                      |   |        |        |            |
| Issuance of industrial fishing licenses in line with precautionary principle   |     |     | Yes/No          | N        | N                    | Y | Y      | Y      | Y          |
| Share of vessels with installed and functioning vessel monitoring and communication safety equipment                                     |     |     | Percentage      |          |                      |   |        |        |            |
| – Industrial Fleet   |     |     |                 | 0        | 0                    | 0 | 100    | 100    | 100        |
| – Artisanal mechanised and motorised fleet   |     |     |                 | 0        | 0                    | 0 | 5      | 15     | 25         |
| Share of landed catch and aquaculture production in targeted coastal and marine fisheries in safe handling according to defined criteria |     |     | Percentage      | 0        | 0                    | 3 | 10     | 15     | 20         |
| Improve fishing communities’ access to alternative livelihoods activities  |     |     |                 |          |                      |   |        |        |            |
| Targeted Households with access to project-promoted livelihood activities outside of capture fisheries                                   |     |     | Number          | 0        | 0                    | 0 | 15,000 | 40,000 | 60,000     |
| – Of which female  |     |     |                 | 0        | 0                    | 0 | 5,000  | 10,000 | 20,000     |



| Intermediate Results Indicators by Components   | DLI | CRI | Unit of Measure | Baseline | Intermediate Targets |       |       |        | End Target |
|---|-----|-----|-----------------|----------|----------------------|-------|-------|--------|------------|
|   |     |     |                 |          | 1                    | 2     | 3     | 4      |            |
| Enabling Activities for Sustainable Fisheries Investments and Growth                        |     |     |                 |          |                      |       |       |        |            |
| Fisheries Management Plans (FMPs) prepared according to defined criteria                    |     |     | Text            | 0        | 1                    | 1     | 2     | 2      | 3          |
| Institutional and enforcement capacity of Department of Fisheries                           |     |     | Text            | 0        | 0                    | 1     | 2     | 4      | 5          |
| Artisanal vessels with valid registration and licenses                                      |     |     | Number          | 1,565    | 1,565                | 2,000 | 5,000 | 10,000 | 15,000     |
| Share of industrial fishing vessels with on-board observers                                 |     |     | Percentage      | 0        | 0                    | 0     | 30.00 | 50.00  | 70.00      |
| Key fishereis managment data on Bangladesh marine and coastal fisheries publicly accessible |     |     | Yes/No          | N        | N                    | Y     | Y     | Y      | Y          |
| Fisheries management plans implemented  |     |     | Number          | 0        | 0                    | 0     | 1     | 1      | 1          |
| Improving Infrastructure and Production Practices   |     |     |                 |          |                      |       |       |        |            |
| Aquaculture farmers with access to productivity boosting packages                           |     |     | Number          | 1,000.00 | 3,000                | 6,000 | 9,000 | 11,000 | 12,000     |
| Landing sites with basic services supported under the project                               |     |     | Number          | 0        | 0                    | 1     | 4     | 10     | 15         |
| Awareness campaigns on sanitary conditions and quality of seafood products conducted        |     |     | Number          | 0        | 1                    | 4     | 6     | 8      | 10         |
| Share of annual aquaculture seeds production that is disease resistant                      |     |     | Percentage      | 1        | 1                    | 1     | 5     | 8      | 10         |
| Community Empowerment and Livelihoods   |     |     |                 |          |                      |       |       |        |            |
| Share of villages with a functioning fisheries co-management committee                      |     |     | Percentage      | 0        | 0                    | 5     | 10    | 15     | 20         |
| Targeted fisher households benefiting from improved community basic infrastructure          |     |     | Percentage      | 0        | 0                    | 10    | 20    | 40     | 60         |
| Participants who complete vocational/skills development training in employment              |     |     | Number          | 0        | 0                    | 700   | 2,600 | 6,500  | 10,000     |
| — Of which Female   |     |     | Number          | 0        | 0                    | 200   | 600   | 1,500  | 2,000      |



|   |  |            |   |    |     |     |     |     |
|---|--|------------|---|----|-----|-----|-----|-----|
| Women's savings and loans groups (SLGs) created   |  | Number     | 0 | 50 | 300 | 450 | 450 | 450 |
| – Female beneficiaries receiving financial and technical support to establish micro-enterprises |  | Number     | 0 | 0  | 200 | 500 | 800 | 900 |
| Share of targeted beneficiaries that express satisfaction with project interventions            |  | Percentage | 0 | 0  | 20  | 45  | 55  | 60  |

### Monitoring & Evaluation Plan: PDO Indicators

|   |   |
|---|---|
| <b>Indicator Name</b>                     | Issuance of industrial fishing licenses in line with precautionary principle  |
| <b>Definition/Description</b>             | <p>The indicator captures improved management of fisheries through control of access. Licensing of industrial vessels is a management intervention that regulates the fishing capacity (volume and days) and delineates the fishing area(s) and will exclude industrial vessels from fishing in areas with artisanal fishing. The licensing process is supported by strengthening enforcement and the VMS.</p> <p>The total fishing capacity of the licensed industrial fleet (excluding tuna vessels) should not exceed the baseline, that is, the total annual fishing capacity for industrial vessels as of calendar year 2017. Once a precautionary FMP becomes available, the fishing capacity of the licensed industrial fleet and level of fishing effort should follow recommendations from the FMP.</p> <p>The marine and coastal capture fisheries fleet lists 243 industrial trawlers.</p> |
| <b>Frequency</b>                          | Annual  |
| <b>Data Source</b>                        | GOB documents promulgating rules and procedure for issuance of fishing licenses; GOB records of issued fishing licenses   |
| <b>Methodology for Data Collection</b>    | Review of procedure for issuance of fishing licenses and annual account of licensed fishing capacity and fishing area   |
| <b>Responsibility for Data Collection</b> | PMU M&E function  |
| <b>Indicator Name</b>                     | Share of vessels with installed and functioning vessel monitoring and distress communication equipment  |
| <b>Definition/Description</b>             | <p>The satellite VMS (for industrial fishing vessels) and the satellite Automatic Identification System (SAT AIS-B), Global System for Mobile communication (GSM), or equivalent (for smaller size vessels) make it possible to identify and track seafaring vessels, that is, the maritime equivalent of air traffic control. The radio-based communications system transmits the course and speed as well as identification and position information to other vessels and shore stations. SAT-VMS installation needs to be a mandatory requirement for industrial fishing vessels to combat illegal, unreported, and unregulated fishing and ensure sustainable fisheries management.</p>   |



|   |   |
|---|---|
|   | <p>The installation of the SAT-AIS or equivalent is a major step in improving safety of life at sea for artisanal fishermen by enabling more effective search and rescue. In conjunction with the registration of the artisanal fleet, it enables implementation of the FMPs through improved catch and fishing effort monitoring. It also contributes to avoidance of conflicts with the industrial fleet in the nearshore zones. The indicator is disaggregated by fleets, with separate targets for the industrial fishing fleet and for the artisanal mechanized and motorized fleet .</p> <p>A 2018 baseline of a total of 33,356 motorized artisanal vessels is calculated based on the DOF's fishers ID register and vessel databases.</p> |
| <b>Frequency</b>                          | Annual  |
| <b>Data Source</b>                        | The DOF's fishers ID register and fishing vessel databases, logbooks of the various enforcement activities, monthly reports of MCS; standard reports from vessel registry, and randomized spot checks of artisanal vessels  |
| <b>Methodology for Data Collection</b>    | Calculation using the DOF's fishers ID register and fishing vessel databases, review of vessel logbooks and monthly reports of MCS, and randomized spot checks of artisanal vessels   |
| <b>Responsibility for Data Collection</b> | PMU M&E function  |
| <b>Indicator Name</b>                     | Share of landed catch and aquaculture production in targeted coastal belt fisheries in safe handling according to defined criteria  |
| <b>Definition/Description</b>             | <p>The indicator measures the behavior change dimension of improved fisheries management with respect to improved handling of landed catch and aquaculture production. The criteria include handling, water, storage, and transport that are</p> <p>(a) safe (in terms of methods, exposure to sun, and availability of basic equipment and utilities) and (b) hygienic (exposure to pollutants, dirty environment, and sewage).</p>  |
| <b>Frequency</b>                          | Annual  |
| <b>Data Source</b>                        | Sector statistics of annual landed catch and aquaculture production, project and activity records on estimated annual catch at project-supported landing sites and storage facilities, and biannual survey of fish handling in targeted coastal areas   |
| <b>Methodology for Data Collection</b>    | Review and calculation  |
| <b>Responsibility for Data Collection</b> | PMU M&E function  |





|   |   |
|---|---|
| <b>Indicator Name</b>                     | Targeted households with access to project-promoted livelihood activities outside of capture fisheries  |
| <b>Definition/Description</b>             | <p>The indicator is disaggregated by sex and measures the number of targeted households where one or more household member(s) has(ve) access to project-supported activities that provide for alternative livelihood/employment opportunities to those related to capture fisheries. It identifies approaches and opportunities to eventually enable fishers to move out of capture fisheries and thus reduce fishing pressure on fish resources while improving livelihoods. The indicator captures targeted support to women and girls to narrow identified gender gaps in project areas, including the establishment of village-level women's savings groups, provision of financial and technical support to support female-led microenterprises, and skills development to enable youth transition to productive employment outside fishing.</p> <p>Age group definition for monitoring purposes:</p> <p>Youth: From 16 to 29 years</p> <p>Adult: Above 30 years</p> |
| <b>Frequency</b>                          | Annual  |
| <b>Data Source</b>                        | Household survey carried out at the selected village by the SDF and sample-based perception survey by third party   |
| <b>Methodology for Data Collection</b>    | Review and calculation  |
| <b>Responsibility for Data Collection</b> | SDF PMU M&E function  |

#### Monitoring & Evaluation Plan: Intermediate Results Indicators

|                               |   |
|-------------------------------|---|
| <b>Indicator Name</b>         | Fisheries Management Plans (FMPs) prepared according to defined criteria  |
| <b>Definition/Description</b> | <p>The indicator relates to PDO indicators 1 and 2. The project will support preparation of an overall national FMP that covers all the fisheries, including the industrial and artisanal segments. The plan will be updated annually.</p> <p>At baseline, there is no available overall national FMP. Defined criteria are (a) engagement with all stakeholders (participatory); (b) soundness (integration of scientific recommendation of application of the precautionary principle); and (c) transparency (publication of consultations, scientific recommendations, and the plan). The score is calculated by assigning one point for each of the following FMP preparation process qualifiers: 1 = participatory process; 1 = transparency; 1 = integration of scientific recommendations. Maximum attainable score is 3. Respectively, 0 = FMP preparation process that is not participatory, not transparent, and not based on scientific recommendations.</p> |
| <b>Frequency</b>              | Annual  |



|   |  |
|---|--|
| <b>Data Source</b>                        | FMP and supporting documents, including technical analysis documents and minutes and proceedings of the FMP preparation  |
| <b>Methodology for Data Collection</b>    | Review, analysis, and scoring of the FMP preparation process based on supporting documents, technical analysis documents, minutes and proceedings  |
| <b>Responsibility for Data Collection</b> | PMU M&E function   |
| <b>Indicator Name</b>                     | Institutional and enforcement capacity of Department of Fisheries  |
| <b>Definition/Description</b>             | This indicator is related to PDO indicators 1, 2, and 3. The capacity assessment score is calculated by assigning one point for each qualifier: 1 = fisheries and aquaculture policies updated; 1 = legal framework aligned with international convention and guidelines (by-laws, normative text); 1 = training plan on enforcement capacity completed; 1 = restructuring of Department of Fisheries according to functional and organizational review initiated; 1 = preference to women in new hires; 1 = DOF senior technical and management staff (assistant director level and above) knowledgeable of and trained to screen for climate and disaster risk (CDR). Maximum attainable score is 6. |
| <b>Frequency</b>                          | Annual   |
| <b>Data Source</b>                        | MOFL and DOF documentation, institutional assessment (institutional and functional review)   |
| <b>Methodology for Data Collection</b>    | Institutional assessment (institutional and functional review), training records, and evaluation   |
| <b>Responsibility for Data Collection</b> | PMU M&E function   |
| <b>Indicator Name</b>                     | Artisanal vessels with valid registration and licenses   |
| <b>Definition/Description</b>             | The indicator relates to PDO indicator 2.  |
| <b>Frequency</b>                          | Annual   |
| <b>Data Source</b>                        | MMD and DOF registers of artisanal vessels, spot checks, review of MCS and vessel logbooks   |
| <b>Methodology for Data Collection</b>    | Review and calculation, review and count of DOF register of artisanal vessels, review of spot check data and logbooks  |
| <b>Responsibility for Data Collection</b> | PMU M&E function   |



|   |  |
|---|--|
| <b>Indicator Name</b>                     | Share of industrial fishing vessels with on-board observers  |
| <b>Definition/Description</b>             | The indicator relates to PDO indicator 1.  |
| <b>Frequency</b>                          | Annual   |
| <b>Data Source</b>                        | Vessel logbooks and observer reports, spot checks, MCS records   |
| <b>Methodology for Data Collection</b>    | Review of MCS records, vessel logbooks, and observer reports; review of spot check data and logbooks   |
| <b>Responsibility for Data Collection</b> | PMU M&E Function   |
| <b>Indicator Name</b>                     | Key fisheries management data on Bangladesh marine and coastal fisheries publicly accessible   |
| <b>Definition/Description</b>             | <p>The indicator relates to PDO indicators 1 and 2. Key (minimum) data to be made publicly available on a regular basis:</p> <ul style="list-style-type: none"> <li>– List of valid fishing licenses from all segments (monthly)</li> <li>– Fees from licenses (every trimester)</li> <li>– List of infractions in artisanal and coastal segments (annually)</li> <li>– List of infractions in industrial segment (monthly)</li> <li>– Proceeds from fines from infractions in industrial segment (biannually)</li> <li>– Catch by industrial fleet (monthly)</li> <li>– Landing in Bangladesh by industrial vessels (monthly)</li> <li>– Landing by artisanal vessels (three-monthly)</li> <li>– List of grievances received by the DOF (three-monthly) and related DOF's response</li> </ul> |
| <b>Frequency</b>                          | Annual   |
| <b>Data Source</b>                        | DOF website(s), fishing licenses, documentation on the process of allocation of fishing licenses   |
| <b>Methodology for Data Collection</b>    | Direct observations, review of the DOF website(s), review of licensing documentation   |
| <b>Responsibility for Data Collection</b> | PMU M&E function   |



|   |  |
|---|--|
| <b>Indicator Name</b>                     | Fisheries management plans implemented   |
| <b>Definition/Description</b>             | This indicator relates to PDO indicator 1 and IR indicator 1.1. Once a precautionary FMP becomes available (IR indicator 1.1), its implementation is defined as follows: the sum of fishing capacity of all the licensed industrial fleet (excluding the tuna fisheries) should follow recommendations from the FMP.   |
| <b>Frequency</b>                          | Annual   |
| <b>Data Source</b>                        | FMP recommendations, list of licensed industrial fishing vessels and related capacity calculated in gross registered tonnage, the DOF website  |
| <b>Methodology for Data Collection</b>    | Vessel registration data review and analysis   |
| <b>Responsibility for Data Collection</b> | PMU M&E function   |
| <b>Indicator Name</b>                     | Aquaculture farmers with access to productivity boosting packages  |
| <b>Definition/Description</b>             | The indicator counts the proportion of targeted aquaculture farmers that receive productivity boosting packages. Productivity boosting packages are identified to include SPF seeds, SPF-compatible feed, three-phase electricity, and/or improved pond water supply.  |
| <b>Frequency</b>                          | Annual   |
| <b>Data Source</b>                        | Project and activity records, aquaculture statistics, estimate of production of targeted farms with disease control  |
| <b>Methodology for Data Collection</b>    | Documentation review and analysis  |
| <b>Responsibility for Data Collection</b> | PMU M&E function   |
| <b>Indicator Name</b>                     | Landing sites with basic services supported under the project  |
| <b>Definition/Description</b>             | <p>The indicator relates to PDO indicator 3. The project will rehabilitate and build landing facilities to reduce postharvest loss and improve quality assurance.</p> <p>Basic services include</p> <ul style="list-style-type: none"> <li>– Availability of ice and chilling,</li> <li>– Well drainage facilities,</li> <li>– Fish landing sites focusing landing for small-scale fisheries, and</li> </ul> |



|   |   |
|---|---|
|   | – Traders own motorized fish transportation boats wherein they carry ice and collect catches from the fishermen operating in rivers and estuaries.  |
| <b>Frequency</b>                          | Annual  |
| <b>Data Source</b>                        | Technical inspection reports upon completion of works   |
| <b>Methodology for Data Collection</b>    | Field visits and documentation review and analysis  |
| <b>Responsibility for Data Collection</b> | PMU M&E function  |
| <b>Indicator Name</b>                     | Awareness campaigns on sanitary conditions and quality of seafood products conducted  |
| <b>Definition/Description</b>             | The indicator relates to PDO indicator 3. The indicator measures number of project-supported awareness campaigns about the sanitary conditions of seafood harvesting and processing in Bangladesh and quality of seafood products in the domestic market that target seafood harvesters, processors, and/or consumers.                      |
| <b>Frequency</b>                          | Annual  |
| <b>Data Source</b>                        | Documentation on awareness campaign design and execution  |
| <b>Methodology for Data Collection</b>    | Document review, random interview sample of campaign recipients   |
| <b>Responsibility for Data Collection</b> | PMU M&E function  |
| <b>Indicator Name</b>                     | Share of annual aquaculture seeds production that is disease resistant  |
| <b>Definition/Description</b>             | This indicator relates to PDO indicator 3 specifically for aquaculture development. The indicator focuses on a key determinant for shrimp aquaculture productivity and loss reduction. In the Bangladesh context, it also offers a proxy measure for reducing destructive pressures on juvenile fish from the harvest of wild shrimp seeds. |
| <b>Frequency</b>                          | Annual  |
| <b>Data Source</b>                        | Project and activity records; sample-based field survey   |
| <b>Methodology for Data Collection</b>    | Document review and random field sampling   |
| <b>Responsibility for Data Collection</b> | PMU M&E function  |



|   |  |
|---|--|
| <b>Indicator Name</b>                     | Share of villages with a functioning fisheries co-management committee   |
| <b>Definition/Description</b>             | This indicator relates to PDO indicator 4. A fisheries co-management committee is a committee with members engaged in the fisheries sector in the targeted village committed to manage fisheries in a sustainable manner. A functioning committee is a committee that meets as planned with at least 50% of the members.   |
| <b>Frequency</b>                          | Annual   |
| <b>Data Source</b>                        | SDF semiannual implementation reports, and institutional assessment (functional and process review)  |
| <b>Methodology for Data Collection</b>    | Document review, field observations, structure beneficiary survey and institutional assessment   |
| <b>Responsibility for Data Collection</b> | PMU M&E function   |
| <b>Indicator Name</b>                     | Targeted fisher households benefiting from improved community basic infrastructure   |
| <b>Definition/Description</b>             | This indicator relates to PDO indicator 4. Basic infrastructure is defined as, including access roads and/or electricity and/or tube wells and/or culverts.  |
| <b>Frequency</b>                          | Annual   |
| <b>Data Source</b>                        | SDF semiannual implementation reports, community- and household-level monitoring   |
| <b>Methodology for Data Collection</b>    | Document review, community- and household-level field monitoring   |
| <b>Responsibility for Data Collection</b> | SDF PMU M&E function   |
| <b>Indicator Name</b>                     | Participants who complete vocational/skills development training in employment   |
| <b>Definition/Description</b>             | <p>This indicator relates to PDO indicator 4. The indicator is disaggregated by sex and serves to provide a proxy for the number of jobs that the project facilitates through vocational training and partnerships. Employment is defined as informal or formal paid work for at least 2 months per period of 12 months.</p> <p>Age group definition for monitoring purposes:</p> <p>Youth: From 16 to 29 years</p> <p>Adult: Above 30 years</p> |
| <b>Frequency</b>                          | Annual   |



|   |   |
|---|---|
| <b>Data Source</b>                        | MIS and SDF semiannual progress report, beneficiary surveys   |
| <b>Methodology for Data Collection</b>    | Document review, periodic random sample surveys of Component 3 beneficiaries  |
| <b>Responsibility for Data Collection</b> | SDF PMU M&E function  |
| <b>Indicator Name</b>                     | Women's savings and loans groups (SLGs) created   |
| <b>Definition/Description</b>             | <p>The indicator relates to PDO indicator 4. It intends to capture enabling conditions generated with project support for narrowing gender gaps at the community level.</p> <p>Its sub-indicator measures the number of female beneficiaries receiving financial and technical support to establish microenterprises. This sub-indicator counts the total number of female beneficiaries who receive grants or loans, training, and other technical support by the project for income-generating activities, including self-employment, home-based businesses, and microenterprises.</p>  |
| <b>Frequency</b>                          | Annual  |
| <b>Data Source</b>                        | SDF progress reports  |
| <b>Methodology for Data Collection</b>    | Review and calculation  |
| <b>Responsibility for Data Collection</b> | SDF PMU M&E function  |
| <b>Indicator Name</b>                     | Share of targeted beneficiaries that express satisfaction with project interventions  |
| <b>Definition/Description</b>             | <p>This indicator relates to PDO indicator 4. The indicator is disaggregated by sex and measures the satisfaction with the totality of project interventions captures demand-side social accountability and serves as citizen engagement (corporate requirement). Focus in the perception survey will be on governance, co-management, and livelihoods aspects. The indicator is linked to a feedback loop (see also the project's social safeguards section). Rating will be at a scale from 1 to 6 as follows: 1. Highly Satisfied; 2. Satisfied; 3. Moderately Satisfied; 4. Moderately Unsatisfied; 5. Unsatisfied; 6. Highly Unsatisfied; Ratings of 1, 2, and 3. will be considered to indicate 'Satisfaction' for the purposes of monitoring this indicator.</p> |
| <b>Frequency</b>                          | Annually  |
| <b>Data Source</b>                        | Random project beneficiary perception survey  |
| <b>Methodology for Data Collection</b>    | Random project beneficiary perception survey  |
| <b>Responsibility for Data Collection</b> | DOF/PMU and SDF M&E function  |



## **ANNEX 1: Implementation Arrangements and Support Plan**

### **COUNTRY: Bangladesh** **Bangladesh Sustainable Coastal and Marine Fisheries**

#### **Strategy and Approach**

1. The World Bank's Implementation Support Plan (ISP) for BSCMFP Phase I lays out the approach to be followed to help the project implementation agencies achieve the expected project results, based on the project's nature and risk profile. The ISP identifies specific actions to (a) better manage key risks identified in the Systematic Operations Risk-Rating Tool, (b) support DOF institutional development, and (c) ensure compliance with the IDA Financing and Project Agreements signed between the GOB and the World Bank.
2. Key ISP elements include (a) establishing a task team with appropriate skill mix required to carry out the project due diligence and provide technical advice to the client; (b) ensuring availability and timely inputs of qualified staff within the World Bank (including consultants as needed), by managing work load of each TT member; (c) ensuring quality and on-time technical and fiduciary reviews, including through field visits and assessments of physical progress, to enable scheduled payments to contractors/consultants, and disbursement schedules; (d) undertaking actions needed to monitor the implementation of mitigation measures identified through the risk assessment process; (e) providing inputs needed for regular monitoring and assessment of project performance and results; and (f) organizing communication with project stakeholders and providing inputs for effective interaction with project beneficiaries.
3. Implementation support will combine periodic supervision with timely technical assistance and policy advice as necessary. The ISP provides for (a) joint DOF-World Bank reviews, including field visits every six months; (b) regular communication and interim technical discussions including spot visits by World Bank and DOF staff; (c) a third-party technical and project management support to the DOF/PMU; (d) monitoring and reporting on BSCMFP implementation progress and achievement of results; (e) a third-party impact evaluation; (f) annual internal and external financial audits and FM reporting; (g) periodic procurement post-reviews, and (h) written communication with the DOF and other institutional stakeholders on implementation assessment and performance results, including on the necessary actions to ensure timely resolution of bottlenecks.
4. **World Bank team skill mix.** The World Bank will put in place a TT comprising a diverse skill mix from various Global Practices, including consultants. Skill sets required for effective implementation support include, among others, project management, natural resources management, marine fisheries and mariculture, aquaculture, community development, private sector finance, M&E, structural port engineer, procurement, FM, IT system specialist, big data/open contracting, communications, citizen engagement, environment, legal, and social. The World Bank team will monitor and advise the DOF on the skills sets and qualification necessary for effective project implementation.
5. **Project management consultant.** Recognizing the DOF's lack of recent experience managing major development assistance programs, a dedicated project management consulting firm will be





retained for the first three years of the project duration. Augmenting the World Bank's implementation support, this general consultant will provide overall project management and technical assistance to the DOF, with a focus on timely execution of the agreed project Procurement Plan. In parallel, the consultant will be responsible for building the DOF project management and fiduciary capacity to effectively carry out the implementation functions for the full BSCMFP duration.

6. **Support to critical implementation support milestones.** The World Bank task team will support the DOF and provide inputs for the project launch during the first three months after project effectiveness. Project launch is a major forum where project agencies and stakeholders will discuss Project Implementation Plans (PIPs) scheduled, roles and responsibilities of agencies, and other important details that will shape the first 18 months of project implementation. The midterm review will be carried out jointly during year 3 of the project with inputs from the DOF, the SDF, and the World Bank. It will be a stocktaking exercise for which the DOF will lead the preparation of a comprehensive report on the project-wide progress, technical issues, and assessment of capacity of implementing agencies, determine needs for training, evaluate interim results, and propose actions to address bottlenecks. At this time the World Bank task team will assess the project progress and agreed actions to determine the timing for launching the BSCMFP Phase II. The World Bank task team will support the DOF and SDF in organizing a project completion workshop three month before project closure to present the project results. It is expected that the DOF will present the analysis and results of the project beneficiaries survey conducted during the last implementation year.

7. **Six-monthly joint review missions.** The DOF, the SDF, and the World Bank task team will jointly conduct BSCMFP implementation reviews every six months following project effectiveness. These reviews would initially focus on key start-up and capacity-building activities to facilitate and accelerate early stages of BSCMFP implementation. The DOF/PMU would prepare and submit to the World Bank an Implementation Progress Report in an agreed format at least 15 days before the start of each joint review. During the joint review, the DOF and the World Bank TT would (a) review BSCMFP progress in the context of the PIP and associated Procurement Plan; (b) identify key issues affecting project performance (both positive and negative); and (c) agree on any actions as needed to sustain and/or accelerate project implementation. Documentation of the joint review consists of an Aide Memoire—which summarizes items (a) to(c)—and a Management Letter from the World Bank to the DOF.

8. In addition to the joint review missions, to ensure smooth implementation, the World Bank task team would follow a problem-solving approach and meet periodically (monthly) with the DOF/PMU and SDF to monitor and assess the implementation progress, identify issues and measures to address them, and set up an action plan. The World Bank TT would include the World Bank Task Team Leaders (TTLs) and varies specialists, including FM, procurement, M&E, environmental and Social Safeguards, and core technical experts (both World Bank staff and consultants), as identified over the course of BSCMFP implementation. World Bank task team composition would vary based on the requirements of each joint review.

### **Implementation Support Plan**

9. The World Bank task team is based in Washington, DC, the United States, and Dhaka, Bangladesh. During the joint reviews and any interim reviews, detailed inputs from the task team would consist of the following:



- (a) **Technical inputs.** These would be provided to the DOF/PMU, SDF, and those divisions/field-based DOF/PMU offices visited during the reviews to facilitate BSCMFP implementation. The World Bank TT would maintain regular phone and e-mail contact with the DOF to facilitate ongoing workflow, such as (i) review of TOR, (ii) prior review of procurement, (iii) identification and deployment of international expertise under the BSCMFP, and (iv) other review and advice as may be required. The DOF would review and update the Project Implementation Manual as needed during project implementation and submit these updates to the World Bank TT for review and agreement.
- (b) **Fiduciary inputs.** The task team would support the DOF/PMU through training and other capacity-building needs with respect to FM and procurement. Procurement and FM compliance would be part of the joint reviews described earlier. The World Bank TT would also ensure any timely support required by the DOF to meet the agreed fiduciary requirements, as given in the Financing Agreement.
- (c) **Procurement.** The Procurement Plan will be updated as required and will be the basis of the World Bank's procurement supervision plan. The World Bank's electronic procurement planning and monitoring system (STEP) will be used to prepare and regular update and get 'no objection' of the Procurement Plans of this project. Respective PMU staff will receive training on STEP organized by the World Bank, during its use in the project.
- (d) **Safeguards.** The task team would monitor environmental and social safeguards compliance during the joint reviews and provide technical assistance to DOF specialists as needed.

10. A summary of the identified implementation support needs is provided in Table 1. A detailed matrix with time-bound actions for effectiveness and start-up is included in the draft POM.

**Table 1. World Bank TT's Estimated Implementation Support Budget/Staff Effort Requirements**

| Time            | Focus of Borrower's Actions  | Skills Needed  | Resource Estimate  | Source  |
|-----------------|--|--|--|---|
| First 12 months | <ul style="list-style-type: none"> <li>• Technical and operational support</li> <li>• Project effectiveness</li> <li>• Project launch and mobilization of implementing arrangements</li> <li>• Operationalizing PMU systems;</li> <li>• Staffing; hiring PM consultant</li> <li>• Identifying technical and capacity issues</li> <li>• Technical support</li> <li>• Developing TORs</li> <li>• Opening accounts</li> <li>• developing technical</li> </ul> | <ul style="list-style-type: none"> <li>• TTL and co-TTL</li> <li>• M&amp;E specialist</li> <li>• Coastal aquaculture specialist</li> <li>• Value chain specialist</li> <li>• Marine fisheries management expert</li> <li>• Fisheries co-management expert</li> <li>• Institutional development and change management specialist</li> <li>• Port engineer</li> <li>• Fisheries finance specialist</li> <li>• Capacity development and education specialist</li> </ul> | <ul style="list-style-type: none"> <li>• US\$290,000</li> <li>• 16 SWs (TCIB)</li> </ul> | <ul style="list-style-type: none"> <li>• BB</li> <li>• FAO</li> <li>• TCIB</li> </ul> |



| Time                                   | Focus of Borrower's Actions   | Skills Needed  | Resource Estimate  | Source   |
|--|---|--|--|--|
|  | <ul style="list-style-type: none"> <li>packages</li> <li>Initial payments for consulting services</li> <li>Launching capacity and training activities</li> </ul>  | <ul style="list-style-type: none"> <li>Food safety specialist</li> <li>Grant management specialist</li> <li>Legal specialist</li> <li>Communications specialist</li> <li>Administrative support</li> </ul>   |  |  |
|  | <ul style="list-style-type: none"> <li>Fiduciary training and supervision</li> <li>Launching procurement</li> <li>Carrying out procurement evaluations</li> <li>Signing contracts for services and construction</li> </ul>  | <ul style="list-style-type: none"> <li>FM specialist</li> <li>Procurement specialist</li> </ul>  | <ul style="list-style-type: none"> <li>6 SWs</li> <li>10 SWs</li> </ul>                                |  |
|  | <ul style="list-style-type: none"> <li>Implementing and monitoring safeguards activities</li> </ul>   | <ul style="list-style-type: none"> <li>Social development specialist</li> <li>Environmental specialist</li> </ul>  | <ul style="list-style-type: none"> <li>6 SWs</li> <li>4 SWs</li> </ul>                                 |  |
| Annually, thereafter, for 12–60 months | <ul style="list-style-type: none"> <li>Technical and operational support</li> <li>Developing technical packages;</li> <li>Capacity building and M&amp;E launched</li> <li>Midterm review</li> <li>Execute technical packages and contracts;</li> <li>Technical supervision of construction/small works</li> <li>Completing capacity-building activities (year 4);</li> <li>Implementing and monitoring safeguards activities</li> <li>Payments execution</li> <li>Carrying out annual audits; M&amp;E and reports</li> <li>Beneficiary survey (year 5) project completion workshop (year 5)</li> <li>Implementing citizen engagement and communication plans</li> </ul> | <ul style="list-style-type: none"> <li>TTL and co-TTL</li> <li>M&amp;E specialist</li> <li>Costal aquaculture specialist</li> <li>Value chain specialist</li> <li>Marine fisheries management expert</li> <li>Institutional development and change management specialist</li> <li>Port engineer</li> <li>Fisheries finance specialist</li> <li>Capacity development and education specialist</li> <li>Food safety specialist</li> <li>Grant window management specialist</li> <li>Legal specialist</li> <li>Communications specialist</li> <li>Administrative support</li> </ul> | <ul style="list-style-type: none"> <li>US\$230,000 per year</li> <li>12 SWs per year (TCIB)</li> </ul> | <ul style="list-style-type: none"> <li>BB</li> <li>FAO TCIB</li> </ul> |
|  | <ul style="list-style-type: none"> <li>Fiduciary monitoring and reporting</li> <li>Carrying out procurement evaluations</li> </ul>  | <ul style="list-style-type: none"> <li>FM specialist</li> <li>Procurement specialist</li> </ul>  | <ul style="list-style-type: none"> <li>4 SWs per year</li> <li>10 SWs per year</li> </ul>              |  |



| Time | Focus of Borrower's Actions   | Skills Needed   | Resource Estimate  | Source |
|------|---|---|--|--------|
|      | <ul style="list-style-type: none"> <li>• Signing contracts for services and construction (completed in Year 4)</li> <li>• Executing payments</li> </ul> |   |  |        |
|      | <ul style="list-style-type: none"> <li>• Implementing and monitoring safeguards activities</li> </ul>   | <ul style="list-style-type: none"> <li>• Social development specialist</li> <li>• Environmental specialist</li> </ul> | <ul style="list-style-type: none"> <li>• 5 SWs per year</li> <li>• 6 SWs per year</li> </ul> |        |

Note: SW = Staff week; BB = Bank Budget;

**Table 1.1. Partner Contribution**

| Name             | Role  |
|------------------|---|
| EC               | Consultations   |
| FAO              | Consultations and technical input; PIS through TCIB service |
| UNIDO            | Consultations and technical input                           |
| USAID            | Consultations and technical input                           |
| USDA             | Consultations and technical input                           |
| BOBP-IGO         | Consultations   |
| IOTC Secretariat | Consultations   |