



Project Information Document (PID)

Concept Stage | Date Prepared/Updated: 14-Mar-2020 | Report No: PIDC28528

**BASIC INFORMATION****A. Basic Project Data**

Country Bangladesh	Project ID P172817	Parent Project ID (if any)	Project Name Bangladesh Environmental Sustainability and Transformation Project (P172817)
Region SOUTH ASIA	Estimated Appraisal Date May 28, 2021	Estimated Board Date Sep 28, 2021	Practice Area (Lead) Environment, Natural Resources & the Blue Economy
Financing Instrument Investment Project Financing	Borrower(s) People's Republic of Bangladesh	Implementing Agency Ministry of Environment, Forest and Climate Change	

Proposed Development Objective(s)

To strengthen environmental governance and to reduce pollution discharges from key sources at selected areas of Bangladesh.

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

Total Project Cost	250.00
Total Financing	250.00
of which IBRD/IDA	250.00
Financing Gap	0.00

DETAILS**World Bank Group Financing**

International Development Association (IDA)	250.00
IDA Credit	250.00



Environmental and Social Risk Classification

High

Concept Review Decision

Track II-The review did authorize the preparation to continue

B. Introduction and Context

Country Context

1. Bangladesh is one of the world’s most densely populated countries with an estimated 165 million people residing in a geographical area of approximately 144,415 km². Bangladesh has enjoyed relatively high and stable growth over the last two decades, accompanied by rapid poverty reduction. Gross domestic product (GDP) grew well above the average for developing countries at around 6 percent per year since 2000. The poverty rate dropped by half from 48.9 percent in 2000 to 24.5 percent in 2016. With per capita gross national income (Atlas method) at US\$1,944 in 2019, Bangladesh has moved into the lower middle-income country status since 2015. Manufacturing—particularly ready-made garment (RMG) exports—and construction have been major drivers of the recent economic growth. The country has experienced a profound social transformation with the influx of girls into the education system and women into the labor force. In the World Bank’s Human Capital Index 2018, Bangladesh has performed better than the South Asian and lower middle-income average in the education and health indicators, with the exception of stunting.

2. Despite robust growth, the pace of poverty reduction has slowed down, especially in urban areas. With rapid urbanization, the absolute number of urban poor was higher in 2016 than in 2010. The welfare gap between eastern and western Bangladesh has also reemerged, correlated with different rates of progress in demographic change and educational attainment, as well as slower agricultural growth. The pace of job creation in the formal sector also slowed down. Increases in labor incomes have been a main driver of poverty reduction in the past with the structural shift from agriculture to industry and services, which created new and better paid jobs. However, the pace of job creation in the formal sector has slowed down. Total employment grew only by 1.8 percent between 2011 and 2016, compared with 3.1 percent per year between 2003 and 2010. With the majority of workers engaged in the informal sector and working under hazardous conditions, the stagnant quality of jobs and the associated vulnerability is a persistent challenge. Gender disparities in the quality of jobs remain acute, with one in three working women engaged in unpaid work versus just 5 percent of working men. Key structural reforms are needed to sustain the growth momentum and improve inclusiveness of growth. With RMG constituting 84 percent of total exports, it will be critical for Bangladesh to diversify its export base. Additionally, reforms are needed to improve infrastructure and connectivity, enhance access to credit, improve human capital, boost agricultural productivity and simplify business regulations.

Sectoral and Institutional Context

3. Sustained growth of Bangladesh’s economy and urban population has seriously polluted the environment of Bangladesh and made it a country with the poorest environmental performance. In 2018, Bangladesh was ranked 179th among all 180 countries analyzed by the Environmental Performance Indicator Report. Among all indicators, air quality and heavy metals were the two worst indicators, ranked at 179th and 177th respectively. In addition, Bangladesh’s performance in water and sanitation was ranked 128th. These rankings reflect serious pollution challenges faced by the country.

4. Environmental pollution has posed high economic costs to Bangladesh and threatened its economic



competitiveness. Poor environmental performance of the country's development, coupled with increasing climate risks (floods, cyclones, and so on), reduces livability of its cities, affects negatively vocational health of its growing work force and more generally public health, and thus poses a serious threat to the country's development achievements. The 2019 Sustainable Development Goals (SDGs): Bangladesh Progress Report estimates that household and ambient air pollution, unsafe water and sanitation and lack of hygiene, and unintentional poisoning (due to lack of proper management of hazardous chemicals and pollution) have caused mortality rates of 68.6, 5.96 and 0.3 per 100,000 population, respectively. Similarly, the World Bank's 2018 Country Environmental Analysis (CEA) estimates that in 2015 air and water pollution has caused nearly 28 per cent of deaths in Bangladesh. Such pollution impacts are estimated to have economic costs of US\$6.52 billion in urban Bangladesh and US\$1.44 billion in Dhaka alone, which are equivalent to 3.4 percent and 0.7 percent of the 2015 national GDP, respectively. It is noteworthy that the Dhaka Division hosts 45 percent of all industry jobs and 37 percent of all service jobs while it is home to around 30 percent of Bangladesh's population.

5. Dirty industries and industrial jobs have affected workers' health and limited the competitiveness of key Bangladesh industries in the global market. At the firm level, hazardous industrial working conditions, associated with lax enforcement of environment, health and safety (EHS) regulations and standards, and "dirty jobs" associated with outdated and polluting production technologies and practices, have negatively affected workers' productivity and health conditions. Despite national policies and legislation to improve the environmental and occupational health and safety standards, bad physical environment (noise), inadequate lighting, unsafe drinking water, overcrowding, inadequate ventilation, dusty raw materials, etc. are among contributing factors to negative health outcomes reported by industrial workers. At the industrial level, the lack of 'decent' green jobs, qualified environmental service providers and equipment manufacturers has inhibited the development of green businesses and the promotion of pollution prevention and management technologies and equipment. Though green jobs exist in Bangladesh, most of them are informal, in underdeveloped industries. Few of these jobs could be shown to meet 'decent' working standards according to the ILO definition. For example, composting of municipal waste and recycling of plastic waste as green jobs are operating inefficiently under hazardous occupational health and safety conditions, causing secondary pollution at the work site and its surrounding environment.

6. Frequently reported on domestic and international media outlets, most visible pollution issues in Bangladesh are ambient air and river pollution of the greater Dhaka area and waste issues in major cities and industrial centers. Available data show that mainly brick kilns, transport (congestion and old and poorly maintained vehicles) and dusts (due to construction and soil erosion) are key sources of fine particulate matters (PM) with diameters that are generally 2.5 micrometers and smaller (PM2.5), which poses the greatest risk to health and is the main cause of reduced visibility. In addition, untreated and insufficiently treated municipal sewage and industrial effluents (mainly from textile/RMG, leather, chemical and pharmaceutical industries), and improper disposal of all types of wastes are identified as key sources of river water pollution. With a municipal waste collection rate of about 35 percent at the national level, large amounts of wastes are dumped into the environment directly, ending up clogging urban drains, shrinking wetland areas, and in turn increasing significantly flood and health risks. With no formal hazardous waste management (HWM) facilities, hazardous wastes, including industrial, medical, electronic, ship breaking, are disposed in municipal dump sites or dumped into the environment. In addition, increasingly large amounts of plastic waste are released into the environment. This situation is expected to be further exacerbated with the country's ambitious plan to build 100 special economic zones between 2015 and 2030.

7. Over the past three decades, Bangladesh has gradually developed its regulatory framework and institutional setups to control pollution and protect its environment. The Ministry of Environment, Forest and Climate Change (MOEFCC), first created in 1989 as the Ministry of Environment and Forest, is the coordinating agency at the national level on all matters related to the environment and sets the climate change strategy for the country. Under the ministry, the



Department of Environment (DOE) is responsible for environmental monitoring and enforcement. The DOE is also active in promoting environmental awareness and mobilizing public support to identify practical solutions to critical environmental problems. Through MOEFCC and DOE, Bangladesh has made tangible progress in further developing environmental policies, standards, guidelines, and legislations, including the 1995 Environment Conservation Act (ECA) (amended in 2010) that has introduced the requirement of environmental clearance certificates for industrial projects and authorized DOE to make rules and take monitoring and enforcement actions to protect the environment.

8. Bangladesh has also made good progress toward mainstreaming the environmental agenda. Among others, the country's 2010–2021 National Sustainable Development Strategy, Seventh Five Year Plan (FYP, 2016-2020) and Country Investment Plan (CIP) for Environment, Forestry and Climate have listed green growth and climate resilience as national priorities. The Seventh FYP specifically calls for air quality improvement in Dhaka and other large cities and the enactment of the Clean Air Act. In addition, the government's Bangladesh Delta Plan (BDP) 2100 has included project ideas to control the discharge of industrial and municipal wastes and wastewaters. To support the BDP implementation, the Bangladesh Water Multi-stakeholder Partnership (WMSP) has developed a Dhaka River Restoration Master Plan and organized specific workstreams to develop technical assistance and investments actions to address urban water pollution issues of the greater Dhaka and to support replicable public-private partnership (PPP) models to manage industrial wastewater in a sustainable manner.

9. Development partners (DPs) have supported Bangladesh to address its pollution challenges. Within the World Bank Group (WBG), IDA has supported a number of investment and analytical activities. For example, the Clean Air and Sustainable Environment (CASE) project (P098151) supported DOE to improve its capacity in air quality management (AQM) (including drafting a Clean Air Act) and the Dhaka City Corporations to better manage traffic flow through physical investments and technical assistance. Approved in 2018, the Sustainable Enterprise Project (P163250) then provides targeted technical and financial assistance to support micro-enterprises to improve their environmental performance and climate resilience. Along with this project, four new IDA projects will help Bangladesh address different aspects of its pollution challenges: (a) the Dhaka Sanitation Improvement Project (P161432) will support proper management of municipal wastewater; (b) the Bangladesh Private Investment and Digital Entrepreneurship Project (P170688) will promote environmental sustainability in participating economic zones and software technology parks; (c) the proposed health project will support medical waste management; and (d) proposed by the WMSP, the Dhaka River Restoration project will support river dredging, municipal wastewater treatment and onsite sewerage management.

10. In terms of technical assistance, as early as 2010, the World Bank studied the ship breaking and recycling industry (P111045) and proposed policy and investments needs to improve the EHS performance of the industry and manage its hazardous wastes properly. The 2018 CEA focused on urban pollution issues and recommended a list of institutional and policy reforms and investment actions. In 2019, a study on resource efficient and cleaner production (RECP) examined technical and financing options to support key polluting industries to improve their environmental performance and financial competitiveness. Currently, technical assistance on the circular economy (P168024) is expected to develop an action plan to reduce industrial and marine pollution with a specific focus on plastics wastes. The Bangladesh Water Platform 2.0 (P171452) supports a water quality diagnostic to summarize challenges and explore policy interventions and technical innovations to improve water quality.

11. In addition to IDA, in 2013 the International Finance Corporation (IFC) launched the Partnership for Cleaner Textile (PaCT) Program with DPs and international brands and has successfully supported the textile sector to adopt RECP technologies and practices and reduce wastewater pollution. IFC is also supporting PPP pilots for effluent treatment plants (ETPs), for example, with RAJUK under design-finance-build-operate-maintain-and-transfer arrangements for the Purbachal New Town Project, the largest greenfield development project in the country. In addition, IFC has been



appointed by the Ministry of Local Government, Rural Development and Cooperatives as the transaction advisor for the development of integrated wastewater management systems in Gazipur City. In close collaboration with the PPP Authority and with technical assistance from the 2030 Water Resource Group, IFC is developing a design-build-operate-transfer model with viability gap financing (including financing from the private sector for the Gazipur City Corporation).

12. Other DPs have also supported the pollution management efforts of Bangladesh. Along with the CASE project, the Financing Brick Kiln Efficiency Improvement Project (45273-001) of the Asian Development Bank (ADB) has supported the DOE and the Bangladesh Bank to finance through PFIs technology upgrade of existing clay-fired kilns and pilots of more advanced clay-fired brick production technologies. On waste management, the ADB has implemented projects to address municipal solid waste management in secondary cities. The ADB also financed the installation of vehicle emission inspection stations under the Bangladesh Road Transport Authority (BRTA). Currently the Europe Union is supporting an air quality source appointment study and a market study on alternative non-fired brick production technologies.

13. Bilaterally, Japan International Cooperation Agency (JICA), French Development Agency (AFD), Germany have been promoting renewable energy and the adoption of energy efficient industrial equipment. In addition, the AFD and the Netherlands are working closely with the government on the preparation and implementation of the Delta Plan. JICA has also actively involved in waste management issues in Dhaka.

14. Along with DPs' support, Bangladesh has promoted green financing to support sustainable industrial development. Specifically, the Bangladesh Bank has promoted green financing through its Green Banking Policy Guidelines for Banks (2011) and for Non-Bank Financial Institutions (NBFIs) and new Banks (2013). Along with these guidelines, the Bangladesh Bank has established a minimum target of direct green finance at 5 percent of the total loan disbursement/investment from January 2016 onwards for all banks and NBFIs, and instructed Banks and NBFIs to allocate 10 percent of their corporate social responsibility budget to address climate risks through grants or concessional financing. It has also supported four green refinancing schemes that provide concessional loans to eligible green investments: a general scheme of Tk 2 billion and a scheme for Islamic Banks and FIs for investments in 51 green products/initiatives in eight categories, a Green Transformation Fund (GTF) of US\$200 million to support export-oriented industries to access finance in foreign exchange for importing capital machinery and accessories for environment-friendly investments, and the US\$50 million ADB brick kiln financing project. As of September 2019, the Bangladesh Bank disbursed about Tk 4.1 billion from the general scheme, US\$33.6 million from the ADB project, and US\$26.1 million from the GTF.

15. Despite these efforts, Bangladesh still faces serious challenges to control environmental pollution. At the institutional level, the DOE has limited human resources (HR), technical capacity and monitoring, analytical and information technology (IT) infrastructure to properly monitor environmental quality and pollution discharges from industrial and municipal sources and disseminate such information to its population. On the HR front, DOE requested in 2016 a hiring of additional 1,222 staff to staff its district and divisional offices but received only an approval of 172 new posts. With limited budget allocation, in 2017 DOE had a staff of 431 against an approved 735 posts. As a result, its divisional and district offices are seriously understaffed and could only process environmental clearance with delays and perform minimal monitoring and enforcement actions. The fact that DOE staff at divisional and district offices have to work on both environmental clearance and environmental monitoring and enforcement at the same time undermines the accountability of the DOE. In addition to staffing issues, the lack of directorates on water quality and HWM has limited the DOE's capacity to properly manage such issues. Systematically, technical capacity of DOE staff needs to be strengthened to perform their tasks properly.

16. In terms of the monitoring and analytical infrastructure, the DOE has developed a continuous air quality monitoring (CAQM) under the CASE project and discloses air quality information on a daily basis but this network of 16



CAQM stations needs to be expanded to improve its spatial coverage. It does not have an automatic water quality monitoring network and performs water quality monitoring manually on a monthly basis and discloses such information annually. Its analytical capacity is also limited with only one central laboratory supported by the CASE project and two divisional laboratories at Dhaka and Chittagong. Finally, the DOE has yet to deploy an environmental information system that can help the department systematically collect, store and analyze environmental monitoring and clearance information.

17. The lack of human resources and insufficient environmental monitoring information have prevented the DOE from timely granting and renewing of environmental clearance certificates to factories and development projects. In this regard, the 2018 CEA has recommended that DOE be reformed with adequate budget allocations to “modernize its information management, monitoring, and enforcement systems, build up and organize its staff to more effectively respond to pressing environmental challenges; and effectively decentralize to district and divisional levels, with priority given to areas/cities with the highest levels of pollution.”

18. At the regulatory level, the 2018 CEA recommends that the current policy framework and enforcement regimes be reformed to (a) improve the transparency of the environmental clearance process through stronger requirements for public consultation and environmental information disclosure; (b) strengthen environmental quality standards and complementary limits for pollutant discharges; (c) develop a legal framework for HWM, which is up to now under-regulated; (d) set high enough environmental penalties to discourage environmental noncompliance; (e) amend the Environment Court Act (2000, amended in 2010) to establish environmental courts in all districts, allow the public to file lawsuits directly, and provide institutional assistance to environmental victims; and (f) promote the effective use of market-based instruments. These reforms are expected to improve the stringency of Bangladesh’s environmental regulations and enforcement, which is currently ranked 97th for stringency and 98th for enforcement among 148 countries evaluated by the World Economic Forum.

19. At the technical level, pollution control efforts are so far focusing largely at the firm level but yet to plan and implement at the airshed or watershed levels. As such, end-of-pipe treatment dominates pollution control efforts and RECP investments are being promoted in selected sectors (mainly brick making and textiles). While the 2018 CEA has called for the scaling up RECP investments under the national 3R policy and the 2016 Industrial Policy, new programs under development may help Bangladesh refocus its efforts on environmental quality improvements at the airshed and watershed levels for the first time. Specifically, developed under the CASE project, the draft Clean Air Act will require the preparation and implementation of air quality management action plans at the city level. The Dhaka River Restoration Master Plan will provide a road map on water quality improvements through coordinated interventions at different sources.

20. At specific sources, Bangladesh may consider alternative and innovative technical interventions. For example, the current measures to control air pollution from brick making are on alternative clay-fired technology, which still consume precious clay resources and release significant amount of air pollutants, including GHGs. There is a potential of transforming the sector from clay-fired bricks to non-fired blocks. According to the Bangladesh Brick Manufacturing Owners Association and the Bangladesh Housing and Building Research Institute, this transformation will have significant environmental and economic benefits. Another example is waste management. In addition to waste recycling efforts, Bangladesh may consider sustainable waste management approaches such as the life-cycle analysis, circular economy and the extended producer responsibility mechanism to minimize waste generation and disposal.

21. For hazardous wastes, including electronic waste (e-waste), Bangladesh needs to develop necessary facilities to properly collect, store, treat and disposal of such wastes. The management of medical wastes may also need to be



reviewed to minimize health and environmental risks associated with such wastes and disposal processes of such wastes.

22. At the financing level, the existing green financing schemes are very limited in terms of financing volumes and the participation level of FIs. In September 2016, it was estimated that direct green finance accounted to 0.44% of total loan disbursements of all banks and FIs. Among others, private and foreign commercial banks contributed 80.4% and 15.6% of green finance, respectively. It is also reported that a limited number of banks and FIs are proactive in promoting green finance. Key challenges caused low disbursement of existing green financing schemes include (a) lack of technical capacity at FIs and (b) limited capacity of potential borrowers to prepare bankable projects. In addition, weak environmental monitoring and enforcement have also provided limited incentives for polluting industries to borrow from such schemes to improve their environmental performance.

23. To help address the above-discussed institutional, regulatory, technical and financial challenges, the MOEFCC through the Economic Relations Division of the Ministry of Finance requested in September 2019 the Bank's support to prepare this proposed project. It is envisioned that the proposed project, as an integral part of donor support, will contribute to the implementation of the Seventh FYP, the CIP, the Dhaka River Restoration Master Plan and the Delta Plan. Through stakeholder consultation, the MOEFCC/DOE and the World Bank agreed on the project concept, which will be further refined during project preparation. The design of this project will build on lessons learned from previous and ongoing operations of all relevant DPs. Preparation and implementation of this project will be closely coordinated with the DPs.

Relationship to CPF

24. The project is aligned with the Country Partnership Framework (CPF) (FY16–FY20) as it will directly address its three key focus areas: growth and competitiveness, social inclusion, and climate and environmental management. Overall, the project supports the key transformation and foundational priorities (institutions and business environment) identified by the Systematic Country Diagnostic. By supporting industries through PFIs to invest in environmentally sustainable technologies and practices and supporting the MOEFCC/DOE to improve the efficiency and effectiveness of environmental enforcement, this project will contribute to CPF Objective 1.4 (enhanced business environment and trade facilitation) and Objective 1.5 (increase financial intermediation). With reduced pollution, the project will also contribute to improved livability of the urban areas and thus help achieve CPF Objective 1.3 (improved delivery of basic services in urban areas). As negative environmental externalities have disproportionately high and adverse impacts on the poor, the project will benefit the poor by reducing health risks associated with environmental pollution, upgrading EHS conditions of targeted polluting industries, and promoting quality jobs for both male and female workers.

25. The Project will generate co-benefit to climate change contributing to the World Bank's corporate commitment. In its Nationally Determined Contributions (NDC), Bangladesh had committed to reducing greenhouse gas (GHG) emissions in the power, industry and transport sectors. The Project will provide support in two of these three priority areas. Promoting energy efficiency in the industry sector through investing in Resource Efficiency and Cleaner Production (RECP) helps mitigate carbon emission. Vehicle emission control can also generate multiple benefits contributing to the modernization of the transport sector in the country. Finally, addressing water pollution through resource efficiency of water supports addressing climate adaptation.

C. Proposed Development Objective(s)

26. The proposed Project Development Objectives are to strengthen environmental governance and to reduce pollution discharges from key sources at selected areas of Bangladesh.



Key Results (From PCN)

27. The proposed key results indicators are the following:
- a. Improved air and water quality monitoring (coverage, frequency) and information disclosure
 - b. Improved efficiency in environmental clearance and renewal
 - c. Reduction in discharges of air and water pollutants, including GHGs, in selected areas
 - d. Reduction in hazardous waste generation and releases in selected areas

D. Concept Description

28. The project will support four components as discussed below. These components and activities will be further refined during project preparation. Among others, gender issues will be examined carefully to review gender gaps, identify as appropriate gender specific actions, and develop gender indicators and related monitoring and evaluation (M&E) arrangements. Project impacts on jobs outcomes and conditions for vulnerable workers in targeted industries will also be monitored and evaluated as part of the project's results framework. In addition, project preparation will also examine carefully potential climate impacts of project investments as well as to incorporate measures to mitigate potential impacts of climate risks to project investments. It is noteworthy that promoting citizen engagement will be a major intervention of this project. Lastly, project preparation will also investigate the feasibility of adopting performance-based conditions for selected project activities. Broad stakeholder consultations will be organized during project preparation to refine the scope of this proposed project.

29. Component 1: Strengthening Environmental Governance. This component will support the MOEFCC and DOE to implement policy and institutional reforms; carry out technical studies; develop various strategies/plans; procure environmental monitoring equipment and develop field-level offices with laboratory facilities; train its staff on technical subjects; develop a state-of-art environmental information management system; and promote public awareness, environmental information disclosure and citizens' engagement in its efforts to improve environmental monitoring and enforcement in the country. The design of this component will be based on recommendations of the 2018 CEA on institutional and policy reforms, RECP financing, and information disclosure and citizen engagements. In addition, for air quality management, this component will support the operationalization of the Clean Air Act developed under the CASE project.

30. Based on the recommendations of the 2018 CEA and outputs of the ongoing TA on circular economy, this component will support the development of waste and resource management policies and strategies and implementation of the action plan of reducing marine plastics that will be drafted in 2020. The proposed environmental information systems will include a waste management sub-system to ensure proper data collection and management of various types of wastes. A pilot extended producer responsibility scheme will be also tested along with relevant policies and guidelines to generate incentives (e.g. standards for recycled materials, green procurement, resource efficient policy, etc.). As appropriate, this component may support the establishment of Producer Responsibility Organization (PRO) to ensure sound management of electronic, hazardous and plastics wastes. It will support behavior change programs and help create consumer demands for circular/recycled products. It will also provide capacity building to promote alternative materials and conduct green expo/fair to further disseminate environmentally friendly solutions and best practices. For plastics related activities, this component will coordinate with the Plastic Free Rivers and Seas for South Asia Project (P171269) and will facilitate the adoption and implementation of policy recommendations of the regional project and promote knowledge exchanges to disseminate innovative solutions with other countries.



31. Component 2: Air and Water Quality Management. This component will support investments at key pollution sources to reduce the generation and release of air and water pollutants and thus contributes to air and water quality improvement. It has two subcomponents: AQM and water quality management (WQM). These sub-components will focus on pollution hotspots of the greater Dhaka area given the significance of its air and water pollution issues.

32. This component will provide different financing support to different types of air and water pollution sources. For municipal sources, this component will provide direct support to concerned agencies and city corporations to implement agreed investment activities to reduce pollution generation and releases from such sources. For industrial sources, this component will largely rely on financial intermediaries (FIs) to use their existing financial networks to identify and support eligible beneficiaries and support their investments in RECP technologies to minimize the generation of, and needed pollution control units to minimize the release of, air and water pollutants. This approach is expected to ensure financial sustainability of project financed investments. Based on existing FI operations in the country, it is expected that the Bangladesh Bank will select eligible participating FIs (PFIs) to manage project financing to RECP and pollution control investments. Technical assistance to PFIs and beneficiary industrial units will be provided to ensure technical soundness of project investments. All industrial beneficiaries will be required to achieve environmental compliance after the completion of project investments. The design of this component will be based on recommendations in the RECP report as well as lessons learned from other World Bank pollution abatement projects such as the Egypt Pollution Abatement Projects (P054958, P090073).

33. Subcomponent 2-1: AQM. This subcomponent will support specific AQM investments in the greater Dhaka with an aim to reduce emission of air pollutants from targeted sources and thus to improve air quality of the Dhaka metropolitan area. Based on available source information, the targeted sources are brick kilns, vehicle emission, road/construction dusts, and waste open burning. For the brick sector, this subcomponent will mobilize FIs through the Bangladesh Bank to finance the transformation of brick production from clay-fired to non-fired cement block production in key brick production areas of the greater Dhaka area. This will help eliminate most of air emissions at the production facility level, create year-round and cleaner job opportunities, and improve the kiln's productivity. It will also help minimize soil loss and soil erosion associated with clay-fired brick production.

34. For vehicle emissions, this subcomponent will support DNCC, DSCC and the Dhaka Transport Coordination Authority (DTCA) to carry out the following activities: (a) construction and operations of vehicle emission inspection stations; (b) reduction of emission from high emission vehicles and support to clean vehicles; (c) promotion of clean fuel, in particular low sulfur diesel; and (d) if needed, additional support to traffic flow management based on the CASE results. For dust and waste burning related issues, this subcomponent will support the Dhaka North and South City Corporations (DNCC, DSCC) to carry out needed investments to better manage road/construction dusts and eliminate open burning of wastes.

35. Subcomponent 2-2: WQM. This subcomponent will support the implementation of the Dhaka River Restoration Master Plan by focusing on reducing effluent discharge of targeted industrial sources (industries, industrial clusters, industrial zones) and thus to control water pollution of selected water bodies in the greater Dhaka area. Targeted industrial sources will receive financial support from PFIs to invest in RECP technologies and ETPs or centralized ETPs (CETPs). As appropriate, successfully piloted PPP models will be promoted to mobilize the participation of the private sector in the construction and operations of such industrial wastewater treatment facilities.

36. Component 3: Plastics and Waste Management. Building on findings of the ongoing circular economy TA and results of stakeholder consultation, this component will support sound management of plastics, hazardous and electronic



wastes at selected localities. In cooperation with IFC, this component will support the analysis of life cycles and waste management value chains of key products to identify sustainable interventions, including circular solutions. Existing and new waste recycling, storage, treatment and disposal facilities may be supported to better manage plastics, electronic and hazardous wastes. Awareness raising and capacity building will also be provided to improve waste management value chains at selected locations. This may include the upgrading of the informal recycling business to improve the quality of recycling practices and promote upcycling and thus promote decent and green jobs. Whenever it is appropriate, PFIs will be engaged to finance sound waste management investments of the private sector and PPP models will be adopted to promote the participation of the private sector in waste management.

37. **Component 4: Project Management.** This component will support the MOEFCC/DOE and related implementing agencies to properly manage their respective project implementation.

Legal Operational Policies	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Areas OP 7.60	No
Summary of Screening of Environmental and Social Risks and Impacts	

38. At the concept stage, the project is expected to generate positive environmental and social impacts as it intends to address environmental pollution challenges that are degrading the environmental quality and affecting negatively the public health of Bangladesh. The project’s environmental risks are rated as *High* as the project may support the management of electronic and hazardous wastes, which if not handled properly may lead to adverse and irreversible impacts on the environment and the public health and safety. The project’s social risks are rated as *Substantial* as project activities may have social impacts and risks associated with labor influx, occupational health and safety issues for workers of targeted polluting industries, community health and safety issues, potential land acquisition and subsequent resettlement issues, potential involvements of small ethnic communities and capacity of the implementing agencies. These ratings will be revisited before appraisal as project locations and detailed design of components and activities are determined and will continue to be assessed and re-assessed during implementation.

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