INTEGRATED SAFEGUARDS DATA SHEET
APPRAISAL STAGE

Report No.: ISDSA16197

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I. BASIC INFORMATION

1. Basic Project Data

Country:	Bangladesh	**Project ID:**	P154511
Project Name:	Bangladesh Regional Waterway Transport Project 1 (P154511)		
Task Team Leader(s):	Diep Nguyen-Van Houtte		
Estimated Appraisal Date:	04-Apr-2016	**Estimated Board Date:**	16-Jun-2016
Managing Unit:	GTI06	**Lending Instrument:**	Investment Project Financing
Sector(s):	Ports, waterways and shipping (100%)		
Theme(s):	Other trade and integration (50%), Trade facilitation and market access (50%)		
Is this project processed under OP 8.50 (Emergency Recovery) or OP 8.00 (Rapid Response to Crises and Emergencies)?	No		
Financing (In USD Million)			
Total Project Cost:	387.70	Total Bank Financing:	360.00
Financing Gap:	0.00		

Financing Source	**Amount**
BORROWER/RECIPIENT	27.70
International Development Association (IDA)	360.00
Total	387.70

Environmental Category:	A - Full Assessment
Is this a Repeater project?	No

2. Project Development Objective(s)

The development objective of the Project is to improve Inland Water Transport (IWT) efficiency and safety for passengers and cargo along the Chittagong-Dhaka-Ashuganj Regional Corridor and to enhance sector sustainability.

3. Project Description

The Project will provide US$360 million in IDA funds to finance interventions aimed at improving

IWT for cargo and passengers along the heavily-trafficked Chittagong-Dhaka-Ashuganj river routes. These fall under the jurisdiction of the Bangladesh Inland Water Transport Authority, a Government authority mandated to oversee sector development. Main interventions include: navigation channel maintenance and improvement; navigation safety improvements; the construction, rehabilitation, and modernization of select river terminals; development of River Information Systems; institutional capacity development; and, funding for research and development to enable continuing sector improvement and sustainability. This includes work on sector policies and strategies needed to: improve revenue collection and management; incentivize public and private sector investments especially related to container transport; and, mitigate and improve IWT's impact on the social and physical environment. The Project consists of three components as follows:

Component 1: Improved Inland Waterway Navigation (IDA financing: US$235 million). This component shall include work to guarantee advertised depths and widths of navigation channels on select river routes. The work also includes provision of aids to navigation. The work is to be done on an Output- and Performance-based Contracting method designed to increase the efficiency and effectiveness of river asset management and maintenance. It is designed to ensure that the physical condition of the rivers under contract are adequate for the need of river users, over the entire period of the contract which is six to seven years. This type of contract significantly expands the role of the private sector, from the simple execution of works to the management and conservation of river assets. This is a departure from the traditional river maintenance contracts used in Bangladesh which have been less-than-optimal. Even where works have been carried out according to plan, the nature of the rivers has meant that advertised depths, aids to navigation and other river infrastructure do not last as long as they should because of deficiencies in the original design, aggravated by inadequate maintenance. The beneficiaries of the new concept are expected to be the river users. In a wider sense, future generations will be able to benefit from a better maintenance of past investments. River users will be able to know the Service Level they can expect in return for the payments they make for the use of the infrastructure (tolls, tariffs, user fees, taxes, etc.). The River Administration shall also benefit by obtaining better overall river conditions with reduced levels of expenditure.
Also included in Component 1 is work to provide safe harbors (storm shelters) whereby users can seek shelter from stress of weather in the Meghna Delta area during tropical cyclones. The Bay of Bengal is responsible for the formation of some of the strongest and most destructive tropical cyclones in the world. Adverse wave conditions, heavy rainfall and associated storm surges from these cyclones are a major cause of loss of life and infrastructure damage in the maritime delta area. It is intended that the storm shelters shall be constructed under the same Output and Performance-based Contractor, using dredged material as a resource. Among others, this component will finance the following activities: (i) bathymetric and other surveys to determine the extent and types of dredging required, river training, environmental protection or other works; (ii) visual aids for day and night navigation such as light buoys, radar beacons, leading lines and other aids; (iii) limited and selected performance-based dredging to guarantee Least Advertised Depth; and (iv) development of six vessel shelters within remote cyclone areas equipped with mooring buoys to ensure safety for the vessels.

Component 2: Improved Services at Priority Inland Waterway Terminals and Landing Ghats/Stations (IDA financing: US$75 million). This component supports the development of two cargo terminals, four passenger terminals and 14 landing ghats/stations. The development of passenger and cargo terminals are within existing inland waterway port areas under the jurisdiction of BIWTA. It includes the modernization and extension of existing facilities to cater for increased demand. Terminals and landing stations are part of the network of about 448 river terminals, 374 landing stations, 23 coastal terminals and 25 pilot stations already provided by BIWTA. The passenger terminals and landing

stations will specifically incorporate the needs of women users and less abled users, and all investments will address safety-related issues for all users. Specifically, this component will finance the following:

A. The cargo terminals include: (i) extension of the existing Pangaon Container Terminal with new general cargo vessel berths and land access infrastructure on the Buriganga river; and, (ii) rehabilitation and modernization of the existing general cargo terminal at Ashuganj including river bank erosion prevention, the replacement of pontoons, gangways and other dilapidated marine structures, the extension of berthing space

B. The passenger terminals include: (i) construction of a new passenger terminal at Shashanghat, downstream of the existing terminal at Sadarghat where landside congestion preclude the development of additional berths; (ii) rehabilitation works for the passenger terminal at Narayanganj; (iii) rehabilitation of works for the passenger terminal at Chandpur; and, (iv) extension of the existing passenger terminal at Barisal

C. Rehabilitation works or new construction of 14 landing stations or launch ghats under this Project are designed to provide access for rural communities, some of which in the lower Meghna delta have no alternative means of transport.

Component 3: Institutional Capacity Development and Sector Sustainability (IDA financing: US$50 million). A series of activities are proposed that will support BIWTA's overall enhancement of its management systems and human resources capacity for modern, efficient, and high quality management of the IWT sector in line with international standards, and to help BIWTA achieve long-term operational and financial sustainability. Activities to be supported include: (i) the development of River Information Systems to help BIWTA improve data collection for the planning, maintenance and development of IWT, as well as enhance climate resiliency of the IWT sector in Bangladesh by creating a more systematized baseline understanding of river hydrology and navigational implications, and provision of a Traffic Monitoring System for passengers and cargo; (ii) improvement of Human Resources capacity for better management of the IWT sector through upgrading and modernizing the IWT Deck and Engine Personnel Training Centre (DEPTC)) into a regional IWT Training Center with open access to all users in the Region and the world; (iii) a project preparation facility to finance feasibility, surveys, design and safeguards studies for continuous sector development; and, (iv) support for the Project Implementation Unit.

4. Project location and salient physical characteristics relevant to the safeguard analysis (if known)

Component 1 focuses on the main Class 1 (rivers with a minimum Least Advertised Depth of 4m) route between Dhaka and Chittagong Corridor, as well as Class 1, 2 and 3 branch routes (with minimum advertised depths of 2.5m and 1.8m respectively) to Ashuganj, Narayanganj, Gorashal, and Barisal. In total, the project address navigation needs on about 900km of river routes as follows:

- The main Dhaka-Chittagong Corridor Route, which includes parts of the Buriganga, Dhaleshwari, and Meghna Rivers, as well as the Meghna Delta and coastal areas in the Bay of Bengal. While the route links to Bangladesh's main port at Chittagong, the Project does not include interventions on the Karnafuli River or areas under the jurisdiction of Chittagong Port Authority, which areas are regularly dredged enabling access by Ocean Shipping.
- The Munshiganj-Demra Route to Gorashal on the Shitalakhya River (a distributary of the Old Brahmaputra River)
- Connecting routes to Ashuganj follow the Upper Meghna River and its floodplain

distributaries.

• Connecting routes to Barisal following the Lower Meghna, and its delta distributaries including the Arial Khan, Tentulia, and Kirtonkhola Rivers. These distributaries are essentially part of the extensive delta area which form as the amount of sediment supply exceeds the rate removal. The delta is divided into two distinct parts, the old western part (formed when the Ganges dominated the deposition system before moving eastwards to join with the lower Meghna) and the active Eastern Part. This part of the delta is characterized by opposing influences of fluvial and marine processes and has lead to the formation of many distributary channels and tidal estuaries.

Navigation hindrances on these routes include soft shoals and bars, which constantly move with changing river conditions. The Project aims at providing periodic and routine maintenance dredging to address problems of sedimentation, together with provision of aids to navigation allowing the delineation of navigation channels. However, dredging is not expected to be required at all locations. Along the Project rivers, shallow depths occur especially in the delta area, and at the confluences of the major rivers and their tributaries, river bends and mouths. Based on hydrographic surveys carried out in September-November 2015, the main problem areas where dredging activities are expected to be most needed include: i) the Hatiya Channel and area near Sandwip Island, at the mouth of the Meghna River; ii) on the approaches to Barisal; iii) on the Lower Meghna ferry crossing routes; and, iv) on the Upper Meghna towards Ashuganj. In addition, under the same performance-based dredging contract, six vessel storm shelters will be constructed and maintained (at Shatnol, Chandpur, opposite side of Char Bhairabi, Mehendiganj, Hatiya, and Sandwip), and the main river ferry crossing routes (Chandpur and Shariatpur on the Lower Meghna River; Lakshmipor and Bhola on the Lower Meghna River; and Beduria and Laharhat on the Tentulia River) will also be maintained.

The locations and salient features of investments under Component 2 are described below:

i. Construction of Pangaon General Cargo Terminal: a new common user general cargo terminal with access infrastructure will be constructed on the Dhaleshwari River adjacent to the existing Pangaon container terminal, for vessels carrying construction materials in general cargo form, including cement, sand, rock and other cargo carried in bagged or break-bulk form. The identified site is about 8 acres in size and includes the foreshore area (land between the lowest and highest water level), and two small flood ponds. The land is owned by BIWTA and is largely vacant at present, although there are about 50 households and small shops (squatters) on the site, as well as an existing ghat (engine boat operated river crossing) for crossing the Buriganga River to Pagla, which is operating under a BIWTA lease and services the local community. A community graveyard is adjacent to the site; its access may be restricted by the project.

ii. Rehabilitation and modernization of the existing general terminal at Ashuganj. This is a small existing terminal handling a variety of cargo, on the Meghna River. The surrounding area is characterized by a mix of industrial, urban and rural land uses. The existing cargo terminal is in general dilapidated state. The rehabilitation works shall include provision for new revetments, new pontoons and link-spans, provision of a paved apron and general improvements to yard areas.

iii. Construction of passenger terminal at Shashanghat: The main Dhaka passenger terminal at Sadarghat is heavily congested. On a daily basis over 60 thousand people use the facility, which has run out of space for expansion. The new passenger terminal will be located on land owned by BIWT A downstream from Sadarghat on the Buriganga River. On the landward side, development shall include provision of a multi-level passenger terminal (of approximately 20,000m2), access roads, car and bus parking and waiting areas. On the riverside, it shall include works to improve the berth basin, bank protection, and provision of floating pontoons together with link-span arrangements enabling passenger access. The site is owned by BIWTA, but is currently being used as a shipbreaking yard,

with about 50 small businesses dealing with scrap items operating in and adjacent to the site. The existing access roads are also being used for storing of scrap metal by various people. There is also an adjacent existing river ghat, attached to the Maha Shashan (crematorium), which is used by the Hindu community for cremation rituals. The terminal will be developed so as to keep this ghat intact.

iv. Rehabilitation of passenger terminals at Narayanganj and Chandpur, extension of existing passenger terminal at Barisal: The existing passenger terminals at Narayanganj and Chandpur are in poor condition. The river bank is eroding and revetments collapsing in both locations.

v. Upgrading of 14 Existing Landing Stations/ Launch Ghats: These launch ghats are located throughout the Project area, and are currently in unsafe dilapidated condition. Several of them are associated with the ferry crossings which will be maintained through the project (Alubazar, Ilisha, Moju Chowdhury, Beduria, and Laharhat).

The overall Project area spans 17 upazilas, which together are home to about 14 million people. More than 70 percent of all IWT traffic is along the Project waterways, principally the Dhaka-Chittagong Corridor. Most of the industrial units in Bangladesh are located within 10km of these waterways. Dhaka, being the capital, is the major urban center for business development, urbanization, export-import and industrialization of the country. There are also a wide diversity of natural habitats and land uses in the Project area. The area includes floodplains, mudflats, mangroves, estuarine habitat, char lands (shoals), plantations and homesteads, urban areas, and industrial areas. Areas of the project rivers, estuary and coastal marine ecosystems are also home to rich wildlife, including 3 species of globally endangered river dolphins, sea turtles, crocodiles and other reptiles, over 125 species of birds (including numerous migratory birds), hundreds of species of fish (including hilsha and others with protected or endangered status), fishing cats and other terrestrial mammals, among others. Most of the lower Meghna River and estuary zone fall into a hilsha sanctuary, which carry restrictions on the physical activities that can be undertaken during critical spawning periods. The dredging contractor will be required to abide by these restrictions. Two rivers within the Project area – the Buriganga River and the Shitalakhya River – are furthermore declared Ecologically Critical Areas (ECAs) under national law, due to their highly degraded state and pressures from numerous industrial and urban development activities. Project activities along these two rivers are permitted, but will require robust mitigation measures for potential negative impacts related to river channel maintenance and terminal construction, upgrading and operation.

All the IWT routes selected for maintenance under the Project are already established routes that have been maintained by BIWTA to varying degrees. Under the Project, an international contractor will maintain all Project routes to the specified depths and provide visual aids to navigation, and will be paid on a performance basis rather than a dredge-volume basis. The contractor will carry out continuous hydrographic surveying throughout the contract period, and determine the most cost-effective method, equipment and schedule to ensuring the required route depths and widths are re-established. Locations where dredge spoils can be deposited (with preference for in-river) as well as other performance criteria and environmental, health and safety management requirements of the contractor have been pre-specified in the EMP. A Dredging Supervision Consultant (DSC) will supervise the contractor and conduct ongoing verification of specified depths and implementation of all other management requirements, prior to authorization of contractor payments. For the construction and rehabilitation/modernization of river terminals and landing stations (Component 2), works will be carried out by traditional works contractors, and both construction progress as well as EMP implementation performance will be supervised by a Construction Supervision Consultant (CSC).

5. Environmental and Social Safeguards Specialists

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6. Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/BP 4.01	Yes	The Project activities consist primarily of maintenance dredging and construction or rehabilitation of the terminals and landing stations. Since the Meghna River is of high ecological sensitivity and vulnerability, certain negative environmental impacts may occur on the river ecology during the implementation and operational phases of the Project. With the exception of the Buriganga River, baseline assessments have not detected notable levels of contamination in sediment samples taken along Project rivers. Based on current hydrographic survey data, dredging is not expected to be required on the Buriganga River. Nonetheless, there remains a possibility that, over the course of the project lifespan, somedredged materialsmay contain contamination. The Project is thus classified as an Environmental Category A project in accordance with OP 4.01 due to the nature and scale of the planned dredging and civil works, and the complexity of related environmental issues. BIWTA has undertaken a detailed Environmental Assessment (EA), consisting of a full Environmental and Social Impact Assessment (ESIA) for Component 1; Environmental Management Framework (EMF) for Components 2 and 3, and Resettlement Policy Framework (RPF) covering all Components;; and an ESA Executive Summary plus Cumulative Impact Assessment covering the overall project.
Natural Habitats OP/BP 4.04	Yes	The Meghna River system and its floodplain provides habitat to a wealth of aquatic and terrestrial biodiversity. While no net loss or permanent degradation of critical natural habitat is expected to result from the Project, the proposed activities will have impacts on some areas of natural riverine and floodplain habitat, including legally designated protected areas; hence, this policy is triggered. The ESIA includes a detailed analysis of impacts to natural habitats in the Project area, and a Biodiversity Management Plan in accordance with the policy. Under the plan, habitat restoration and enhancement measures as well as rules and restrictions for dredging activities are specified to avoid, mitigate and/or compensate for any

		adverse impacts in accordance with this policy. The initial screening of river terminals and landings under Component 2 did not identify any affected areas of critical habitat. Nonetheless, the EMF specifies requirements for further detailed baseline assessments of any areas of natural habitat which could be affected by these investments, full assessment of any impacts to natural habitat, and application of the mitigation hierarchy in accordance with this policy, for all project activities not fully specified at the time of project appraisal.
Forests OP/BP 4.36	Yes	There are some areas of mangrove vegetation as well as social forestry areas in the Project area of influence, thus triggering the policy; however, no direct impacts on these forests are expected. Disposal of dredge materials in areas with mangroves or other forest lands, or in a manner where such forests would be affected, will be prohibited under the Project. In addition, any revegetation/plantation efforts taken up as part of river terminal development will be undertaken in accordance with this policy, as applicable.
Pest Management OP 4.09	No	No pesticides will be procured through the Project, nor is the Project expected to affect the use of pesticides.
Physical Cultural Resources OP/BP 4.11	Yes	The Project area is densely populated, and public places of cultural importance such as eid gah, mosques, etc. exist close to the riverbank in many locations, although the ESIA did not identify any which qualify as culturally significant as per this policy. Under Component 1, dredged material will be deposited in-river unless technically unfeasible, thus avoiding most potential impacts to Phyiscal Cultural Resources. In case of any material disposal near locally important cultural resources, disposal sites will be required to avoid directly impacting or blocking community access to locally important cultural resources. Chance find procedures will also be implemented by the contractors. Under Component 2, initial screening of the locations proposed for construction of the Shashanghat and Pangaon river terminals have identified a community graveyard, a prayer house, and a Hindu ashes immersion site which have the potential to be affected through restrictions of access. The detailed ESIA for these sites, as well as for all other Component 2 and 3 subprojects, will require full identification of any cultural heritage that could be affected directly or indirectly, and adequate measures to avoid, mitigate and/or manage such impacts in accordance with this policy.

Indigenous Peoples OP/ BP 4.10	No	The Project is located on the bank line districts of Dhaka, Comilla, Narayanganj, Chandpur, Barisal of southwest Bangladesh. The social impact assessment undertaken indicates that there are no indigenous communities residing in the Project area and therefore no impacts on them are expected under the Project.
Involuntary Resettlement OP/BP 4.12	Yes	The social assessment carried out under Component 2 has identified minimal land requirement. Informal settlements are likely to be adversely affected by Pangaon General Cargo Terminal and Shashanghat passenger terminal. Almost all dredge material will be disposedas per the plan within the river in accordance with national laws. Only at locations where the river is extremely narrow, dredged material may be deposited on government land free from encumbrance. No agricultural land will be used for permanent or temporary filling up of the areas. In addition, minor land acquisition may be required for river terminal and landing ghats sub-projects, a Resettlement Policy Framework is prepared to address the adverse impacts including ensuring socially inclusive investments to safeguard the needs of benefit women and disabled people at terminals and landing sub-projects.
Safety of Dams OP/BP 4.37	No	The Project will not finance any dams, nor do Project activities depend on any existing dams.
Projects on International Waterways OP/BP 7.50	Yes	The Project activities will take place mostly on the Meghna River in the Ganges-Brahmaputra-Meghna river system. Riparians of these rivers include India, Bhutan, China and Nepal. However, the Project qualifies for an exception from the requirement to notify other riparians under paragraph 7(a) of the policy, given that the proposed interventions fit within the ongoing scheme of the Government's dredging program and existing navigation facilities including terminals and landings. The activities to be financed (i) will not adversely change the quality or quantity of water flows to the other riparians; and (ii) will not be adversely affected by the other riparians' possible water use.
Projects in Disputed Areas OP/BP 7.60	No	There are no disputed areas in the Project area of influence.

II. Key Safeguard Policy Issues and Their Management

A. Summary of Key Safeguard Issues

1. Describe any safeguard issues and impacts associated with the proposed project. Identify and describe any potential large scale, significant and/or irreversible impacts:
IWT is overall a "greener" transport mode compared to road and rail, notably with respect to GHG

and other emissions per ton-km of goods or passengers transported. The Project will therefore overall contribute to improved environmental sustainability of the transport sector on some of the most-trafficked routes in the country, by enhancing the reliability, speed, safety and attractiveness of IWT transport. Nonetheless, project activities also carry a range of environmental and social risks and impacts which must be appropriately minimized, mitigated and managed.

For IWT route maintenance (Component 1), the main environmental impacts include disturbance of aquatic and benthic habitats, as well as impacts associated with disposal of dredged material. Dredging involves the removal of substrate and benthic organisms at the dredging site. It also leads to increased turbidity, suspended solids, and noise; reduced light transmittance; changes in salinity, temperature, and pH; reduced dissolved oxygen (DO); and releases of nutrients, heavy metals and organic contaminants, all with diverse related effects on aquatic biodiversity. River maintenance activities may also impact downstream riverbank erosion patterns, and can temporarily disrupt other river uses such as navigation routes and fishing activities. Disposal of dredge spoils may also entail environmental and social impacts. Only minimal on-land disposal is expected under the Project, as in-river disposal will be the preferred option wherever feasible from a technical perspective. If required, on-land disposal will take place on government land, and sites will be selected so as to minimize impacts to terrestrial or floodplain habitat, with disposal facilities designed to minimize and mitigate impacts to water quality and aquatic life from tailwater draining from deposited spoils. In areas close to heavy industries and urban areas in particular, there is furthermore a possibility that sediments may contain contamination, although baseline assessments carried out as part of the ESIA have not identified this as a major issue. If contaminated sediments are identified in dredge locations during project implementation, their disposal will need to consider potential impacts to both aquatic and terrestrial flora and fauna, as well as possible risks to human health.

For Component 2, the construction and rehabilitation/upgrading of river terminals and landings, as well as their ongoing use and maintenance, will meanwhile result in various positive and negative impacts. Construction will entail building or rehabilitation of infrastructure such as jetties, bank protection works, pontoons, and on-shore facilities including buildings, toilet facilities, parking areas, storage facilities, and improvements/widening of access roads. At some of the locations, Chandpur terminal in particular, dredging will be required. In the construction stage, typical construction impacts will include noise, dust, construction-related vehicular traffic, management of solid waste and effluent discharges, etc. At the proposed location of the new Shashanghat passenger terminal, soil remediation and clean-up may also be required, as the site is currently being used for iron/scrap processing, manufacturing, trading and transporting.

In most locations, only minor land acquisition is expected to be needed; however, squatters and lessees will need to be displaced at terminal and landing locations. The World Bank policy on involuntary resettlement (OP/BP 4.12) has therefore been triggered for this project. As none of the residents or likely affected persons along the IWT corridor, river terminals and other sites is from the tribal communities (indigenous peoples), OP/BP 4.10 on Indigenous Peoples has not been triggered.

In the operations phase, positive impacts for local communities will be felt through the increased local commerce and trade, and associated employment and livelihood opportunities. Terminals and landings catering to passengers will also include female-only toilets and waiting areas, and will take into account the needs of the disabled and elderly. However, terminal operations will also generate ongoing noise to surrounding communities, and localized air pollution from idling

ship engines. Management of ship-related waste (solid waste as well as effluents), as well as on-shore management of port-related vehicle traffic, will also be significant issues. All of these issues will be studied in depth during the detailed ESIA and design stage of river terminals and landings during project implementation.

Project activities under Component 3 may meanwhile entail minor, localized impacts. All Component 3 sub-projects will be screened for relevant environmental and social issues during project implementation, with more detailed assessments carried out where required.

2. Describe any potential indirect and/or long term impacts due to anticipated future activities in the project area:

During the operations phase of the waterways, the improvements to navigational reliability and safety will induce increased river traffic, resulting in a variety of positive socioeconomic benefits for communities along the waterways, who stand to benefit from livelihood and employment opportunities associated with the increased commerce.

Greater traffic volumes on the waterways will also increase the risks of improper discharge of waste, ballast waters, and oil spills from ships, with associated impacts to aquatic species and to fishing community livelihoods. Wave action from boats may also further induce erosion and affect riverbank habitat in some locations. Based on the ESIA, dredging activities under the Project are not expected to cause significant long-term impacts to aquatic or benthic ecology in the main project rivers, given the existing highly dynamic nature of river morphology, with high sediment and flow volumes. In the smaller navigation channels within the Project area, dredging activities could over time lead to a marginal decrease in benthic community abundance and diversity within and near the dredge locations. Such impacts will be monitored under the Project, and a biodiversity conservation and enhancement program will be implemented to respond to any observed material effects of such benthic impacts on species of conservation concern.

Over the long term, the river terminals and landings may also induce land-use changes in surrounding areas over time, such as industrial development, urbanization, etc. These effects are not expected to be significant, however, given that in most cases the Project will only rehabilitate or upgrade existing facilities, and the only two new terminals to be developed under the project – Shashanghat and Pangaon – are already located in the Dhaka metropolitan region and in close proximity to existing port facilities. Nonetheless, they will be fully studied during the detailed ESIA and design stage for all terminals and landings, so that the extent of impacts can be fully understood and appropriate mitigation and management measures identified.

3. Describe any project alternatives (if relevant) considered to help avoid or minimize adverse impacts.

The design of the performance-based river maintenance contract under Component 1 differs from a traditional dredging contract in that the contractor is given discretion to select the most appropriate alternative method to maintain the specified channel depth, rather than all such decisions being planned and specified upfront. The idea of this approach is to incentivize the most cost-efficient methods of achieving the desired channel depth, and also reflects the fact that the river environment is constantly changing and upfront rigid planning over a long period (6-7 years) is impractical. Nonetheless, the ESIA reviews the potential dredging and other river maintenance techniques and evaluates their comparative environmental impacts and costs in different environments. The EMP provides recommendations of the most environmentally benign methods of river maintenance – such as adjusting the channel alignment to accommodate changes to river morphology and minimize dredging, where feasible. The EMP also indicates where dredge spoils

can be safely deposited from an environmental perspective, as well as thresholds for impacts to water quality and benthic disturbance during known critical periods and locations (such as during the hilsha spawning period, within hilsha reserves).

For river terminals, landings, and vessel shelters, alternative locations for their siting and alternative existing facilities to include within the Project, were evaluated. For the two new proposed terminals – at Shashanghat and Pangaon – criteria for preliminary site selection included: proximity to Dhaka, accessibility via existing road networks and market areas, minimal land acquisition needs and physical displacement, absence of environmentally sensitive features or habitats, and – in the case of Shashanghat -- proximity to the existing passenger terminal at Sadarghat so that future on-land connectivity between the two locations would be possible. For vessel shelters, proposed locations were screened for environmental and social sensitivities and, in some instances, were adjusted based on the findings of site screening to avoid sensitive habitats and to better service the shipping routes. For existing terminals and landing stations to be upgraded, the selected list considered the highest priority locations from the perspective of potential socioeconomic benefits, the need for upgrading and rehabilitation, as well as the urgency of improving public safety and accessibility, including especially for women and disabled people. Since in all cases the detailed designs will only be developed during project implementation phase, detailed site specific alternatives analysis will be carried out as part of the detailed ESIA study for this project component, and site layouts and designs will be adjusted as needed to minimize negative effects and maximize benefits.

4. Describe measures taken by the borrower to address safeguard policy issues. Provide an assessment of borrower capacity to plan and implement the measures described.

Bangladesh Inland Water Transport Authority (BIWTA) under the Ministry of Shipping (MoS) is the implementing agency of the Project. BIWTA is responsible for development, maintenance and control of inland water transport and of certain inland navigable waterways in Bangladesh. BIWTA has carried out a full ESIA for Component 1 activities. This study also includes a Cumulative Impact Assessment covering the full Project area of influence (full IWT routes plus launch terminals, landings, ferry crossings and vessel shelters), as well as an ESA Executive Summary also spanning the entire project. The ESIA includes an EMP, which specifies (a) the environmental, social, health and safety (ESHS) requirements of the contractor as well as of BIWTA during the life of the navigation and vessel shelter maintenance performance based contract(s), (b) roles/responsibilities/staffing and budget requirements for ESHS management by both contractor and BIWTA; (c) reporting requirements on ESHS aspects, including any performance indicators related to ESHS management; and (d) capacity assessment and necessary capacity building measures for BIWTA. The EMP includes both site-specific provisions – such as prohibitions on depositing of dredge spoils in areas of critical habitat, and limitations on dredging activities in hilsha sanctuaries during the peak spawning periods – as well as general measures and performance criteria to minimize negative impacts of dredging operations and to manage impacts associated with vessel shelters. Contractors will furthermore be required to demonstrate adequate management systems such as through ISO 14001 certification, to retain appropriate EHS expertise, and to apply relevant good practice management practices in line with WBG General EHS Guidelines, EHS Guidelines on Ports, Harbors and Terminals, and other applicable international guidelines such as those of PIANC --World Association for Waterborne Transport Infrastructure.

BIWTA has also developed a Resettlement Policy Framework (RPF) for land acquisition needs related to dredge materials disposal and vessel shelters. This framework will be guidance for BIWTA for identification of land needs and displacement issues, if required, and to prepare

Resettlement Action Plans (RAP) and implement them. A Community Engagement and Communications Strategy and a Grievance Management System have also been outlined as part of the ESIA.

For river terminals and landings under Component 2, as well as any activities under Component 3 with possible impacts, given that feasibility and design studies will be carried out during implementation of the Project, BIWTA has prepared an Environmental Management Framework (EMF) and a Resettlement Policy Framework covering the potential and likely impacts of these facilities and specifying the requirements for further assessment, planning, and management/ mitigation of all such impacts during project implementation. The full detailed ESIA for these facilities will be commissioned during year one of the Project, in parallel to the feasibility and design studies. The EMF and RPF include site screenings of the proposed investment locations, preliminary identification of key issues, and requirements for the full ESIA and design studies to ensure environmental and social issues are fully assessed and taken into account. The frameworks also lay out institutional arrangements, responsibilities, and systems and preliminary budget estimation for completing the detailed assessments and for implementation, monitoring and oversight of mitigation and management measures. The RPF will guide BIWTA in land acquisition, social impact assessment, and preparation and implementation of Resettlement Action Plans.

Borrower capacity: BIWTA does not have any existing permanent environmental or social management capacity. Capacity building on environmental and social management aspects will therefore be an important component of the Project. BIWTA will establish a Project Implementation Unit (PIU), which will include an Environmental and Social (E&S) Cell, headed by a Superintending Engineer (Civil), and supported by two Deputy Directors – one for environmental management and one for social management – all deputed from the agency's permanent staff. In addition, the Cell will be supported by individual consultants employed under the Project for environmental, social and communications support. The E&S Cell shall be fully responsible to coordinate with the Project activities and ensure compliance with all environmental and social safeguards and communications requirements in planning and implementation of Project interventions following the legal and policy framework of GoB and the World Bank. The PIU's E&S Cell shall also manage the necessary handling of grievances / complaints including preparing reports on such grievances. In addition, the PIU will be supported in overseeing contractor performance by a Dredging Supervision Consultant (DSC) for Component 1 and Construction Supervision Consultants (CSC) for Component 2 activities, each of which will count with appropriate environmental and social expertise to monitor EMP and RAP implementation. Furthermore, external M&E consultants will also be engaged by the PIU to conduct third-party monitoring and evaluation of the EMP and RAP implementation, and to advise on adequate functioning of all E&S management arrangements. Additional specialized consultants will be hired by the PIU to carry out studies and implement further sustainability oriented activities under Component 3 of the Project.

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

Project stakeholders are diverse, including IWT passengers, boatmen and shipping companies, traders, water transport workers, shop owners and vendors at terminals, lease holders of terminals, day laborers and porters working at terminals, fishermen and fishing communities, farmers, squatters who may be displaced by project investments, conservation NGOs, and government agencies.

BIWTA has carried out a comprehensive consultation program as part of preparation of the ESIA, EMF and RPF. In total, over 4,000 individuals have been engaged during project preparation, through a combination of formal workshops, community level focus group discussions, and key informant interviews.

During implementation, the BIWTA will establish a Grievance Redress Mechanism (GRM) and a communications system to ensure ongoing fluid communications and channels for engagement with local communities on project related issues. The detailed ESIA study to be carried out during implementation for river terminals and landings will also include consultations with stakeholders at each investment location, as well as broader stakeholders of the Project.

All safeguards documents – ESIA, EMF, RPF and ESA Executive Summary – have been disclosed by BIWTA on their website, as well as on the World Bank's Infoshop. In addition, Bangla-language versions of the RPF and ESA Executive Summary are also made available locally in hard copy. The ESIA for river terminals and landings under Component 2 will be similarly disclosed once completed during project implementation.

B. Disclosure Requirements

Environmental Assessment/Audit/Management Plan/Other	
Date of receipt by the Bank	20-Jan-2016
Date of submission to InfoShop	04-Feb-2016
For category A projects, date of distributing the Executive Summary of the EA to the Executive Directors	
"In country" Disclosure	
Bangladesh	04-Feb-2016
Comments:	
Resettlement Action Plan/Framework/Policy Process	
Date of receipt by the Bank	20-Jan-2016
Date of submission to InfoShop	04-Feb-2016
"In country" Disclosure	
Bangladesh	04-Feb-2016
Comments:	
If the project triggers the Pest Management and/or Physical Cultural Resources policies, the respective issues are to be addressed and disclosed as part of the Environmental Assessment/ Audit/or EMP.	
If in-country disclosure of any of the above documents is not expected, please explain why:	

C. Compliance Monitoring Indicators at the Corporate Level

OP/BP/GP 4.01 - Environment Assessment	
Does the project require a stand-alone EA (including EMP) report?	Yes [×] No [ ] NA [ ]
If yes, then did the Regional Environment Unit or Practice Manager (PM) review and approve the EA report?	Yes [×] No [ ] NA [ ]

Are the cost and the accountabilities for the EMP incorporated in the credit/loan?	Yes [×] No [ ] NA [ ]
OP/BP 4.04 - Natural Habitats	
Would the project result in any significant conversion or degradation of critical natural habitats?	Yes [ ] No [×] NA [ ]
If the project would result in significant conversion or degradation of other (non-critical) natural habitats, does the project include mitigation measures acceptable to the Bank?	Yes [ ] No [×] NA [ ]
OP/BP 4.11 - Physical Cultural Resources	
Does the EA include adequate measures related to cultural property?	Yes [×] No [ ] NA [ ]
Does the credit/loan incorporate mechanisms to mitigate the potential adverse impacts on cultural property?	Yes [×] No [ ] NA [ ]
OP/BP 4.12 - Involuntary Resettlement	
Has a resettlement plan/abbreviated plan/policy framework/ process framework (as appropriate) been prepared?	Yes [×] No [ ] NA [ ]
If yes, then did the Regional unit responsible for safeguards or Practice Manager review the plan?	Yes [×] No [ ] NA [ ]
Is physical displacement/relocation expected? Provided estimated number of people to be affected	Yes [ ] No [ ] TBD [×]
Is economic displacement expected? (loss of assets or access to assets that leads to loss of income sources or other means of livelihoods) Provided estimated number of people to be affected	Yes [ ] No [ ] TBD [×]
OP/BP 4.36 - Forests	
Has the sector-wide analysis of policy and institutional issues and constraints been carried out?	Yes [ ] No [ ] NA [×]
Does the project design include satisfactory measures to overcome these constraints?	Yes [ ] No [ ] NA [×]
Does the project finance commercial harvesting, and if so, does it include provisions for certification system?	Yes [ ] No [ ] NA [×]
OP 7.50 - Projects on International Waterways	
Have the other riparians been notified of the project?	Yes [ ] No [ ] NA [×]
If the project falls under one of the exceptions to the notification requirement, has this been cleared with the Legal Department, and the memo to the RVP prepared and sent?	Yes [×] No [ ] NA [ ]
Has the RVP approved such an exception?	Yes [×] No [ ] NA [ ]
The World Bank Policy on Disclosure of Information	
Have relevant safeguard policies documents been sent to the World Bank's Infoshop?	Yes [×] No [ ] NA [ ]

Have relevant documents been disclosed in-country in a public place in a form and language that are understandable and accessible to project-affected groups and local NGOs?	Yes [×] No [ ] NA [ ]
All Safeguard Policies	
Have satisfactory calendar, budget and clear institutional responsibilities been prepared for the implementation of measures related to safeguard policies?	Yes [×] No [ ] NA [ ]
Have costs related to safeguard policy measures been included in the project cost?	Yes [×] No [ ] NA [ ]
Does the Monitoring and Evaluation system of the project include the monitoring of safeguard impacts and measures related to safeguard policies?	Yes [×] No [ ] NA [ ]
Have satisfactory implementation arrangements been agreed with the borrower and the same been adequately reflected in the project legal documents?	Yes [×] No [ ] NA [ ]

III. APPROVALS

Task Team Leader(s):	Name: Diep Nguyen-Van Houtte	
Approved By		
Safeguards Advisor:	Name: Maged Mahmoud Hamed (SA)	Date: 11-Apr-2016
Practice Manager/ Manager:	Name: Karla Gonzalez Carvajal (PMGR)	Date: 12-Apr-2016