

**COMBINED PROJECT INFORMATION DOCUMENTS / INTEGRATED  
SAFEGUARDS DATA SHEET (PID/ISDS)  
CONCEPT STAGE**

**Report No.:** PIDISDSC18704

**Date Prepared/Updated:** 30-Jun-2016

**I. BASIC INFORMATION**

**A. Basic Project Data**

<b>Country:</b>	India	<b>Project ID:</b>	P157929
		<b>Parent Project ID (if any):</b>	
<b>Project Name:</b>	Assam Inland Water Transport Project (P157929)		
<b>Region:</b>	SOUTH ASIA		
<b>Estimated Appraisal Date:</b>	28-Aug-2017	<b>Estimated Board Date:</b>	08-Nov-2017
<b>Practice Area (Lead):</b>	Transport & ICT	<b>Lending Instrument:</b>	Investment Project Financing
<b>Borrower(s):</b>	India		
<b>Implementing Agency:</b>	Transport Dept., Govt. of Assam, Dispur, Guwahati (Assam), India		
<b>Financing (in USD Million)</b>			
<b>Financing Source</b>			<b>Amount</b>
Borrower			30.00
International Bank for Reconstruction and Development			120.00
Total Project Cost			150.00
<b>Environmental Category:</b>	A - Full Assessment		
<b>Concept Review Decision:</b>	Track II - The review did authorize the preparation to continue		
<b>Is this a Repeater project?</b>	No		
<b>Other Decision (as needed):</b>			

**B. Introduction and Context**

**Country Context**

The Indian economy is likely to sustain a growth rate exceeding 7 percent annually over the next

2-3 years if investment levels are maintained. Investment in improved infrastructure is one of GoI's building blocks for economic growth. Transport infrastructure is a key component but for inland transport this has traditionally meant roads and railways. GoI's increasing commitment to the inland waterways transport (IWT) sectors is shown in three recent national initiatives: Sagarmala is a port-centric development strategy for better integrating the development of ports, industrial clusters and hinterlands through inland and coastal waterway connections as well as roads and railways; the National Waterway Grid is a concept that would improve and connect waterway routes from the port of Haldia (on the Ganga River) and other Indian east coast ports via Bangladesh rivers to Assam and the north-east; the National Waterways Bill (passed by the Lok Sabha in 2015) will classify many more of India's waterways as National Waterways thereby mandating the Inland Waterways Authority of India (IWAI), established in 1986, to develop the navigation infrastructure for stretches found feasible for inland freight, passenger and tourist boats.

Another economic policy measure of the GoI is to devolve more responsibility for deployment of public resources from national to state governments. Its effectiveness will clearly depend on the capacity of relevant State authorities to discharge these responsibilities. In the IWT sector, IWAI is responsible for providing and maintaining the navigation fairway but it does not own the water resources or have responsibility for regulating or operating water transport services. Moreover, landside activities such as riparian land-use development for ports or jetties or for industries that may wish to use IWT are largely regulated by State governments. The State of Assam has the largest network of navigable waterways of any of India's states. The proposed Assam Inland Water Transport Project will help Assam enhance its inland waterway transport and improve the capacity of its institutions to administer, regulate and deliver safe and efficient IWT services in the sector.

### **Sectoral and Institutional Context**

Assam has approximately 1980 km of navigable waterways of which the most important for transport purposes are the Brahmaputra and Barak Rivers. The Brahmaputra River, with a length of 891 km between the Bangladesh Border and Sadiya, was declared National Waterway 2 by GoI in 1988. It is a braided river system generally varying in width from around 1-10 km but in parts up to 20 km. It contains numerous small islands, some of which are permanently inhabited, including Majuli Island, the world's largest inhabited river island. The second major river, the Barak (152 km), is designated to become National Waterway 16 in the National Waterways Act 2016.

Brahmaputra, running through the heart of the state, is a formidable physical barrier to accessibility and mobility having only three bridges along its length (with two more under construction). But it also provides an important transport asset. The urban and rural ferry services, which cross it or serve its islands are the single most important transport mode for many communities and households. The State government has designated 97 ferry routes but there are numerous other routes licensed by the local (village) and district councils. Most of the designated ferry services are provided by the Directorate of Inland Waterway Transport Assam (DIWTA), which owns 40 combined passenger/cargo vessels of between 10 and 120 DWT. Other ferries are provided by small independent operators. Other users of the river include the Central Inland Water Corporation Limited (a Government of India Undertaking transporting cargo and operating some terminals on the rivers in the Eastern India & North-Eastern India and on the Indo-Bangladesh protocol routes), tourist vessels, and boatmen and farmers moving products in country boats. Several small river ports and numerous jetties and landing points serve

over 3,000 of these small boats with capacities between 5 and 40 DWT operating on the Brahmaputra alone.

DIWTA was established in 1958 as part of the Assam Transport Department. Headquartered in Guwahati and employing around 4,330 regular staff, it has divisional offices in Guwahati, Dibrugarh and Silchar, five sub-divisional offices, three commercial offices and a crew-training centre. Its ferry services on the Brahmaputra and Barak Rivers carry nearly 7.5 million passengers annually, more than 650,000 motorized vehicles, nearly a million bicycles and carts and around 40,000 tonnes of goods and livestock. The Assam government recognizes the conflicting interests in DIWTA being both regulator and an operator of services and plans to address this issue.

A second government concern is the aging and poorly equipped fleet. Many of DIWTA's own vessels are more than 40 years old. Most demand is now met by the informal sector operating traditional country boats without supporting infrastructure. Navigational aids are often inadequate, and many ferry terminals are no more than improvised moorings needing relocation with changing river conditions, often for substantial distances and to locations with poor last-mile connectivity. Safety is also a critical issue. Investigations into a ferry accident in 2012 at Medartari that killed 150 people revealed serious deficiencies in disaster response planning, weak regulation, lack of communication systems and safety equipment and crew training deficiencies.

There is only a small volume of commercial barging activity on the Brahmaputra and Barak Rivers. While a thorough appraisal of commercial market prospects has not yet been made, contributory factors include market demand, infrastructure supply, and connectivity factors.

The Government of Assam plans to transform the quality of inland water transport services and integrate high quality passenger and vehicle ferry services into Assam's wider transport network. The Government plans to create a more supportive institutional framework to facilitate implementation of this policy. Sector administration and regulation will be the responsibility of a specialized authority. Ferry and terminal enterprise activities will be separated and vested in a new corporation established under the Companies Act (2013) and operated at arm's length from government. There is a need to strengthen the capacity of both entities to meet the Assam Government's sector objectives. The Project will focus on this strengthening while providing investment financing for better and safer ferry operations.

### **Relationship to CAS/CPS/CPF**

Support of the Assam Inland Water Transport Project contributes to the three themes in CPS 2013-2017: integration, transformation and inclusion.

The Project will better integrate centers of production and markets within Assam through early improvements in passenger and vehicle accessibility across the Brahmaputra and to its islands; it will help improve integration with the rest of India if, in the longer-run, cargo use can be more strongly developed through government IWT development strategies (CPS outcome 1.1). The Project could be transformational as a demonstration project for other State IWT administrations in India keen on promoting inland water transport as a safer, environmentally attractive mode of transport (CPS outcome 2.6). Improving passenger ferry system on the Brahmaputra to facilitate accessibility and its increased usage will reduce road congestion helping to reduce GHG emissions and contributing to mitigation of climate change impacts. Finally, Assam has one of the lowest per capita income levels in India, and improved accessibility across and along the Brahmaputra will be inclusive in improving access to employment opportunities, health,

education and other social services, access to markets for local products and possibly development of new industries on riparian land and therefore creating more jobs. The Project will work with women and marginalized groups to establish how existing ferry services affect their lives and how they can be improved to create benefit and opportunity for these groups (CPS outcome 3.6).

### **C. Proposed Development Objective(s)**

#### **Proposed Development Objective(s) (From PCN)**

The Project's Development Objectives are to: (a) improve the passenger and vehicle accessibility across the Brahmaputra and to its islands with ferry System in Assam; and (b) improve the institutional framework and strengthen the capacity of the state institutions, which administer, regulate and provide Inland Water Transport.

#### **Key Results (From PCN)**

The Project seeks to achieve the following key results:

- a. Improved transport accessibility and connectivity for people with poor or no access to road or rail services by better quality ferry services;
- b. Increased number of passengers using ferry services;
- c. Institutional Development - Improved institutional and regulatory arrangements for Inland Water Transport in Assam and stronger institutions.

Key intermediate indicators would be developed during project preparation but may include: passenger vessels carrying capacity; improved terminals; improved last mile connectivity to/from terminals; availability of navigation aids in Guwahati area; user satisfaction survey results; training needs identified and number of staff trained; and new institutional framework for IWT defined and implemented

### **D. Concept Description**

The Project originated in a request from GoI to the Bank for loan assistance of USD 120 million for the Project. Preliminary estimates suggest a total Project cost of about USD 150 million equivalent, to be confirmed by more detailed studies.

It is aligned with strategy of developing waterways for promoting regional integration and mitigation of climate change impacts. Broadly, it will consist of two components:

Component 1: Developing Long Term Strategic Plan for IWT in Assam and Institutional and Capacity Development (estimated cost USD 15 million): This component would include but not limited to:

- Long term strategic plans and feasibility studies for sector planning and investment (estimated cost USD 5 million): The primary objective of the study is the preparation of an Integrated Strategic Development Plan to guide the sustainable development of the inland water transport sector in Assam. This will include a vision for the IWT sector development till 2035 and the prioritized time bound plan for institutional (organizational, policy and regulatory) reform and the physical investments (whether from public or private sources). This is planned to be achieved through commissioning of consultancies that undertake a deep review of the condition of IWT in the state, assess the institutional framework and capacity, preparation of demand forecasts finally leading to development of long term IWT action plan and investment needs. In doing so, the component will lay particular emphasis on planning gender inclusive water transport infrastructure/services that are also sustainable and climate resilient. Ways to mainstream water

transport in Guwahati) s urban transport plans including multi-modal integration and last mile connectivity will also be explored.

- Capacity Development (estimated cost USD 10 million): The primary objective will be to strengthen the capacity of Assam Inland Water Transport Authority (AIWTA) to perform its new roles in regard to IWT sector strategy formulation, policy advice and administration, and industry regulation; and assist the new company Assam Inland Water Transport Corporation Limited (AIWTCL) to develop a Business Plan and to guide the company through the initial period of independent operation. The sub-component will also assess sector laws and regulations including safety regulations for vessel and passenger movement more specifically for women and children. Stakeholder outreach and engagement strategy for the project including mechanism for grievance redress will also be developed. To improve capacity, strengthening of training facilities, certification, training and learning events will be considered along with development of new recruits and existing staff and individual passenger ferry operators.

An important objective will be to support establishment of a Search and Rescue (SAR) Organization/piloting emergency response system (policy, procedures, equipment, management) as well as improving systems for emergency preparedness including climate and natural disaster risk preparedness. In addition, the component will work towards strengthening capacity for ongoing environmental and social management of IWT infrastructure and operations.

Component 2: Improvement in Ferry Services (estimated cost US\$ 135 million): This component would be divided into the following sub-components:

- Land-side ferry infrastructure and last mile connectivity: This would involve developing modern, scalable floating terminal infrastructure at major urban and rural ferry ghats; road accesses, terminal buildings and other amenities that is user friendly, specifically for physically challenged, women, children, old and infirm and passengers travelling for health facilities. The infrastructure improvements / designs will in particular adopt a ) working with nature) approach which ensures that project objectives are satisfied in a way that places natural ecosystem at center stage thereby making solutions non-damaging and sustainable (limit dredging, utilize portable / modular infrastructure design adaptation for landing stations to enhance climate change resiliency, low draft vessel designs, etc.). The developments would offer opportunities for ecotourism development, rejuvenating the river waterfront and integration of quality ferry terminals in the urban context.

- Fleet modernization: Condition surveys of the existing fleet, hull & machinery, deck and outfit items to trade suitability, impact stability (for the area of operation), loading and other conditions shall be undertaken. Selected vessels may be retrofitted. This will also include measures to ) green) the vessel fleet, including on waste management practices, as well as fuel efficiency and fuel mix. Potential pilot development of a CNG refueling station for vessels, likely in Guwahati, will also be explored. A few medium-speed shallow draft Roll-On Roll-Off (RoRo) passenger/cargo catamarans for selected major traffic routes would be procured.

- Aids to Navigation: The sub-component would look at drawing on national / international experience in assessing appropriate aids to navigation, their procurement and deployment to allow 24-hour services / night navigation on most vulnerable / trafficked routes / crossing points.

- Incentive scheme/fund for local councils and small country boat private operators ) The objective of instituting such an incentive will be to encourage investment in modern shipping technology including adoption of greener and safer technologies, through review of fiscal and other barriers affecting quality of boat construction and maintenance.

## II. SAFEGUARDS

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

The specific locations, scale and designs of specific investment subproject are not yet known, although they are expected to consist primarily of development and upgrading of IWT passenger terminal facilities, access roads for last mile connectivity to the riverbank, and vessel fleet improvements for ferry services along the Brahmaputra and Barak Rivers and their tributaries. Most subproject are expected to be small scale in nature, with site specific rather than regional potential negative impacts. Wherever possible, working with nature approaches to infrastructure development will be utilized, so as to avoid dredging, river training works or large-scale embankment stabilization works that have a potential to significantly alter river morphology and aquatic ecosystems. River terminals will be modular in design so that they can be moved depending on seasonal fluctuations in river height. Locations will be selected so as to avoid sensitive natural habitats, wherever possible. Nonetheless, at this stage the possibility of larger scale subproject with more significant impacts cannot yet be ruled out. During project preparation, as specific proposed first-year investments as well as eligibility criteria for future subproject are defined, the range of project locations and their potential characteristics will be more fully identified.

Social impacts of the project are expected to be positive with socially inclusive sector development and gender inclusive water transport, enhancing access to safe secured waterways transport systems. However, infrastructure facilities may require land that may have an adverse impact at select locations. The project will prepare an RPF cum Tribal development Framework to address any potential negative impacts. An overall grievance redress mechanism will be established to address complaints directly related to the operation of project activities. The user satisfaction survey will provide feedback and monitor citizens' access to services and the facilities at mid-term and end-term for continuous citizens' engagement during preparation and implementation.

## **B. Borrower's Institutional Capacity for Safeguard Policies**

The Government of Assam will establish an Assam Inland Water Transport Development Society (AIWTDS) to host the Project management unit (PMU) that will coordinate and oversee overall preparation and implementation of the project. The PMU will recruit dedicated staff to manage the project, including environmental and social specialists. The Directorate of Inland Waterway Transport Assam (DIWTA) is the existing agency responsible for river transport and ferry services in the state, which is the primary agency targeted for Strategic Planning, Institutional Capacity and Development under Component 1, and also will implement major investments, under direction from the PMU, at the identified locations under Component 2. This is the first World Bank financed project at this scale to be implemented by the DIWTA.

The project will provide for substantial safeguards-related capacity-building, including training workshops and the production of guidance reports and toolkits. A high priority will be safeguards-related training for DIWTA. Close monitoring of triggered safeguard policies and national laws during implementation and adequate staffing at the PMU level of environmental and social staff will be emphasized.

## **C. Environmental and Social Safeguards Specialists on the Team**

Leanne Farrell (GEN06)

Mridula Singh (GSU06)

**D. POLICIES THAT MIGHT APPLY**

<b>Safeguard Policies</b>	<b>Triggered?</b>	<b>Explanation (Optional)</b>
Environmental Assessment OP/BP 4.01	Yes	The policy is triggered by the proposed investments under Component 2 (Improvement of Ferry Services). While specific investments and their locations are still not identified, they are likely to be mostly of a small-scale nature, with few potential negative impacts. Nonetheless, since the possibility of larger scale investments cannot yet be ruled out, for now the project maintains a Category B rating in accordance with OP 4.01. During preparation, an Environmental Assessment (EA) process will be carried out to confirm the appropriate category, assess site-specific impacts and define all required mitigation measures for fully defined (year-one) subprojects, and develop an Environmental Management Framework (EMF) for future subprojects which may be defined and taken up in later years of project implementation.
Natural Habitats OP/BP 4.04	Yes	<p>The majority of project investments will take place along the banks and islands of the Brahmaputra River, which is a massive braided river that bisects the state of Assam, ranging in width from 1km (at Guwahati) to over 10km. The river's floodplain in the state has been populated and heavily cultivated for centuries. Nonetheless, some blocks of natural habitat do remain, particularly in the Dibru Siakhowa, Kaziranga, Laokhowa, and Orang National Parks which border the river. These protected areas as well as other areas of natural forest and grasslands along the river and on its islands are an important habitat for a variety of wildlife, including a number of species of global significance. The river is also rich in aquatic biodiversity.</p> <p>The project EA will screen for natural habitats at all proposed investment sites, and ensure that the mitigation hierarchy is applied as per the policy, with a preference for avoiding areas of sensitive habitat. The EMF for future subprojects will also include criteria for screening, assessment and management of any potential natural habitat issues.</p>
Forests OP/BP 4.36	TBD	This policy is not expected to be triggered, as subprojects will be on or close to riverbanks, and will not involve any forestry activities. All investment locations will nonetheless be screened for any

		potential impacts on forests. If identified, the policy will be triggered, and impacts to forests will be avoided or mitigated in accordance with the policy.
Pest Management OP 4.09	No	No pesticides will be procured under the project, nor will project activities lead to an increase in the use of pesticides.
Physical Cultural Resources OP/BP 4.11	TBD	The locations of all proposed investment subprojects will be screened for any known physical cultural resources. If identified, it is expected that most impacts can be avoided by adjusting the subproject location. Where this is not feasible, the provisions of the policy will be applied. In addition, all civil works contracts will include chance find procedures.
Indigenous Peoples OP/BP 4.10	Yes	The policy is triggered to ensure access of tribal community to benefits generated by the proposed project and mitigating adverse impact. Accordingly a Tribal Development Framework will be prepared.
Involuntary Resettlement OP/ BP 4.12	Yes	The proposed project will support terminals and facilities along the waterway to improve passenger and cargo. Initial assessments indicates that government land is available, however, minimal additional private may be required that may have adverse impact on owners of household. The project proposes to carry out social impact assessments to prepare safeguard document in compliance with Right to Fair Compensation and Transparent Land Acquisition and Resettlement and Rehabilitation, Act 2013 and OP 4.12.
Safety of Dams OP/BP 4.37	No	The project is not building or rehabilitating any dam, does not depend on existing dams, and is not at potential threat from any existing dams.
Projects on International Waterways OP/BP 7.50	TBD	
Projects in Disputed Areas OP/ BP 7.60	No	The project area does not include any disputed territories.

## E. Safeguard Preparation Plan

### 1. Tentative target date for preparing the PAD Stage ISDS

31-Jan-2017

### 2. Time frame for launching and completing the safeguard-related studies that may be needed. The specific studies and their timing should be specified in the PAD-stage ISDS.

An Environmental Assessment (EA) will be carried out as part of project preparation, including: (a) overall screening, alternatives analysis, and assessment of the range of potential investment activities to be financed through the project, and overall management systems and capacity to

manage negative impacts and enhance positive impacts in accordance with the safeguard policies; (b) site-specific EIAs/EMPs for fully identified (year-one) subprojects; and (c) an Environmental Management Framework (EMF) to guide the assessment and management planning process for future subprojects. If the EA process determines that Category A level subprojects may be financed, a Cumulative Impact Assessment will be carried out. All elements of the assessment process will be subject to stakeholder consultations, and documents will be disclosed publicly in-country and by the World Bank prior to appraisal.

A Resettlement Policy Framework (RPF) cum tribal Development framework will be prepared as all investments and all locations would not be known by appraisal. The RPF cum TDF will be publicly disclosed before project appraisal (in-country at publicly accessible locations and through the Bank's Info-Shop). Project Preparation will require additional support of external experts to facilitate the RPF cum TDF preparation.

Sufficient Bank support will be provided to guide the client to prepare the required safeguards instruments and conduct the necessary consultations.

Project implementation will also include the hiring of dedicated safeguards staff and establishment of safeguards systems, which will monitor compliance and mitigation measures with the World Bank safeguard policies, among other criteria.

### III. Contact point

#### World Bank

Contact: Atul Agarwal  
Title: Sr Transport. Spec.

#### Borrower/Client/Recipient

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#### Implementing Agencies

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### IV. For more information contact:

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### V. Approval

Task Team Leader(s):	Name: Atul Agarwal
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<b><i>Approved By</i></b>		
Safeguards Advisor:	Name: Maged Mahmoud Hamed (SA)	Date: 19-Jul-2016
Practice Manager/ Manager:	Name: Karla Gonzalez Carvajal (PMGR)	Date: 27-Jul-2016
Country Director:	Name: Onno Ruhl (CD)	Date: 29-Jul-2016

1 Reminder: The Bank's Disclosure Policy requires that safeguard-related documents be disclosed before appraisal (i) at the InfoShop and (ii) in country, at publicly accessible locations and in a form and language that are accessible to potentially affected persons.