

# INTEGRATED SAFEGUARDS DATA SHEET CONCEPT STAGE

Report No.: ISDSC373

Date ISDS Prepared/Updated: 05-Dec-2011

## I. BASIC INFORMATION

### A. Basic Project Data

<b>Country:</b>	India	<b>Project ID:</b>	P127725
<b>Project Name:</b>	Bihar Flood Rehabilitation Phase II (P127725)		
<b>Task Team Leader:</b>	Francis Ghesquiere		
<b>Estimated Appraisal Date:</b>	10-Aug-2012	<b>Estimated Board Date:</b>	15-Nov-2012
<b>Managing Unit:</b>	SASDU	<b>Lending Instrument:</b>	Specific Investment Loan
<b>Sector:</b>	General water, sanitation and flood protection sector (70%), General agriculture, fishing and forestry sector (30%)		
<b>Theme:</b>	Natural disaster management (70%), Other rural development (30%)		
<b>Financing (In USD Million)</b>			
<b>Financing Source</b>			<b>Amount</b>
BORROWER/RECIPIENT			250.00
International Development Association (IDA)			750.00
Total			1000.00
<b>Environmental Category:</b>	A - Full Assessment		
<b>Is this a Repeater project?</b>	No		

### B. Project Objectives

The Project Development Objective of the Bihar Flood Recovery Project Phase II is to increase productivity and profitability of agriculture (crop and livestock), decrease volatility of agricultural production, and enhance resilience to floods and droughts in the selected project areas.

### C. Project Description

The project will be developed under a multi-sector framework with investment activities aimed at reducing output volatility and increasing productivity in selected geographical areas. Flood control and irrigation investments will target two areas selected on either side of the Ganges River. Flood control investments will be made in the Greater Kosi Basin while irrigation investments will be made in both Northeast and South Central Bihar. Additional activities will be concentrated in the same geographical area to increase connectivity between farmers and markets through strengthening and augmenting the transport network, primarily focusing on providing missing bridges and rural roads to connect farmers to local markets (rural haats). Additional activities in the same districts will then aim at increasing agricultural productivity through investments aimed at improving the effectiveness of public sector support to agriculture and catalyzing greater private sector participation in agricultural production. These activities will include significant institutional strengthening and capacity building efforts, along with activities to increase access to finance.

By integrating activities from several departments, the project seeks to maximize complementarity of action. Flood control, irrigation, improved connectivity, and services to farmers will build on each other to help increase productivity in the targeted areas. In addition, several activities will leverage each other. For example, rural roads can help strengthen embankments and be used for evacuation in case of floods; off-grid solar power can provide electricity for other agriculture activities; and solar powered pumps can also include sensors to monitor the water table.

Particular attention will be given to institutional strengthening, including in flood control, to increase capacity to manage embankment and river systems; irrigation, to better understand and manage water resources while improving the capacity of water user associations; transport, to increase the ability to maintain rural connectivity; and, agriculture, to increase the effectiveness of services and support to farmers, while providing support to increase the involvement of private participation in the agriculture value chain.

The project will comprise the following six components.

Component 1 - Improving Flood Management [US\$500] million

Activities financed under this component will primarily focus on increasing the resiliency of existing infrastructure in the greater Kosi Basin to annual flooding. The component will also include significant institutional strengthening activities to help Bihar move towards a more proactive risk management approach to flood risk. Investments to be financed include, inter-alia: (i) improvements and strengthening of critical portions of the Eastern Kosi Embankment; (ii) restoration of embankments and channel improvement in critical stretches of the Kosi River; (iii) procurement of dredging equipment and maintenance; (iv) flood protection works to protect vulnerable populations; (v) flood moderation schemes for NE Bihar; and, (vi) drainage schemes for NE Bihar.

Component 2 - Strengthening Irrigation [US\$150] million

Activities financed under this component will primarily focus on increasing the irrigation capacity of existing infrastructure in the Greater Kosi Basin and South Central Bihar. In addition to significant institutional strengthening, this component will finance two main activities. The first will rehabilitate a large irrigation network. Based on an economic analysis to be undertaken under project preparation, this will either be an extensive renovation and restoration of Ahar-Pynes schemes that are similar to tank irrigation structures throughout India, or the lining of the sides of the Sone Canal to limit the extensive leakage and loss of irrigation capacity. The second activity will support the procurement and implementation of

off-grid solar powered, energy efficient, direct current pumps and solar panels. A long-term management contract will be signed for the maintenance of the pumps to ensure sustainability. South Bihar has a high prevalence of days with sunshine and is considered ideal for solar power generation. Institutional strengthening for this component will focus on improving the functionality of Water User Associations and the implementation of a GIS based Ground Water Monitoring System.

Component 3 - Access to Markets [US\$200] million

Activities financed under this component will focus on increasing the connectivity between farmers and markets and will include a large institutional strengthening and capacity building effort. Investments in rural roads and bridges will be made in both targeted regions, the Greater Kosi Basin and South Central Bihar, with emphasis on bridge construction. Investments to be financed include the construction of small and medium bridges and connecting roads in the targeted areas, and upgrading of rural roads connecting the developed rural roads to a higher level of roads. Rural roads to be financed will be identified based on potential connections to the local farmer markets (rural haats). The institutional strengthening activities will focus on the development of an Asset Management System, as well as training in technical skill gradation, and management information systems. Institutional support will also be provided to promote alternative construction methods and materials that take into consideration the annual phenomenon of annual flooding.

Component 4 - Enhancing Agricultural Efficiency [US\$100] million\*

This component aims to sustainably increase the productivity and profitability of agriculture in the selected project areas. The focus will be on small and marginal farmers and the activities financed will integrate, and add value to, investments made under other components to improve production and market access conditions. Project activities will be implemented by line departments, supplemented by contractual extension staff (a current institutional practice in the State), and with significant involvement of farmer's groups.

There will be four sub-components, including: (i) Crop Production - activities to be financed include dissemination of improved (higher-yield, climate resilient) crop varieties, support to farmers (through access to inputs and/or relevant machinery) to sustainably adopt the demonstrated varieties and production practices, enhancing supply of quality seeds/breed at the local level, and improved on-farm water management; (ii) Livestock Production (especially fish and small ruminants) - activities to be financed include increasing supply of quality fingerlings and improved aquaculture practices in fisheries, and provision of good quality bucks and improved nutrition and health management for goats and other small ruminants; (iii) Post-Harvest Value-Addition and Marketing - activities to be financed include enhancing community-level assets and expertise for post-harvest value-addition, facilitating establishment of local agro-enterprises (through loan guarantees and other support to "crowd-in" private investment) and upgrading/establishment of local markets (haats) (these haats will be integrated with investments in Component 3, and also feed into larger "hub" markets being developed under a concurrent ADB-financed project; and (iv) Institutional Strengthening and Capacity Building - activities to be financed include strengthening institutional capacity to provide effective extension support at the farmer level, enhancing staff technical skills, and improving capacity for coordination, management and monitoring of relevant public programs in agriculture and allied sectors.

Results indicators for this component include adoption of improved seed/breed varieties, adoption of improved crop/livestock production practices, better seed replacement rate, higher cropping intensity and improved crop-mix, and a higher share of final value captured by primary producers/local communities.

Component 5 - Contingent Emergency Response [US\$0] million

This component, to be prepared under OP/BP8.0, will provide flexibility in the allocation of project resources in case of a major disaster occurring during project implementation. The component would allow for the GoB to request reallocation of uncommitted project resources to emergency response and recovery activities. Disbursements would be made against the procurement of goods, works, and consultant services required for supporting the immediate response and recovery needs of the GoB. A specified amount could also be earmarked for liquidity support through reimbursement of a pre-identified positive list of goods purchased by the state. The resources would be executed through the existing PMU greatly accelerating a possible response.

Component 6 - Implementation Support [US\$50] million

This component would finance activities required for project implementation. These would include incremental operating costs as well as the cost of operating Bihar Aapada Punarwas Evam Punarnirman Society (BAPEPS) and for outside consultancies required for preparation and supervision of specific activities.

\*In parallel to the preparation of the Kosi Phase II, the Bank is also supporting Bihar through a proposed Second Development Policy Loan (DPL), which will include an agriculture policy reform program that would also support the effectiveness of public investments provided under this project.

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

The project is located in the State of Bihar in India. Bihar lies mid-way between West Bengal in the east and Uttar Pradesh in the west. It is bound by Nepal in north and by Jharkhand in the southern direction. The State is a stretch of fertile plain that is divided into two unequal parts, separated by the Ganges River, which flows from west to east.

The northern part of the State is drained by the Ganges northern tributaries of Bagmati, Gandak and Kosi, which originate in Nepal. These three rivers are difficult to manage and regularly flood much of North Bihar. The lateral movement of the Kosi River has led to erosion, loss of land and water logging in its basin over the years. A considerable portion of the land in the project area is waterlogged, a phenomenon that has been exacerbated by development. Natural drainage has been impeded by embankments, canals, roads, and railway tracks often due to poor design and insufficient attention to the larger hydrological context of the region as a whole. The southern part of the state, suffers from the opposite problem.

Apart from the natural factors linked to geomorphology and hydrology of the Kosi basin, human interventions (both in Nepal as well as in Bihar) have impacted changes in sediment load or run-off through water resource management schemes such as bunds, barrages and embankments and accelerated erosion in the upper watershed due to deforestation and development works. The conventional flood-control measures have changed the agro-ecology of the Kosi basin. Flood-prone and waterlogged areas have increased, and erosion and sand casting has temporarily or permanently made huge areas of land uncultivable; and this, in turn, has increased landlessness and distress amongst the local community. South of the Ganges, maintaining sufficient water resources for agricultural production is an important challenge.

The economy of Bihar is largely service oriented, with a significant agricultural base and a limited industrial sector. Bihar is an important agricultural state: it accounts for 8-10 percent of the national agricultural production and is the second largest producer of vegetables and the third largest producer of fruits. However, agricultural productivity, cropping intensity, and market-orientation of production are low - evidenced by the fact that the average per worker income in agriculture is half of the national average. Despite the importance of the agriculture sector to the State's economy and the people's livelihoods, investment in irrigation, research, extension and farm-input and - output market linkages have been inadequate in the past, which has constrained output and productivity.

The project would be implemented in a multi-sector framework with investment activities aimed at reducing output volatility and increasing productivity in selected geographical areas. Flood control and irrigation investments will target two areas selected on either side of the Ganges River. Flood control investments will be made in the Greater Kosi Basin while irrigation rehabilitation investments will be made in both Northeast

and South Central Bihar. While the BKFRP is addressing the damage caused due to the breach in the Kosi river embankment in August 2008, this Phase 2 project would aim to address these larger flood management issues in the Greater Kosi Basin.

#### E. Borrowers Institutional Capacity for Safeguard Policies

Under the first phase of the Kosi Flood Recovery Program, the Government constituted the Bihar Aapada Punarwas Evam Punarnirman Society (BAPEPS) to coordinate project implementation. This Phase II operation will benefit from this existing arrangement. The BAPEPS will act as the Project Management Unit (PMU) for all components and will be primarily responsible for the implementation of the project. The ex-officio Chairperson of the Society will be the Development Commissioner, GoB. The BAPEPS will have the overall responsibility for project implementation including, but not limited to, reporting, monitoring and evaluation, procurement control, financial management, audit and disbursements, compliance with the environmental and social policy requirements, as well as coordination with the line agencies and the World Bank. Within the PMU, an Environment Manager and Social Manager (under Deputy Director, Projects) will be deployed to handle all matters pertaining to environment and social management under the project.

The key responsibilities of the Environment and Social Managers include: (a) updating of the ESMF document; (b) orientation and training of the PMU staff (both at headquarters and in the field offices) and implementing agency teams on aspects covered under the ESMF; (c) leading/providing over-sight on the EA/SA process and its output/s, including preparation of EMPs; (d) review of monitoring reports submitted by the implementing agencies on ESMF/EMP implementation; (e) conducting regular visits to project sites to review ESMF compliance during sub-project planning, design and execution; (f) providing guidance and inputs to the PMU and implementing agency teams on environment and social management aspects. These specialists will also deal with matters pertaining to integration of ESMF into the sub-project design and contract documents; preparation of ToRs for studies (such as for EA/SA); reporting, documentation, monitoring and evaluation on environment and social aspects and will ensure over-all co-ordination with the Implementing Agencies and field offices of BAPEPS. The representative offices of the BAPEPS at the district and block level will support the Environment and Social Manager in carrying-out the responsibilities listed above.

#### F. Environmental and Social Safeguards Specialists on the Team

Shankar Narayanan (SASDS)

Neha Pravash Kumar Mishra (SASDI)

## II. SAFEGUARD POLICIES THAT MIGHT APPLY

Safeguard Policies Triggered	Yes	No	TBD	Explanation
Environmental Assessment OP/BP 4.01	X			Specific interventions envisaged under the project such as those for flood control, irrigation and strengthening of transport network may have some potential adverse environmental impacts in their area of influence. Such impacts will depend upon the location, nature and magnitude of interventions - there will be clarity on this once the said details are known and the results from the environment screening process are available. OP 4.01 has been triggered to ensure that such investments are planned and designed to be sound and sustainable by integrating environmental dimensions into the over-all decision making process.
Natural Habitats OP/BP 4.04			X	After the screening results are available, the safeguard policy trigger on natural habitats will be ascertained, particularly in context of proposed activities such as improvement/ strengthening of existing embankments, channel improvements, dredging and other flood protection works. While impacts on critical natural habitats are not envisaged based on currently available information, the safeguard related studies will determine if such an issue is likely to arise on account of a such specific sub-project interventions.
Forests OP/BP 4.36		X		
Pest Management OP 4.09			X	Some proposed interventions for enhancing agricultural efficiency under Component 4 may trigger policy requirements of OP 4.09. While the proposed component largely aims to sustainably increase the productivity and profitability of agriculture in the selected project areas, activities such as crop production enhancement/management may require adoption of strategies that promote use of biological/ environmental control methods and reduces reliance on chemical pesticides, including issues related to handling, application and disposal of waste products.
Physical Cultural Resources OP/BP 4.11	X			A few project interventions may be located close to sites, structures, natural/man-made features that have historical, archeological, religious or other cultural significance. Through screening and EA/ SA process, the project's potential impacts on physical cultural resources will be determined and management measures, as required will be taken and integrated into the sub-project cycle.
Indigenous Peoples OP/BP 4.10		X		
Involuntary Resettlement OP/BP 4.12	X			Some project interventions are likely to trigger issues such as those related to land acquisition, loss of assets and impact on livelihood sources.
Safety of Dams OP/BP 4.37		X		

Safeguard Policies Triggered	Yes	No	TBD	Explanation
Projects on International Waterways OP/BP 7.50	X			
Projects in Disputed Areas OP/BP 7.60		X		

### III. SAFEGUARD PREPARATION PLAN

**A. Tentative target date for preparing the PAD Stage ISDS:** 31-May-2012

**B. Time frame for launching and completing the safeguard-related studies that may be needed. The specific studies and their timing<sup>1</sup> should be specified in the PAD-stage ISDS:**

The process that would be followed for launching and completing the safeguard-related studies for the project is given below:

1. Updating/revision of Environment and Social Management Framework, being currently used for BKFRP - The revision will be made reflecting the issues and safeguards process requirements in line with the proposed components/sub-components under this project. Apart from providing a direction on stakeholder consultation, institutional aspects and application of regulatory requirements, the ESMF will also guide the 'environment and social screening process' based on which the need for more comprehensive assessment for sub-projects will be determined.

Expected time frame for completion of this Activity - February 15, 2011.

2. Screening: The environment and social screening will be completed for the sub-projects proposed to be covered/financed under the project using the process/methodology agreed in the ESMF and a report will be prepared.

Expected time frame for completion of this Activity - By April 15, 2011.

3. Environment and Social Assessment - In line with WB's operational policies, the environment and social assessment (including preparation of related outputs such as EMPs and RAPs) would be conducted for all sub-projects for which the comprehensive study needs are identified.

Expected time frame for completion of this Activity - Prior to appraisal for sub-projects proposed for financing in year one and for the rest of the sub-projects, the EA/SA will be completed prior to invitation of bids.

The safeguard-related documents will be disclosed before appraisal at the Bank's InfoShop and in country in line with requirements of Bank's Disclosure Policy.

### IV. APPROVALS

<i>Signed and submitted by:</i>		
Task Team Leader:	Name: Lilian MacArthur	Date: 05-Dec-2011
<i>Approved By:</i>		
Regional Safeguards Coordinator:	Name: Sanjay Srivastava (RSA)	Date: 05-Dec-2011
Comments: cleared. Please see email dated 12/05/2011 for details.		
Sector Manager:	Name: Bernice K. Van Bronkhorst (SM)	Date: 05-Dec-2011
Comments:		

<sup>1</sup> 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.