

**INTEGRATED SAFEGUARDS DATA SHEET  
CONCEPT STAGE**

Report No.: AC6252

**Date ISDS Prepared/Updated: 06/20/2011**

**I. BASIC INFORMATION**

**A. Basic Project Data**

Country: India	Project ID: P122770
Project Name: Uttar Pradesh Water Sector Restructuring Project Phase 2	
Task Team Leader: Winston Yu	
Estimated Appraisal Date: March 20, 2012	Estimated Board Date: July 31, 2012
Managing Unit: SASDA	Lending Instrument: Specific Investment Loan
Sector: Irrigation and drainage (35%);General water, sanitation and flood protection sector (25%);Crops (25%);Agricultural extension and research (15%)	
Theme: Other rural development (25%);Water resource management (25%);Rural services and infrastructure (25%);Administrative and civil service reform (25%)	
IBRD Amount (US\$m.):	0.00
IDA Amount (US\$m.):	800.00
GEF Amount (US\$m.):	0.00
PCF Amount (US\$m.):	0.00
Other financing amounts by source:	
<u>BORROWER/RECIPIENT</u>	0.00
	0.00

**B. Project Objectives [from section 2 of PCN]**

The Project Development Objective (PDO) of the Uttar Pradesh Water Sector Restructuring Project (UPWSRP) Phase II is to:

1. Assist the GoUP in strengthening its institutional and policy framework for integrated water resources management for the entire State; and
2. Enable farmers in targeted irrigated areas to increase their agricultural productivity and water use efficiency.

**C. Project Description [from section 3 of PCN]**

Component A: Strengthening of Apex Water Institutions and Inter-Sector Coordination (\$15M)

Component A1: Operationalizing the State Water Regulator

The Uttar Pradesh Water Management and Regulatory Commission (UPWAMREC) has been created under an Act (2008) passed by the legislative assembly. Functions of this 'Regulator' include, inter alia, approving the Integrated State Water Basin Plans, determining the allocation

and distribution of entitlements for various uses of water (e.g. urban, agriculture, energy) as defined by the State Water Policy, reviewing and providing clearances to new water resources project, establishing a system of enforcement, monitoring, and measurement of entitlements, promoting better water management techniques and setting water supply standards, fixing and regulating a water tariff system, and to aid and advise the State Government on any matter referred to the Commission. This component will build the capacity of the UPWAMREC to implement the power, functions, and duties of the Commission. This will include primarily training, a panel of experts, and various workshops and study tours.

#### Component A2: Strengthening the Knowledge Basin and Analytical Capacity for Integrated Water Resources Management

The State Water Resources Agency (SWARA) and the State Water Resources Data and Analysis Center (SWARADAC) have been created and are functional. These two agencies support the UPWAMREC. The function of SWARA is to develop and provide State-level inter-sectoral analysis on water allocation, planning, and management for the optimal use of surface and groundwater uses. The function of SWARADAC is to collect, verify validate, analyze, and store data related to water resources management for each river sub-basin in the State. This component will improve the knowledge base and analytical capacity of these two institutions. This will include preparing basin plans and decision support systems for the sub-basins in the Ghagra-Gomti basin, various strategic studies, development of an 'Integrated Water Resources Information System (IWRIS)', strengthen the hydrologic-meteorological observation network for the entire state, develop detailed plans for conjunctive use, and special studies for the Bundelkhand region.

#### Component B: Modernization and Rehabilitation of Irrigation and Drainage Systems (\$350M)

##### Component B1: Horizontal Expansion of I&D Investments

This component will rehabilitate and modernize the irrigation and drainage system in new areas in parts of the Sarda Sahayak System (including along the Haidergarh, Barabanki, and Dariyabad Branches) and for select basins in the drought-prone Bundelkhand region (including the Ken-Baghain Basin). The total cultivable command area will be about 500,000 hectares. The aim is to improve the design of the system to ensure timely, assured, controlled, and measured water delivery. This may include updating topographic and cadastral surveys in the Phase 2 areas, updating hydrologic assessments, rehabilitation of canals, drains, and pucca structures, introducing silt traps where technically advantageous, clarification and modernization of outlets, SCADA and telemetry system, cross regulators as required, duckbill weirs, village road bridges, measurement devices (e.g. flow meters), vertical drainage, and canal lining in critical areas. This component will build upon the design features prepared in UPWSRP.

##### Component B1: Vertical Extension of I&D Investments

This component will introduce modern methods of control and operation in the UPWSRP Phase 1 areas (i.e. Jaunpur Branch) where modernization was not completed. This includes the installation of controllable and measurable inlets to the minors (with participation of WUAs) to

provide the basis for volumetric water charges, proportional, non-adjustable water dividers having a measurement facility for outlets to the field channels, modern measurement devices, and SCADA and telemetry systems.

#### Component C: Consolidation and Enhancement of Irrigation Department Reforms (\$20M)

##### Component C1: UPID Modernization and Capacity Building

As part of UPWSRP Phase 1, a substantial training program was delivered involving over 4500 UPID participants covering topics ranging from the technical (e.g. AutoCAD, GIS, Canal-Mod, MASSCOT) to the managerial. Almost 2000 officers were given basic computer training as the Department was computerized and an extensive management information system (MIS) for business processing put in place. This component will continue these capacity building efforts including among other things training on advanced surveying techniques, GIS, modern control and measurement approaches, computers and IT systems, exposure trips to enhance the understanding of participatory irrigation management, and financial management. The IT section of UPID will also be further modernized including strengthening the ISO structure and staff, creating a centralized IT help desk, and strengthening the LAN and WAN systems across the divisional offices. Finally, this component will also focus on improving the operation and maintenance capacity of the department. This will be done through the development and training on asset management and planning through the existing MIS.

##### Component C2: Water Users Associations Strengthening and Development

Under UPWSRP Phase 1, 4678 water users associations at the outlet and 421 water users associations at the minor level have been constituted. Elections to establish executive committees have been completed. The vision of the participatory irrigation management (PIM) approach to irrigation water delivery (as defined in the Act on Participatory Irrigation Management) is to build the capacity of these local associations to manage themselves the local water distribution, assess water charges, manage finances, operate and maintain local infrastructure, resolve conflicts, plan and operate the schedule of water, and promote greater efficient water use. This component will support the strengthening and development of water users associations in both the Phase 1 and new Phase 2 areas. This may include awareness campaigns about the PIM Act, support to the election process, and training on all aspects of local level water management and irrigation. This component will also (a) assist the GoUP in ensuring that the UP PIM Act is effective across the State and mainstreamed in all of its activities, systems and procedures; (b) ensure that UPID officers and staff are fully conversant with their duties and responsibilities under the Act and (c) provide technical assistance, training and capacity building support towards helping the State and UPID realize the stated benefits of implementation of this Act.

##### Component C3: Establishing a State-Wide Flood Management Information System (FMIS)

Thirty percent of the State is recognized as flood prone. The eastern region is one of the worst affected area and floods occur almost every year from the Ghagra, Rapti, and Gandak Rivers and their tributaries. Though a large number of structural and non-structural measures have been

implemented for these areas a modern flood forecasting and early warning system is required. The main activity is to set-up a comprehensive flood management information system (under the SWARA) for the state. Specific tools will be developed for the Rapti Basin as a pilot. Moreover, this component will strengthen the linkages between the SWARA/DAC and the State level Disaster Management Authority and identify specific disaster management water-related products.

#### Component D: Enhancing Agriculture Productivity (\$75M)

##### Component D1: Agriculture Intensification and Diversification

This component will focus on Phase 1 outlet command areas where improvements with irrigation water availability and timing and support to water users associations can be packaged with improved production practices (e.g. quality seeds, balanced use of organic and chemical fertilizers, proper plant spacing) to improve overall productivity and increase diversification. In these areas, a variety of demonstration programs and pilots will also be introduced. This may include piloting pigeon-pea, mustard, green gram (moong), banana, and papaya and various horticulture and animal husbandry practices. This may also build upon the earlier Uttar Pradesh Diversification Agricultural Support Projects (DASP). These interventions will be sequenced into the Phase 2 areas as water delivery systems are improved.

##### Component D2: Drought-Prone Bundelkhand

Accelerating productivity and production in the dry Bundelkhand area is a priority for the GoUP. This component will introduce various measures to conserve water including drip and other micro-irrigation technologies, conjunctive use, land leveling, and less water intensive seed varieties (e.g. pulses and oilseeds). Moreover, demonstration packages will be developed to encourage fertilizer and pesticide usage, improve seed replacement rates, increase the use of farm machinery and equipment, and create silos and cold storage facilities to minimize post harvest losses. These new approaches will be disseminated through awareness and training programs, field demonstrations, and various pilots.

#### Component E: Feasibility Studies and Preparation Activities for the Next Phase (\$5M)

This component will include initiating topographic surveys and environmental, social and other assessment and preparation of feasibility studies for activities to be undertaken in the third project in the UP Water Sector Reform Program. Lessons learned during implementation of Phase 2 will be reflected in this preparatory work.

#### Component F: Project Coordination and Monitoring (\$15M)

The existing multi-disciplinary Project Activities Core Team (PACT) will coordinate the project activities, which span multiple Departments. This component is designed to assist the PACT with its role in facilitating and guiding the implementation and monitoring of all project activities, ensuring synergy and coordination amongst activities and Departments, preparing consolidated reports and facilitating training and study tours.

### **D. Project location (if known)**

The project has components that are state-wide (i.e. Component A: Strengthening of Apex Water Institutions and Inter-Sector Coordination and Component C: Consolidation and Enhancement of Irrigation Department Reforms) and physical interventions (i.e. Component B: Modernization and Rehabilitation of Irrigation and Drainage Systems) that are targeted to rehabilitate and modernize the irrigation and drainage system in new areas in parts of the Sarada Sahayak System (including along the Haidargarh, Barabanki, and Dariyabad Branches) and for select basins in the drought-prone Bundelkhand region (including the Ken-Baghain Basin). The project will also introduce modern methods of control and operation in the UPWSRP Phase 1 areas (i.e. Jaunpur Branch) where modernization was not completed. Agricultural productivity enhancements (i.e. Component D) will also be introduced in both of the Phase 1 and 2 areas.

#### **E. Borrower's Institutional Capacity for Safeguard Policies [from PCN]**

After several years of engagement working closely with the Bank team, the PACT has built significant capacity and knowledge about World Bank procedures at the sector (institutional risk) and project (implementation risk) levels. This continuity with staff and management will enhance the initial stages of project implementation.

#### **F. Environmental and Social Safeguards Specialists**

Mr Shankar Narayanan (SASDS)

Mr Anupam Joshi (SASDI)

## **II. SAFEGUARD POLICIES THAT MIGHT APPLY**

<b>Safeguard Policies Triggered</b>	<b>Yes</b>	<b>No</b>	<b>TBD</b>
<b>Environmental Assessment (OP/BP 4.01)</b>	<b>X</b>		
This policy is triggered as the proposed investments in irrigation infrastructure and water management activities could have adverse environmental impacts. The physical works of the project are rehabilitative in nature and therefore are not anticipated to cause any significant adverse environmental or social impacts. Full environmental and social assessments were carried out under Phase I and these assessments will be built upon and extended into the Phase II project areas.			
<b>Natural Habitats (OP/BP 4.04)</b>			<b>X</b>
An Environmental Assessment will determine whether the Natural Habitats policy will be triggered or not.			
<b>Forests (OP/BP 4.36)</b>		<b>X</b>	
<b>Pest Management (OP 4.09)</b>	<b>X</b>		
Although the project does not plan to finance any pesticides, there is a possibility of induced impact of greater pesticide use due to increased agricultural intensification and diversification. Hence, integrated pest management activities should be enhanced and the pest management plan that was developed under Phase I will be expanded.			
<b>Physical Cultural Resources (OP/BP 4.11)</b>		<b>X</b>	
<b>Indigenous Peoples (OP/BP 4.10)</b>			<b>X</b>
A social assessment will determine whether the Indigenous Peoples policy will be triggered or not			
<b>Involuntary Resettlement (OP/BP 4.12)</b>	<b>X</b>		
Even though it is unlikely that the rehabilitation and modernization of the irrigation systems in the UPWSRP Phase 2 Project area would call for any involuntary resettlement, this policy is			

<b>Safeguard Policies Triggered</b>	<b>Yes</b>	<b>No</b>	<b>TBD</b>
triggered to provide for any such requirement that might arise and to ensure that remedial action incorporates the requirements of OP 4.12.			
<b>Safety of Dams (OP/BP 4.37)</b>		<b>X</b>	
<b>Projects on International Waterways (OP/BP 7.50)</b>	<b>X</b>		
Although the project is in an international river basin (Ganges), there is not anticipated to be any significant impact upstream or downstream on water quality or quantity given the nature of interventions. Given the nature of this project, the OP is triggered and, according to BP 7.50, a waiver on notification will be sought and granted similar to Phase I.			
<b>Projects in Disputed Areas (OP/BP 7.60)</b>		<b>X</b>	

**Environmental Category:** A - Full Assessment

### III. SAFEGUARD PREPARATION PLAN

- A. Target date for the Quality Enhancement Review (QER), at which time the PAD-stage ISDS would be prepared: 06/01/2012
- B. For projects that will not require a QER, the target date for preparing the PAD-stage ISDS: N/A
- C. 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 team hopes that the Environmental Social Assessment will be completed by May 2012.

### IV. APPROVALS

<i>Signed and submitted by:</i>		
<b>Task Team Leader:</b>	<b>Mr Winston Yu</b>	
<i>Approved by:</i>		
<b>Regional Safeguards Coordinator:</b>	<b>Mr Sanjay Srivastava</b>	<b>06/16/2011</b>
<b>Comments: cleared. Please share with us the ToR for ESA.</b>		
<b>Sector Manager:</b>	<b>Mr Parmesh Shah</b>	<b>06/20/2011</b>
<b>Comments: Cleared</b>		

<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.

