INTEGRATED SAFEGUARDS DATA SHEET
CONCEPT STAGE

Report No.: ISDSC1128

Date ISDS Prepared/Updated: 22-Dec-2014

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I. BASIC INFORMATION

A. Basic Project Data

Country:	India	**Project ID:**	P152698
Project Name:	IN Hydrology III Project (P152698)		
Task Team Leader(s):	Anju Gaur		
Estimated Appraisal Date:	31-Jul-2015	**Estimated Board Date:**	30-Sep-2015
Managing Unit:	GWADR	**Lending Instrument:**	Investment Project Financing
Sector(s):	General information and communications sector (40%), Irrigation and drainage (20%), Public administration- Water, sanitation and flo od protection (15%), Flood protection (15%), General agriculture, fishing and forestry sector (10%)		
Theme(s):	Water resource management (80%), e-Government (20%)		
Financing (In USD Million)			
Total Project Cost:	500.00	Total Bank Financing:	370.00
Financing Gap:	0.00		

Financing Source	Amount
BORROWER/RECIPIENT	130.00
International Development Association (IDA)	370.00
Total	500.00

Environmental Category:	B - Partial Assessment
Is this a Repeater project?	No

B. Project Objectives

The proposed PDO is to “to strengthen water resources planning and management in selected institutions across India through improved monitoring and enhanced accessibility and use of water resources data and information”

C. Project Description

Based on the successes of previous phases of project, the Government of India wishes to expand these efforts to cover the entire country including the states of the Indus, Ganga and Brahmaputra basins . HP-III will further improve and expand monitoring systems for water availability and water use. It will emphasize real-time monitoring for operations, flow forecasting, integrated water resource planning on a river basin basis and strengthening of community-based groundwater management. HP-III will contribute to the GoI Digital India initiative by integrating across state and central agencies.

Building on the earlier phases, HP-III will include the following:

i. Database standardization: a national information center and center of excellence will be established to standardize databases and associated procedures and to integrate hydro-meteorological and water use data of the country.
ii. Transparent and reliable water data: real-time and automated monitoring with online delivery for reliable and transparent data access in support of operational management.
iii. Balanced centralized and decentralized support: the project will provide both generic national solutions (through central agencies) and specific state-based solutions.
iv.Operational systems: state-level operational systems will be put in place for flood management and irrigation distribution.
v. River basin approach: IWRM on a river basin basis will be promoted to devise appropriate solutions for planning investments and developments.
vi.Flexible design: the project will support performance based funding allocations and flexibility in program to address the needs of states.
vii.Cross learning: cross-learning among states will be continued including transferring knowledge from HP-II state agencies to new HP-III agencies.

The project will consist of the following four components:

Component A: Improving In Situ Monitoring System (IMS): USD 300 million.

This component will expand and upgrade water resources monitoring systems, bolster database population and maintenance, develop community-based data collection and water management, and conduct site specific surveys to the states in the Indus, Ganges and Brahmaputra Basins and in North-East India. This will include:

i) In situ real time/automated monitoring systems (weather, river, reservoir, canal, groundwater and water quality) ;
ii) Community-based hydrological monitoring and management system;
iii) Implementation of protocols developed by central agencies (CWC, CGWB and CPCB) for inter-agency data sharing, data validation and analytical quality control procedures for water quality laboratories;
iv)Establishment of National Water Information Center though upgrading and expansion of database software on web-based centralized systems for data entry, data storage, data management and data dissemination, developed under HP-II (including India-WRIS); and
v)Targeted surveys such as i) priority reservoir sedimentation surveys, ii) bathymetric surveys in river stretches with critical flooding issues, iii) groundwater exploration and aquifer mapping for selected areas, and iv) water quality and waste load surveys, to assess the load, fate and transport of critical constituents within water quality hotspots.

The output of this component would be a national Water Resources Monitoring System.

Component B: Improving Spatial Information System (SIS): USD 80 million

The component will strengthen and make available remote sensing and spatial information data to water managers and stakeholders through providing and processing of spatial data sets, creating tools for tailor-made processing of spatial data, and developing web-based portals for public access to information. Development of centralized spatial data sets will largely be produced by National Remotes Sensing Center (NRSC), Indian Meteorological Department (IMD) and Survey of India (SOI) with the dissemination of the information via a publicly accessible, web-based portal for non-classified data. Products to be developed include:

i) Digital Elevation Model (DEM) for the entire country for improved flood hazard mapping and other planning purposes,
ii) Local high resolution surveys (such as LIDAR) for flood prone areas to support flood risk mapping and management action plans,
iii) Satellite based estimates of water balance parameters including climate, land use, irrigation water requirement, and flood assessment
iv)Publicly accessible, web-based portal for non-classified data.

The output of this component will be centralized Water Resources Information System (WRIS) customized with respect to various users including public, state agencies and other departments.

Component C: Promoting Water Resources Operation and Management Applications (WROMA): USD 50 million
This component will ensure the usefulness of the WRMS and WRIS data sets through decision support systems (DSS) for river basin planning, water balance assessments, climate risk assessments, water quality management, scenario analysis for investment planning, and tools for community based groundwater management. It will develop short-term and seasonal flow forecasts, establish multiple flood/flow forecasting systems important for operation of reservoirs and flood management, and introduce on pilot basis operation and water distribution systems for irrigation systems.

Flagship knowledge products will include IWRM plans for selected river basins, a report on the status of India's water resources, including water balance assessments, water quality assessments and support purpose driven studies (PDS) on specific issues for each IA, including climate risk assessments for present and planned water resources infrastructure.

Component D: Strengthening Water Resources Institutions and Capacity Building (WRICB): USD 70 million

Component D will strengthen and build capacity in the participating Implementing Agencies (Water Resources Institutions) through establishing Water Resources Knowledge Centers and providing infrastructure and ITC equipment, capacity building and extensive training programs, supporting project management through Technical Assistance and Management Consultancies, and funding of incremental staff. In particular, the project will support the establishment of a National Water Information Center (upgraded version of India-WRIS) and centers of excellence at national and state levels. The National Water Information Center will provide a central platform for integration and exchange of water data across the country and will ensure the sustainability of data management.

MoWR, RD&GR established India-WRIS with its own resources and they are now committed to the National Water Information Center following the achievements of HP-II. In addition, the project will support strengthening of irrigation training Institutes for improved water management practices.

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

The Project would cover all states of India and will draw lessons from the past and current projects - Hydrology Phase I and II projects implemented in selected states. For the physical locations of the monitoring stations (component 1) the sites will be chosen to fill the gaps in the current monitoring network. While the intention is to use only state owned land for the upgradation of existing monitoring stations, a final determination on locations where land is required, the process used to obtain it, and a consequential determination of whether OP 4.12 is triggered will be made before project appraisal. Under component 3, water resources management plans, and drought management plans will be prepared at the sub-basin levels. The choice of sub-basins will emerge out of the success of implementation of components 1 and 2 (as without adequate monitoring data and other planning information, plans cannot be made), and as such any sub-basin in India could be selected. Components 2 and 4will be implemented state-wide for all states. An identification of whether any Scheduled Tribe households are impacted by the project will follow the determination of where component 1 monitoring stations and community crowd sourced information are located, as well as the choice of sub-basin for component 3. It may be noted that the project is intended to cover the entirety of the country including Schedule 5 and Schedule 6 areas. As this automatically triggers OP 4.10, the project team will pay particular attention to the specific cultural needs of tribal groups in ensuring meaningful participation.

E. Borrowers Institutional Capacity for Safeguard Policies

All states have well established water resources departments with some engineering skills to handle the project interventions. The interventions in component 1 is not expected to lead to any significant negative environmental consequence, as the construction/installation impacts will be very small and very localized. It is not anticipated that land will need to be acquired for the monitoring stations but a final determination will be made before appraisal. Should OP 4.12 be triggered, the project will make an assessment of the Borrower's institutional capacity to implement appropriate social safeguard management plans.

Components 2 and 4 are not expected to have any environmental and social impacts. Component 3 (preparation of sub-basin level plans for water resources management or for drought management) may have environmental and social consequences, which need to be managed, particularly in the case where Scheduled Tribe households are present in the selected sub-basin area. These will not be direct impacts (and therefore, specialized capacity to management direct impacts will not be required), and will only be indirect consequences from implementation of the sub-basin plans. It is therefore, important to have a robust process of sub-basin plan preparation which takes care of the potential social and environmental risks. Almost all states lack adequate and appropriate capacity to manage the process of preparation of basin or sub-basin plans, and the project will support building that capacity. As part of the capacity building component for the implementing agencies, the component 4 will also build/augment capacity to review and supervise the process of preparation sub-basin plans, and the process to ensure that the potential environmental and social are identified adequately, avoided or addressed adequately.

In fact, the project interventions and outcomes will contribute to better overall sustainable environmental management in India, and as such be considered as part of the overall national

capacity building for environmental management. By (i) setting in operation a reliable and accessible hydrological knowledge base of meteorology, surface and ground water resources and water quality; and by (ii) promotion of use of hydrological models and analytical tools, environmental concerns will be mainstreamed in in the water resources sector plans, basin/sub-basin plans, and in water resources management across the country. Special-purpose studies will include studies relevant to critical environmental resources (such as lakes, rivers), and priority environmental issues (such as the pollution of surface and groundwater resources, and source sustainability) which will help conservation of critical environmental and water resources. The databases and analytical tools developed by the project will help in the enhancement of dam safety in many basins.

F. Environmental and Social Safeguards Specialists on the Team

Pyush Dogra (GENDR)

Smrithi Talwar (GSURR)

Tapas Paul (GENDR)

II. SAFEGUARD POLICIES THAT MIGHT APPLY

Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/BP 4.01	Yes	The project components 2 and 4 do not have any environmental impacts. Component 1 which will set up monitoring stations, and associated facilities and infrastructure that may have small footprints, and very low levels of environmental impacts. Component 3 (preparation of flood and drought management support system, or water resources management) may have impacts when recommendations are implemented, and therefore, it is important to prepare these system in a manner and through a process that identify all relevant environmental issues, avoids generation of those issues, and mitigates and manages these issues as part of the planning process. This will be taken care by mainstreaming environmental management issues in the terms of reference of the basin or sub-basin level plans for water resources management or flood management or drought management (and referred to in the operational manual of the project).
Natural Habitats OP/BP 4.04	No	No direct or indirect impact on natural habitats. Any potential indirect impact will be avoided or mitigated as part of the process of preparation of the sub-basin plans (i.e., during implementation of component).
Forests OP/BP 4.36	No	No direct or indirect impact on forests or livelihood based on forests. Any potential indirect impact will be avoided or mitigated as part of the process of preparation of the sub-basin plans (i.e., during implementation of component).
Pest Management OP 4.09	No	The project does not finance any chemical or

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		synthetic pesticide. In fact rational and balanced use of pesticide, avoidance of WHO Classes 1 and 2 pesticides, and adoption of IPM and NPM will expected to be promoted by the sub-basin level water resources arrangement plans.
Physical Cultural Resources OP/BP 4.11	No	No direct or indirect impact on forests or livelihood based on forests. Any potential indirect impact will be avoided or mitigated as part of the process of preparation of the sub-basin plans (i.e., during implementation of component.
Indigenous Peoples OP/BP 4.10	Yes	The project will be implemented all over the country, including the scheduled tribal areas. The sub-basin plans, as required, if located fully or partly in the scheduled areas, will have consultation to ensure that the concerns of the IP are considered in preparation of relevant documents.
Involuntary Resettlement OP/ BP 4.12	TBD	It is anticipated that state owned land will be used for the construction of monitoring stations. However, as the specific site locations are yet to be determined, a clearer assessment on whether this policy is triggered or not will be made before project appraisal.
Safety of Dams OP/BP 4.37	No	The project will finance data and analytical tools. The reservoir operation system may suggest improvement of operating rules for some reservoirs (that will be selected depending on the success of components 1 and 2 during implementation). The project will examine the need for specific examination of all such dams, and as required will (i) accept selection of the dams where the borrower's dam safety review and management processes are deemed to be adequate and appropriate, for consequent preparation of reservoir operation plans; or in the event when the borrower's dam safety review and management were not found to be adequate and effective, (a) hire services of an independent panel of experts on dam safety; and/or (b) implement the requisite inspection, remedy or any other dam safety measure. These mechanisms will be covered by the operation manual of the project.
Projects on International Waterways OP/BP 7.50	TBD	The project does not finance any intervention, or any detailed design and engineering study that triggers the policy. The relevance and application of the Policy will be assessed during preparation, and will be updated, as necessary at appraisal.

Projects in Disputed Areas OP/ BP 7.60	No	No known locations of the project's footprint is in the disputed areas.

III. SAFEGUARD PREPARATION PLAN

A. Tentative target date for preparing the PAD Stage ISDS: 30-Jul-2015

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

A. Target date for the Quality Enhancement Review (QER), at which time the PAD-stage ISDS would be prepared:

B. For simple projects that will not require a QER, the target date for preparing the PAD-stage ISDS:

C.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:

The project is not expected to have any adverse environmental or social impacts. The project seeks to improve the environmental knowledge base, environmental awareness, synergize data and analysis on water quality, improve access to water related information, develop analytical tools such as decision support systems and design aids that, in addition to the improved knowledge base and special-purpose studies are expected to better inform environmental activities and improve future environmental assessments at least in the project areas.

The project team will make a clearer identification of community beneficiaries (for components 1 and 3) so as to facilitate social benefits accruing from their participation in the project. Where Scheduled Tribe families are directly impacted a social assessment will be undertaken to identify particular areas of impact, so as to take this into account in sub-basin management plans. These plans will be made with the active consultation of affected tribal households. A stakeholder and institutional mapping will determine those beneficiaries (for component 4) who are the focus of institutional strengthening initiatives.

IV. APPROVALS

Task Team Leader(s):	Name: Anju Gaur	
Approved By:		
Regional Safeguards Coordinator:	Name: Francis V. Fragano (RSA)	Date: 22-Dec-2014
Practice Manager/ Manager:	Name: Josses Mugabi (PMGR)	Date: 22-Dec-2014

[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.