

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

**Report No.:** PIDISDSC17501

**Date Prepared/Updated:** 29-Apr-2016

**I. BASIC INFORMATION**

**A. Basic Project Data**

<b>Country:</b>	China	<b>Project ID:</b>	P158717
		<b>Parent Project ID (if any):</b>	
<b>Project Name:</b>	China: Hubei Inland Waterway Improvement Project (P158717)		
<b>Region:</b>	EAST ASIA AND PACIFIC		
<b>Estimated Appraisal Date:</b>	31-Oct-2016	<b>Estimated Board Date:</b>	19-Apr-2017
<b>Practice Area (Lead):</b>	Transport & ICT	<b>Lending Instrument:</b>	Investment Project Financing
<b>Borrower(s):</b>	People's Republic of China		
<b>Implementing Agency:</b>	Hubei Provincial Transportation Department (HPTD)		
<b>Financing (in USD Million)</b>			
<b>Financing Source</b>			<b>Amount</b>
Borrower			366.00
International Bank for Reconstruction and Development			150.00
Financing Gap			0.00
Total Project Cost			516.00
<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**

1. China has achieved remarkable economic growth in the past three decades and increased average GDP per capita from about US\$225 in 1978 to US\$7,600 in 2014. However, it faces a huge challenge to achieve its development target of lifting the remaining poor out of poverty by 2020, in particular the over 70 million poor farmers. Economic development has not been balanced, and there are growing disparities between the more prosperous eastern/coastal provinces and the less developed western and central regions.

2. China's 13th Five-Year Plan (2016-2020) aims to shift the growth pattern and achieve a medium-high economic growth in a more balanced, inclusive, and sustainable manner. The Plan pursues innovative, coordinated, open, shared, and green development strategies to enhance the quality and benefits of economic development.

3. Hubei Province is situated in central China and connects the more prosperous eastern provinces with the less developed western region along the Yangtze River. It plays a strategic role in the Development of Yangtze River Economic Belt (YREB) and the Rising of Central China. The corridor along the YREB is China's economic backbone that accounts for over 40% of its population and approximately 45% of its GDP.

4. Hubei's 13th Five-Year Plan (2016-2020) aims to eliminate poverty and boost economic development through a National "Interchange" Strategy supported by developing a modern multimodal transport system and enhancing the competitive edge of Wuhan, the provincial capital and traditional inland transport hub, where the world's third largest river, the Yangtze River, and its tributary, the Han River, converge.

### **Sectoral and Institutional Context**

5. Inland waterways play an increasingly important role in China's transport sector, carrying about 263 million passengers and six billion tons of cargo in 2014 through about 126,300 km of navigable waterways. China's inland waterway transport (IWT) has received greater government attention in recent years due to its relatively high energy efficiency and low greenhouse gas emission. Nevertheless, IWT in China has not yet realized its full potential in providing a sustainable transport system and is still relatively under-developed in comparison with other transport modes. Its share of total freight in ton-km in 2014 was only seven percent, although it is higher than the 5.6% share of IWT in the EU. Two of the major constraints of IWT in China are: (i) a large proportion of the navigable waterways do not meet navigation standards required by larger vessels that can transport freight at a lower cost; and (ii) the limited integration of waterways, ports, and intermodal logistics. Both national and local governments have planned to improve inland waterway infrastructure and the connectivity between waterway and other modes of transport in order to increase IWT capacity and utilization.

6. The Ministry of Transport issued the National Inland Waterway and Port Plan in 2007 that envisaged the development of a 'high-class' waterway network (defined as Class IV to Class I Standard) with a total length of about 19,100 km, which will connect 25% of cities with a population of over half a million. Subsequently, in April 2014, the State Council issued guidelines to enhance the traffic capacity of the Yangtze River and its tributaries. The plan envisaged an integrated transport system that connects waterways, roads, railways, and air routes by 2020.

7. The Han River is the longest tributary in the middle reach of the Yangtze River, with about 867 km of navigable waterways in Hubei Province. Nevertheless only 39% of the waterways currently reach the planned navigation standard, and the remaining waterways are

either under improvement or to be upgraded. This not only constrains IWT development along the Han River but also results in reducing the effectiveness of completed investments.

8. Hubei Province has set targets in the Hubei Inland Waterway Transport Development Plan (HIWTDP) for the period 2002-2020, which prioritizes the development of "Three Trunk - One Net - One River" waterways and envisages that by 2020 the total lengths of classified waterways and high-class waterways will reach 71.7% and 27.7% respectively of its 8,700 km of navigable waterways. The Han River, which is one of the Three Trunk waterways, runs through eight municipalities in Hubei Province and feeds into the Yangtze River at Wuhan. It will be upgraded to Class III standard from Danjiangkou downstream and enable 1000 Dead Weight Tonnage (DWT) vessels to navigate year-round to the Yangtze River from Xiangyang Municipality, a regional center in the northwest of Hubei Province.

9. The hinterland of the Han River is a major producer of agricultural products, fertilizers, building materials, and bulk minerals, which are suitable for IWT. Waterway traffic on the Han River increased about 8.8 percent a year during 2000-2013 and moved 21.3 million tons of freight in 2013. Future traffic growth is however severely constrained by the low capacity of navigation infrastructure along the River. Both the national and provincial governments are committed to speed up inland waterway development of the Han River.

10. The proposed Project will also contribute to achieving the objectives of the Yangtze River Economic Belt Strategy, which include the construction of an integrated air, land, and water transport corridor, the enhancement of the Yangtze River golden waterway function, and the coordinated development to facilitate interaction and cooperation among eastern, central and western regions.

11. Since the First Inland Waterways Project (P003493) approved in 1995, the Bank has supported seven inland waterway projects in China, including one on-going and six completed projects. The first two projects targeted to removing transport bottlenecks by improving IWT facilities; more recent projects have included power-generation facilities as part of integrated powerhouse/ship lock complexes to improve the financial sustainability of IWT; and the latest projects have supported waterway management systems for coordinating the multiple uses of water resources, including flood control, irrigation, power generation, and navigation.

12. China seeks the Bank's continued support in improving the operation and management of inland waterways through project interventions that reflect best practices and international experience. Successful IWT projects around the world show that it is imperative that a balance between economy and ecology be achieved. The development of the Han River in eight stages has a cumulative impact on the river ecosystem, and the Bank will share knowledge and experience in assessing and mitigating the cumulative impact. In addition, IWT development not only requires waterway infrastructure improvement but also depends on the development of port, vessel, and intermodal connections. The Bank will work with Hubei Province to reflect international good practices in project preparation and implementation.

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

13. The proposed project is consistent with the World Bank Group's China Country Partnership Strategy (CPS) for 2013-2016. In particular, it supports two of the strategic themes of the CPS:

- Strategic Theme 1: Supporting Greener Growth. IWT development in the Han River will

contribute to improving transport efficiency, lowering GHG emissions, requiring less arable land in comparison with other transport modes. Hydropower will provide renewable energy and reduce coal consumption in power sector.

- Strategic Theme 2: Promoting More Inclusive Development. The Project facilitates transport connectivity, particularly for industries, between the lagging inland cities along the Han River and the advanced Eastern regions of the Yangtze River Economic Belt.

### C. Proposed Development Objective(s)

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

14. The development objective of the Project is to improve inland waterway transport capacity along the Han River in support of low carbon development.

#### Key Results (From PCN)

15. The achievements of the PDO will be measured by the following outcomes indicators:
- Traffic Increase passing through the Yakou ship lock (to measure improvement of IWT capacity).
  - Reduction in CO2 emission (to measure climate change impacts).
  - Provision of renewable energy (to measure low carbon development).

### D. Concept Description

16. The Han River originates in Shanxi Province and has about 1,376 kilometers of navigable waterway. Of which, 858km are located in Hubei Province. According to relevant plans governing the development of IWT on the Han River, the waterway between Danjiangkou and Hankou, consisting of the middle and lower reaches of the Han River, is to be upgraded to Class III standard through six stages. Three of the six stages have been built, and the remaining stages at Xinji, Yakou, and Nianpanshan are planned to be developed by 2020.

17. The proposed Project will support the development of Yakou Navigation Complex in the middle reach of the Han River, about 203 km downstream of Danjiangkou Complex and 53km downstream from Cuijiaying Complex (financed by the Bank's Fifth Inland Waterway Project). The Yakou Navigation Complex will have multiple functions such as waterway improvement, power generation, agriculture irrigation, flooding mitigation, and landscaping.

18. The Bank's financial support to the proposed Project is critical to achieve governments' development plans, enhance green development, and facilitate regional integration. It will add more value by providing technical assistance to address key weaknesses in IWT management in Hubei Province, enhance IWT efficiency, safety, and competitiveness, as well as promote the sustainability of IWT development in parallel to infrastructure improvements. Moreover, Bank support to the Project will attribute to realize the full economic benefits of all the six stages and ensure the long-term sustainability of IWT along the Han River.

19. The proposed Project tentatively comprises two components as outlined below.

20. Component A: Construction of Yakou Complex. The Yakou Complex is a single integrated infrastructure that will upgrade about 53 km waterways between Yakou and Cuijiaying to Class III standard, provide about 247 GWH of hydropower per year to local grid, increase over 5,300 ha of gravity irrigational farmlands, improve flooding resilience, and create better landscape for recreation. The Bank will add more value in this component in the areas of

coordinated utilization of water resources along the River, environmentally friendly engineering design and construction management, and waterway ecosystem protection. The Yakou Complex will consist of the following main structures:

- Ship lock. A Grade III single ship lock, capable of accommodating vessels up to 1,000 DWT.
- Sluice gates. Dam sluice gates to regulate flows.
- Powerhouse. Powerhouse built within the dam to generate electricity.
- Connection dam. Three sections of earth-rock dam, with a total length of about 2,150 meters, connecting the structures with both river banks.
- Fish ladder. A 960 meter long vertical-slot fish way.
- Dam crest access bridge. Several bridge sections across the ship lock, sluice gates and powerhouse, with a total length of about 1,500 meters.

21. Component B: Institutional Strengthening. This component will support technical assistance and training activities to enhance the institutional capacity of the IWT management authorities, particularly by taking a holistic approach to enhance IWT efficiency and sustainability along the Han River. Technical assistances will focus on the following aspects: (i) IWT capacity and efficiency improvements through better port planning, vessel upgrading, crew training, intermodal integration, and policy supports; (ii) Digital waterway information system (WIS) development; (iii) IWT safety management through risk analysis and emergency response system development; and (iv) Environment management through vessel wastes management, energy efficiency, and low emissions. The list is indicative and not exhaustive.

22. The total project cost is estimated to be approximately RMB3.35 billion (equivalent to USD516 million), including an IBRD loan of USD150.00 million.

## II. SAFEGUARDS

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

23. The proposed Yakou Complex is located in the middle reach of the Han River in Yicheng City, Xiangyang (formerly Xiangfan) Municipality in Hubei Province. The project area is subject to monsoon climate with distinctive four seasons; annual average temperature is about 16 degrees Celsius; multi-year average annual precipitation is about 813 mm; April – August is the raining season. The river section in the project area has an elevation of 47-49.5 meters and depth of 0.2-8.0m, and is about 500-1000m wide. The water depth is subject to rain events and water releases from upper stream dams.

24. The Yakou Complex is about 203 kilometers downstream from the Danjiangkou Dam, which marks the starting point of the middle reaches of the Han River. The Han River runs in valleys through mountainous area in its upper reaches, while downstream of Danjiangkou Dam, alluvial plain and low hills are dominant and the river is limited within flood control dikes.. The Yakou Complex is a single integral infrastructure unit that will form a reservoir with designed normal pool water elevation of 55.22 meters and normal pool storage of about 350 million cubic meters. The Yakou Complex is a low-head run-off type dam, which will be 14 meters high. Given the existing flood control dikes along the river section and low elevation caused by the Yakou dam, the inundation area upstream of the Yakou dam will be relatively limited compared to open inundation. In addition, there is no need to heighten the dikes as the exiting flood dikes are of adequately height. Strengthening the dikes (widening or other anti-seepage measures) will be necessary.

25. The project area has been subject to human activities for a long history. Agricultural and urban areas are dominant along the project corridor. There are dense road networks and transmission lines in the project area as well. The Xiangyang City has rich tourism resources and historical sites as well.

26. Han River is 1567 km long with a total basin area of 159 thousand km<sup>2</sup>. It runs through Shaanxi and Hubei Provinces and joins the Yangtze River at Hankou in Wuhan City. According to the national and Hubei provincial inland waterway plans, the middle to low reaches of the Han River along the Danjiangkou to Hankou corridor (650km) will be upgraded to a Grade III (allowing for year-round navigation of 1,000 dwt vessels) navigation channel. Among the seven complexes in the Danjiangkou-Hankou corridor, four have been built and operational, including Danjiangkou, Wangpuzhou, Cuijiaying and Xinglong. The remaining three, namely Xinji, Yakou and Nianpanshan Complexes, are planned to be built by 2020. The Yakou Complex is 52.67 kilometers downstream from the existing Cuijiaying Complex that was constructed under the Bank's Fifth Inland Waterway Project. The Danjiangkou Reservoir is the largest reservoir along the Han River, with a storage capacity of 29 billion m<sup>3</sup> that is 82 times of the designed storage capacity of Yakou reservoir.

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

27. The PMO was established on July 13, 2015 by HPTD, which has extensive experiences with Bank safeguard requirements. Some PMO staff are veterans from the Bank financed Fifth IWT project. Local governments, including Yicheng City, Xiangcheng and Dongjin districts, will be responsible for local resettlement planning and implementation. Local resettlement offices have been established with staff who have extensive experiences of local resettlement, but not Bank safeguard requirements. Training program should be provided in the near future during the preparation stage. It should also be included in the RP for the implementation stage. Additionally, the PMO should promptly establish social and technical management teams within its organization and in local resettlement offices.

28. An experienced team from Wuhan University has been engaged to assist the PMO in consolidating the resettlement planning and social assessment preparation. Additionally, an accredited EA consultant has been engaged to prepare the project EA. Furthermore, specialized institutes have been engaged to carry out special studies including fish way and fish facilities, terrestrial and aquatic ecosystem survey, and environmental quality monitoring. Overall, the PMO and its consultants' capacity for environmental and social safeguards management are considered adequate.

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

Ning Yang (GEN2A)

Songling Yao (GSU02)

### **D. POLICIES THAT MIGHT APPLY**

<b>Safeguard Policies</b>	<b>Triggered?</b>	<b>Explanation (Optional)</b>
Environmental Assessment OP/BP 4.01	Yes	Per OP4.0, the project will be Category A based on its nature, scale, and potential environmental and social impacts. In view of the fact that the client has prepared an EIA report, which has been reviewed by the Ministry of Environmental Protection (MEP) and

	<p>is expected to receive approval, the proposed EA instrument will include: (i) an EIA report approved by MEP; (ii) a supplementary EIA report, including cumulative impact assessment; (iii) an Environmental Management Plan (EMP) for the hydro-navigation complex; (iv) an EMP for the flood protection works (dikes and other facilities associated with the reservoir); and (v) an EA Executive Summary.</p> <p>The Bank team reviewed the draft EIA report and conducted field visits and environmental screening during the identification mission. An EA TOR for supplementary environmental assessment and cumulative impact assessment has been drafted. Among other issues, the following aspects should be given particular attention in the next steps of the EA preparation: (i) addressing natural habitats issue and sensitive areas/receptors that will be potentially affected by the project, notably the Wanyangzhou Wetland Park, fish spawning sites and fish species protection, and physical cultural resources in the inundation area; (ii) cumulative impact assessment for the cascade development on the mid-to-low reaches of the Han River; and (iii) supplementary information disclosure and public consultation. Specifically, the following should be given particular attention:</p> <p>EA Scope/Area of Influence. The project level assessment should cover not only the Yakou Complex construction but also civil works of the upstream reservoir area dikes, drainage systems, the power transmission lines, and other associated facilities that will be improved or built for the construction and operation of the Yakou Complex. Additionally, given the existing planning for cascade development along the mid-to-low reaches of the Han River, a cumulative impact assessment is required.</p> <p>Alternative Analysis. The current EIA includes an alternative analysis on dam location, reservoir storage level, layout of the hydro-navigation complex, diversion during construction, location and selection of construction sites (including the major works, borrow and disposal sites, and access roads).</p>
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	<p>This analysis should: (i) be expanded to include the "without project" scenario and other ancillary works where appropriate; and (ii) strengthen social considerations.</p> <p>Environmental and social baselines should include natural environment, ecological environment, social, regional environmental quality and other major environmental issues, including: (i) hydrology and sedimentation process of the Han River; (ii) hydrogeology and soil; (iii) terrestrial ecology; (iv) aquatic ecosystem and fishery resources; (v) ecologically sensitive areas; (vi) social aspects; (vii) regional environmental quality; and (viii) key environmental issues. Since a stand-alone social assessment will be conducted guided by OP4.10 and OP4.12, the social issues in the EA, including baselines and impacts assessment, will be informed by the stand-alone social assessment.</p> <p>Impact assessment and mitigation should include 1) impacts on water quality and groundwater; 2) impacts on aquatic ecology and fish species; 3) impacts on terrestrial ecology; 4) impacts on ecologically sensitive areas; 5) impacts on ambient air quality; 6) resettlement impacts; 7) social impacts, including physical cultural resources and social disturbance during construction brought by construction activities and influx of workers; 8) impact on public health; and 9) other impacts such as environmental geology, solid waste, etc.</p> <p>Indirect and Cumulative Impact Assessment. The assessment shall clearly define spatial and temporal assessment boundaries, key cumulative issues identified, environmental and social baseline, identification of key Valuable Ecosystem Vectors (VECs), assessment of cumulative impacts, mitigation measures, and public consultation. Of fundamental importance to the analysis are the collection of relevant development plans, strategic environmental assessment, and post assessment of already completed major works on the Han River. A review of the overall Master Plan for the Han River cascade development plan will be reviewed as part of the cumulative impact assessment. Given the scale and feature of the Danjiangkou Dam, it has become a</p>
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	<p>control stage of the Han river cascade development. Hence it is proposed that the cumulative impact assessment will focus on the mid to low reaches of Han River, namely, the 650km long Danjiangkou to Hankou corridor. The cumulative impact assessment will assess various projects proposed in the project area, including indirect impacts such as the increased ship traffic which may result in possible spills, transportation of hazardous material, and accidents. It should also propose a management plan to deal with induced and cumulative impacts. A review of the overall Master Plan for the Han River cascade development plan will be reviewed as part of the cumulative impact assessment. The cumulative impact assessment will be conducted within the project area of influence, which will be defined in the ESIA TOR to be reviewed and agreed upon with the RSS. The cumulative impact assessment will assess various projects proposed in the project area, including indirect impacts such as the increased ship traffic which may result in possible spills, transportation of hazardous material, and accidents. It should also propose a management plan to deal with induced and cumulative impacts.</p> <p>Information Disclosure and public consultation. Two rounds of disclosure and public consultation have been conducted. Additional public consultation and information disclosure are required by Bank policy OP4.01 for the Bank financed project. The first should be carried out when the ToR for supplementary environmental assessment is prepared and confirmed by the Bank. The second will be conducted after the draft updated/supplementary EIA and EMPs are prepared.</p> <p>Newspaper and website announcements of the EIA and EMP disclosure should be made to inform the public that the reports are available to the public on the internet and/or in the public centers and/or offices of communities, villages, and government agencies.</p> <p>The consultation should be carried out through questionnaire survey, focused group meetings, and interviews. Stakeholder to be consulted should include local communities and villagers, potentially affected people, relevant agencies and groups.</p>
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Natural Habitats OP/BP 4.04	Yes	<p>The policy is triggered. The project area is primarily agricultural and urban area and has been subject to human activities for a long history. Survey and impact assessment on aquatic terrestrial ecosystems were conducted. Special treatment on protecting fish habitats were included in the EIA. The following efforts should be made in the next steps of the EA and EMP development to ensure compliance with OP4.04.</p> <p>Several ecologically sensitive areas and receptors have been identified, notably the following:</p> <p>Wanyangzhou Wetland Park. The wetland park is located about 4km upstream of the dam site. It was approved by National Forest Bureau in Dec 2013 for pilot development of a wetland park over a period of eight years. Currently detailed planning for the park is underway. Building on existing assessment, the EA shall expand on a) regulatory compliance, b) ecological survey and evaluation of the wetland ecological significance, c) potential impacts on the wetland park by the project construction and operation, and d) mitigation measure, including offset as necessary.</p> <p>Protection of fish spawning sites and fish species. The EIA indicates the existence of fish spawning sites upstream and downstream of the dam. The EIA correctly identifies that impacts on fish is the major environmental issue of the project. Great efforts have been made on the survey, impact assessment and development of mitigation plans which include habitat protection, fish channel and reproduction facility, coordinated dam operation (ecological flow scheduling), and strengthening fishing management and studies. Implementation of the eco-flow scheduling requires multi-dam coordination on the Han River. Habitat protection also requires inter-agency collaboration. The rich information should be presented in a separate chapter in the EIA. Mitigation measures should be specifically presented in the EMP. Plans to ensure the effective implementation of the mitigation measures should be sufficiently discussed in the EIA.</p> <p>The EA will state whether any critical natural</p>
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		<p>habitats are affected by the project or by cumulative impacts. Appropriate mitigation and compensation schemes should be proposed in the EA. The EA should also assess the various options considered to address fish migration issues, the adequacy of the selected/proposed fish ladder and stocking programs to maintain fish migration and aquatic biodiversity in the Han River. This assessment should be based on biodiversity surveys upstream and downstream of the proposed project as well as the analysis is of the effectiveness of the existing fish passages in other complexes. Ecological flow analysis should include flow regimes to maintain fish habitats downstream of the dam.</p> <p>The EA will state whether any critical natural habitats are affected by the project or by cumulative impacts. Appropriate mitigation and compensation schemes should be proposed in the EA. The EA should also assess the various options considered to address fish migration issues, the adequacy of the selected/proposed fish ladder and stocking programs to maintain fish migration and aquatic biodiversity in the Han River. This assessment should be based on biodiversity surveys upstream and downstream of the proposed project as well as the analysis is of the effectiveness of the existing fish passages in other complexes. Ecological flow analysis should include flow regimes to maintain fish habitats downstream of the dam.</p>
Forests OP/BP 4.36	No	The project is not anticipated to involve in any forests.
Pest Management OP 4.09	No	The project is not anticipated to involve the use or procurement of any pesticides.
Physical Cultural Resources OP/BP 4.11	Yes	A survey conducted by Hubei Provincial Cultural Relics and Archeology Institute along the project corridor indicates the existence of 12 ancient tombs in the inundation area. These tombs are of small scale and scatter along the project corridor, with one identified as county level Cultural Relics Protection Unit according to domestic law. Detailed information of the cultural relics and a PCR management plan should be included in the EIA and EMP. Chance-find procedures should be included in the EMP as well.
Indigenous Peoples OP/BP 4.10	TBD	The social screening by the task team found no minority village/community present in the project

		<p>area. However, given the vast impacted area, further screening and social assessment are required during the project preparation. Application of OP 4.10, Ethnic Minority, will be determined as early as possible and prior to project appraisal.</p> <p>Additionally, a standalone social assessment (SA) will be prepared to establish social baseline, identify and consult with stakeholders, examine, and address social risks triggered by the project. The SA will cover whole project social impact areas, and address social issues related to the OP 4.01, OP 4.12, and OP 4.10 if triggered.</p>
Involuntary Resettlement OP/ BP 4.12	Yes	<p>The potential resettlement impacts may include land acquisition and resettlement at dam site, in reservoir area, and outside of river dikes where there are potential issues of flood and immersion, as well as social disturbance caused by project construction and operation such as immersion and inundation. Land acquisition including land leasing, and land protection will create significant impact on the local communities. Therefore, OP 4.12, Involuntary Resettlement will be triggered, and a resettlement plan will be prepared.</p> <p>Based on the draft resettlement document provided by the PMO in ID mission, more than 20 thousands of people will be affected by land acquisition and protection, relating to 85155 mu land; and about 35 rural households will be relocated including reservoir area and dam site. Among the land to be acquired, only 29470 mu are farmland collectively owned by about 30 villages. The proposed compensation and restoration measures comprise cash compensation, land leveling raising, social security program, and training, etc.</p> <p>Further, some activities are identified linking to the project, such as the Han River Dike (Yakou-Xiangyang Section) Strengthening Project to reinforce the dikes of the Yakou Reservoir; the electricity transmission lines to be built to connect the project to the regional power network, port development, etc. These activities will be designed and implemented by other agencies, and their resettlement related impacts are not clear at this stage, therefore a resettlement policy framework will</p>

		be prepared.
Safety of Dams OP/BP 4.37	Yes	<p>The project triggers the Bank Safeguards Policy on Safety of Dams (OP4.37) because the project would finance construction of a new dam. In the meantime, several existing upstream dams and one scheduled upstream dam may also relate to the OP4.37 because failure of the upstream dams may cause extensive damage to or failure of the new Bank-funded structure. These dams include the existing Danjiangkou, Wangfuzhou and Cuijiaying dams and a proposed new upstream dam. More information on the upstream dams and primary analysis on their impacts to the safe operation of the Yakou Dam are required.</p> <p>Establishment of Panel of Experts (POE). Given the OP4.37 requirements and the tight project preparation schedule proposed by the client, the PMO will establish a POE for dam safety. Terms of reference (TOR) of the panel and curriculum vitae of the proposed experts should be sent to the Bank for prior approval. The panel should consist of three or more experts, appointed by the PMO and acceptable to the Bank, with expertise in the various technical fields relevant to the safety aspects of the dam and at a minimum cover the areas of dam safety management, hydrology, and construction. The primary purpose of the panel is to review and advise the PMO on matters related to dam safety and other critical aspects of the dam, its appurtenant structures, the catchment area, the area surrounding the reservoir, and downstream areas. However, the PMO normally extends the panel's composition and terms of reference beyond dam safety to cover such areas as project formulation, technical design, construction procedures, and other associated works such as power facilities, river diversion during construction, ship lifts, and fish ladders, etc.</p> <p>Application of updated hydrological data. For design, the hydrological data used is from 1953 to 1998 for runoff and 1953 to 2003 for flood control. The data of recent years are not applied; this is not acceptable to the Bank. The Bank requested the PMO and design institute to collect available most recent hydrological data, verify the design based on the updated hydrological data and send the revised</p>

		design report the Bank for review. In addition, Dam Safety Assessment will be conducted for the existing dams and safety measures proposed.
Projects on International Waterways OP/BP 7.50	No	The project is located in hinterland and the Han River joins Yantze River. The project doesn't involve any international waters.
Projects in Disputed Areas OP/BP 7.60	No	The project is located in hinterland and doesn't involve any disputed areas.

### E. Safeguard Preparation Plan

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

30-Jun-2016

#### 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.

The social safeguard-related studies, including the RP, RPF, and SA, will be completed by June 30, 2016. Similarly, the environmental safeguard-related studies, including the EIA and EMP will be completed by June 30, 2016.

### III. Contact point

#### World Bank

Contact: Xiaoke Zhai

Title: Sr Transport. Spec.

#### Borrower/Client/Recipient

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### V. Approval

Task Team Leader(s):	Name: Xiaoke Zhai
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<b><i>Approved By</i></b>		
Safeguards Advisor:	Name: Peter Leonard (SA)	Date: 29-Apr-2016
Practice Manager/ Manager:	Name: Michel Kerf (PMGR)	Date: 30-Apr-2016
Country Director:	Name: Elena E. Glinskaya (CD)	Date: 23-Aug-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.