PROJECT INFORMATION DOCUMENT (PID)
CONCEPT STAGE

Project Name: Jiangxi Wuxikou Integrated Flood Management Project (P128867)
Region: EAST ASIA AND PACIFIC
Country: China
Sector(s): Flood protection (80%), Water supply (20%)
Lending Instrument: Specific Investment Loan
Project ID: P128867
Borrower(s): International Department, Ministry of Finance
Implementing Agency: Wuxikou Flood Control Scheme Management Bureau
Environmental Category: A-Full Assessment
Date PID Prepared: 29-Mar-2012
Estimated Date of Appraisal Completion: 18-Sep-2012
Estimated Date of Board Approval: 05-Feb-2013
Concept Review Decision: Track I - The review did authorize the preparation to continue
Other Decision: NA

I. Introduction and Context

Country Context
Since the historic 1998 floods of the Yangtze River that claimed the lives of over 2,300 people, China's flood disaster prevention capacity and infrastructure has been improved and strengthened markedly over the past decade. Many reservoirs and dikes along the main rivers have been improved and reinforced.

With the improvement of flood control systems, especially along the main rivers, problems with flood disasters are increasingly happening along small and medium-sized rivers. During the past 10 years over 90% of the flood-related disasters occurred in small towns, cities and rural areas, mostly caused by landslides and flashfloods due to excessive rainfall. For example, the floods in 2010 have left over 2,690 people dead and 1,170 missing, and affected 140 million people and 7 million hectares of agricultural areas across 28 provinces and regions in China. The direct economic losses are estimated to be around US$40 billion, mostly as a result of landslides and flashfloods in small and medium-sized river basins.

In late 2010, the State Council Standing Committee meeting made a decision on prioritizing and increasing investments to improve planning, prevention, mitigation and response to floods in small and medium-sized rivers. The meeting decided that each province or municipality should use five years to resolve outstanding issues/problems with weak segments of flood control and disaster mitigation system in order to truly safeguard people’s lives and property, and maintain overall economic and social development.

In early 2011, the Chinese Central Government issued its first document on water resources issues entitled "Decisions on Accelerating Water Sector Reform and Development," which proposed a strategy of establishing a complete flood prevention system in China by 2020. The strategy requires that the flood control systems in small and medium-sized rivers in areas most vulnerable to mountain flash flooding should be strengthened and completed by the end of 2015 or the end of the 12th five-year plan (2011-2015).

Sectoral and Institutional Context
In response to the national strategy of strengthening flood control systems in small and medium-sized rivers, Jiangxi Province proposed an infrastructure project for Bank financing that is to construct the Wuxikou Flood Control Scheme on the Changjiang River, a medium-sized river or tributary of the Raohe River, which is to provide necessary flood protection of its Jingdezheng City. The project has been included in the 12th Five-year Plan of the Jiangxi Province and the Feasibility Study Report (FSR) has been technically reviewed and cleared by the Ministry of Water Resources (MWR) and approved by the National Development and Reform Commission (NDRC) in July 2011.

The Bank’s involvement of the above proposed infrastructure project would provide assistance or value added to Jingdezheng City with integrated flood risk management approach that would focus not only on structural measures but also on non-structural measures to integrate the concept of living with floods, protecting key assets, and minimizing losses based on the experiences and lessons from the well-recognized international practices in flood risk management in medium and small rivers.

Relationship to CAS
The proposed Jiangxi Wuxikou Integrated Flood Management Project (the Project) would strongly support the Bank’s China
II. Proposed Development Objective(s)

Proposed Development Objective(s)

The Project development objective is to reduce the flood risk in the central urban area of Jingdezhen City through implementation of priority structural and non-structural measures. The project will help increase the flood protection level from twenty-year floodup to fifty-year flood, and contribute to establishment of an integrated flood risk management for the city.

Accompanied benefits of the project will be to maintain environment flow of the river and generate hydropower to meet the peak demand of power. In the long run, the municipal government will explore opportunities to optimize water resources allocation from the reservoir to meet the long-term water demand for social and economic development of the Jingdezhen City.

Key Results

The primary target beneficiaries of this project are the population of the urban and rural ordinary people in the project areas. The accomplishment of the above objective would result in a fundamental improvement in mitigating the flood risks to Jingdezhen City and its surrounding areas from the current flood protection standard of less than a20-year flood event up to 50-year flood event to ensure a sustainable social and economic development in Jingdezhen City.

The main outcome indicators for attainment of the objective would be: (a) increase in urban area and population protected against the flood protection standard of a 50-year flood event; (b) reduced economic losses resulting from the improved flood protection standard of a 50-year flood event; (c) integrated flood risk management system established and put into operation for Jingdezhen City; and (d) amount of clean energy production from Wuxikou hydropower plant.

III. Preliminary Description

Key Development Issues: A major challenge for Jingdezhen City is to reduce the risks of its urban population to frequent floods from the Chang River, a medium-sized river flowing through the downtown of the City. The rainfall in Jingdezhen region is very uneven temporally with almost half concentrated from April to June. The rainfall in the main wet seasonsis generally intensive, widespread and of long duration (1-3 days). Jingdezhen City, an industrial and cultural center in Northeastern Jiangxi, is very vulnerable to river flooding with its low ground elevation and very little flood control infrastructure. In addition, storm water within the city would need to be pumped out when the water level is high during flood season.

Government Strategy: The strategy of Jingdezhen Municipal Government (JMG) is to build a “Combined City Dike-Reservoir System” for protection of the Jingdezhen City from a 50-year flood event of the Changjiang River: (a) the City Dike System – a separate and on-going government program which included construction of dikes along the river sections within the City to upgrade flood protection standard from a 10-year flood event to a 20-year flood event, and rehabilitating the city’s urban drainage system up to a standard of maximum 24 hour storms in 20-year frequency (175mm). The on-going City Dike System will be completed by 2013; and (b) Wuxikou Flood Control Scheme – a government program which was proposed to be financed by the World Bank under this Project and includes construction of a flood control scheme upstream in Fuliang County to upgrade the flood protection standard for the City from a 20-year flood event to a 50-year flood event (please refer to the project map attached as part of the PCN package).

Key Features of Wuxikou Flood Control Scheme (the main dam): According to the current FSR, the preliminary features of the dam are: (a) a dam with max height of 45.6m and crest length of 538m; (b) a reservoir of 487 MCM (of which 294 MCM are flood storage); (c) a hydropower plant with installed capacity of 38 MW and annual average power production of 81 million Kwh; (d) increase the P=95% river flow from 6.56m3/s to 16.4 m3/s through reservoir regulation to meet the demand of both drinking water supply (Q=6.43m3/s by 2020) and minimum environmental flow; (e) resettlement of 10,552 people; and (f) planned construction period is 41 months and total base cost RM¥2.1 billion.

Based on the project concept and approach and proposed project development objectives, it's proposed that the project include the following components:

Component 1: Construction of Wuxikou Water Control Scheme
(1) Construction of Wuxikou Flood Control Scheme - a 45.6m high dam with a crest length of 538m, flood handling structures and appurtenant structures; and
(2) Construction of a power station with three turbines and generating units with a total installed capacity of 30MW.

Component 2: Establishment of Integrated Flood Risk Management System
(1) Upgrading the flood forecasting, disaster assessment and early warning system to adapt frequent and extreme weather conditions due to impact of climate change, including upgrading of hydrological telemetry network and necessary facilities for integrated flood risk management;
(2) Preparing an operational plan for conjunctive and optimum operations of the Integrated Flood Risk Management System with both structure and non-structure measures; and
(3) Capacity building for integrated flood risk management, including a specialized learning program and knowledge transfer.

Component 3: Implementation of Resettlement Action Plan (to be fully financed by government)
(1) Carrying out of a program for the resettlement and rehabilitation of people affected by the implementation of the project

Component 4: Project Management and Implementation Support
(1) Consulting services (including the Expert Group and Dam Safety Panel) to facilitate PMOs for project management and implementation;
(2) Oversea or domestic workshops, training and study tours to ensure that the project management and implementation follows the international practice;
(3) Monitoring and evaluation (M&E) and procurement and financial management information system (MIS); and
(4) Office equipment and working vehicles for project supervision and quality control.

IV. Safeguard Policies that might apply

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V. Tentative financing

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VI. Contact point

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