

**PROJECT INFORMATION DOCUMENT (PID)  
APPRAISAL STAGE**

Report No.: PIDA6086

<b>Project Name</b>	Climate Smart Staple Crop Production (P144531)
<b>Region</b>	EAST ASIA AND PACIFIC
<b>Country</b>	China
<b>Sector(s)</b>	Crops (80%), Agricultural extension and research (20%)
<b>Theme(s)</b>	Climate change (100%)
<b>Lending Instrument</b>	Investment Project Financing
<b>Project ID</b>	P144531
<b>GEF Focal Area</b>	Climate change
<b>Borrower(s)</b>	People's Republic of China
<b>Implementing Agency</b>	Ministry of Agriculture
<b>Environmental Category</b>	B-Partial Assessment
<b>Date PID Prepared/Updated</b>	22-May-2014
<b>Date PID Approved/Disclosed</b>	23-May-2014
<b>Estimated Date of Appraisal Completion</b>	30-May-2014
<b>Estimated Date of Board Approval</b>	15-Sep-2014
<b>Decision</b>	

## I. Project Context

### Country Context

1. As a major country contributing to, and being seriously affected by, climate change, China has strived to integrate climate smart development actions into its emerging green growth strategy. In doing so, the Government has developed the National Program on Climate Change (2007), the White Paper on China's Policies and Actions for Addressing Climate Change (2011, the White Paper) and most recently the Work Plan for Greenhouse Gas Emission Control during the Period of the 12th Five-Year Plan for National Economic and Social Development (2011, the 12th FYP). Consistent with these frameworks, the Government specified in the Action Program on Climate Change for Agriculture (2008, the Action Program) that it would develop sustainable crop production systems to increase crop yields and farmers' incomes while reduce greenhouse gas (GHG) emissions and improve climate resilience of crop production systems. In this regard, the Government has emphasized the importance of promoting sustainable crop production technologies and establishing scientific monitoring and evaluation (M&E) methods to ensure effective GHG emission reductions from its crop production sector and improve the sector's capacity to adapt to a changing climate that is expected to be hotter nationwide, drier with more droughts in Northern China, and wetter with more floods in Southern China.

## **Sectoral and institutional Context**

2. The agriculture sector of China has supported 22% of world population with only 9% of world's arable land. To achieve food security, China has developed an intensive crop production system that relies heavily on high consumption, but low utilization rates, of fertilizers, pesticides and irrigation water. As a result, China's crop production has significant GHG emissions. Heavy reliance on synthetic fertilizers has also stressed China's limited arable land. China's low productivity cropland accounts for over 70% of the total arable land area, and soil organic carbon (SOC) in typical cropland of China is 30% lower than the world average, and over 50% lower than that of Europe. This situation is further aggravated by unsustainable crop production practices which often include flood irrigation, monocropping with limited crop rotation, excessive tillage, straw burning, and low rates of organic residue return to soil. These practices has not only led to the high GHG emissions from crop production but also reduced climate resilience of the country's crop production systems.

3. High inputs and low efficiency in their utilization and low SOC content imply that there is a high potential for China to undertake climate change mitigation and adaptation actions to improve economic and environmental performance of its crop production. Recognizing the potential, China is implementing on its own and in collaboration with international organizations, including the World Bank, a program to pilot low GHG emission and soil carbon sequestration technology such as precision fertilization and crop residue retention in the field to avoid and/or minimize agriculture emissions. In addition, China continues to improve its irrigation infrastructure and promote water-saving irrigation, stress-resistant crop varieties and diversification of cropping systems to improve climate resilience of its crop production systems. A key focus of China's initiatives is to introduce to farmers technologies and practices (e.g., precision fertilization and no-till land preparation) that can promote efficiency of GHG intensive synthetic inputs, improve soil productivity and achieve sustainable crop yields. These actions comply with the principle of climate smart agriculture (CSA), which seeks to increase productivity in an environmentally and socially sustainable manner, strengthen the resilience of cropping systems to climate change, minimize the agricultural sector's contribution to climate change by reducing GHG emissions and sequester soil organic carbon.

4. The Ministry of Agriculture (MOA) has identified a number of factors limiting the uptake of climate smart crop production technologies in China such as: (a) limited public support to the screening and assessment of agricultural technologies; (b) inadequate demonstration on the ground; (c) limited awareness of farmers and local governments; (d) lack of policy incentives; and (e) low capacity of extension services to disseminate advisories to farmers. To address these challenges and promote continuous identification and adoption of context-specific climate smart production technologies, MOA requested the Bank's support to prepare and implement this project financed by a grant from the Global Environment Facility (GEF).

## **II. Proposed Development Objectives**

The proposed project's Project Development Objective (PDO) and its Global Environmental Objective (GEO) is to demonstrate climate smart and sustainable staple crop production in Huaiyuan County of Anhui Province and Yexian County of Henan Province.

## **III. Project Description**

### **Component Name**

CSA Demonstration

**Comments (optional)**

This component will support (a) demonstration of GHG emission reduction and efficient irrigation techniques; (b) demonstration of soil carbon sequestration techniques; (c) new production technique pilots; (d) technical support for CSA demonstration; and (e) monitoring and evaluation (M&E).

**Component Name**

Policy Development and Knowledge Management

**Comments (optional)**

This component will support (a) development of national CSA policies, strategy and guidelines; (b) domestic dissemination of project knowledge; and (c) promotion of international CSA cooperation.

**Component Name**

Project Management

**Comments (optional)**

This component will support project implementing agencies to manage, implement, supervise and monitor project implementation.

**IV. Financing (in USD Million)**

Total Project Cost:	30.10	Total Bank Financing:	0.00
Financing Gap:	0.00		
<b>For Loans/Credits/Others</b>			<b>Amount</b>
Borrower			25.00
Global Environment Facility (GEF)			5.10
Total			30.10

**V. Implementation**

Institutional arrangements for project implementations have been established at the national, provincial and project county levels. At the national level, a National Project Steering Committee (NPSC) led by MOA has been set up with participation of key national stakeholders to guide overall implementation of the project. MOA has designated a National Project Director (NPD) and established a Project Management Office (PMO) to manage project implementation with technical support from a National Expert Group (NEG). At the provincial level, a Provincial Leading Group (PLG) led by the Department of Agriculture (DOA) of each of the two project provinces has been established to oversee project implementation in the respective province with support from a Project Management Unit hosted in the DOA. At the county level, a County Leading Group (CLG) led by a deputy head of the county government has been set up to oversee project implementation in the project county with support of a county PMU hosted by the Agriculture Bureau of the respective county.

MOA has adopted a Project Implementation Manual (PIM) to guide project implementation. The Manual provides detailed information on (a) the project objective, project activities and financing arrangements; (b) roles and responsibilities of the PMO, county PMUs and other entities involved in project implementation; (c) financial management, disbursement, procurement, safeguards arrangements; (d) steps and procedures for project implementation; and (d) monitoring and evaluation, reporting and information disclosure arrangements.

**VI. Safeguard Policies (including public consultation)**

<b>Safeguard Policies Triggered by the Project</b>	<b>Yes</b>	<b>No</b>
Environmental Assessment OP/BP 4.01	x	
Natural Habitats OP/BP 4.04		x
Forests OP/BP 4.36		x
Pest Management OP 4.09	x	
Physical Cultural Resources OP/BP 4.11		x
Indigenous Peoples OP/BP 4.10		x
Involuntary Resettlement OP/BP 4.12	x	
Safety of Dams OP/BP 4.37		x
Projects on International Waterways OP/BP 7.50		x
Projects in Disputed Areas OP/BP 7.60		x

**Comments (optional)****VII. Contact point****World Bank**

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