CHINA-COMPREHENSIVE AGRICULTURE DEVELOPMENT PROGRAM - THE CAD -

ISLAMABAD, PAKISTAN
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CHINA-COMPREHENSIVE AGRICULTURE DEVELOPMENT PROGRAM - THE CAD

OUTLINE OF THE PRESENTATION

1) THE CAD PROGRAM
2) INTENSIFICATION IRRIGATED AGRICULTURAL PROJECT
3) MAINSTREAMING CLIMATE CHANGE ADAPTATION INTO IRRIGATED AGRICULTURE
4) CONCLUSIONS
1) THE CAD PROGRAM

BACKGROUND
• China National CAD is one of the most important programs to support the sustainable agriculture development in China.
• China National CAD program started in the year of 1988;
• CAD covers 1847 counties or about 91% of total 2016 counties in China.

MAIN OBJECTIVES:
1. Improving agriculture infrastructure and ecological environment
2. Promoting the adjustment of agricultural structure and the agriculture industrialization
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Two Categories of Projects
• Farmland improvement.
• Agriculture industrialization

Funding Sources:
• Central government budget
• Local governments
• Farmer’s contribution
• Other funds from the enterprises and the banks
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Overall Program Management/Implementation

4 levels of Government are responsible for overall management/implementation of the CAD Program:

- Central level,
- Provincial level,
- Municipality level, and
- County level
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• Implementing Agency
  • The State Office of the Comprehensive Agriculture Development (SOCAD), under the Ministry of Finance, is the implementation agency for both the Government CAD funded projects and the World Bank funded projects under CAD Program: Irrigated Agriculture Intensification Project Loan 3 (IAIL3 Project) and GEF Mainstreaming Climate Change Adaptation in Irrigated Agriculture Projects (GEFCC).

  • SOCAD is responsible for project management, supervision, monitoring and evaluation of project implementation.
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ACHIEVEMENTS (1988-2007)

Farmland Improvement:

- Improved 34.84 million ha of low and medium yield farmland,
- Improved 3.2 million ha of pasture,
- Improved 120 thousand ha of desertification areas,
- Newly increased and improved 32 million ha of irrigation areas
- Newly increased and improved 14 million ha of water logging areas
- Newly increased 89.3 billion kilograms of grain production capacity.
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### Farm Land Improvement

<table>
<thead>
<tr>
<th>Activity</th>
<th>Achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved Land (low and medium yield land)</td>
<td>34.84 million ha</td>
</tr>
<tr>
<td>Improved Pasture</td>
<td>3.2 million ha</td>
</tr>
<tr>
<td>Improved Desertification Areas</td>
<td>120,000 ha</td>
</tr>
<tr>
<td>Increased and Newly Improved Land</td>
<td>14 million ha</td>
</tr>
<tr>
<td>Increased grain Production</td>
<td>89.3 million kg</td>
</tr>
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</table>
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ACHIEVEMENTS (1988-2007) - Continued

Agriculture Industrialization:

• Supported 1.4 million ha of cash forest, vegetable and Chinese medicinal herbs;

• Supported 530 thousand ha of aquiculture areas;

• Supported 7129 specific projects for agriculture product processing and agriculture production service.
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Agriculture Industrialization

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The CAD Program - Yearly Investment

- Investment '000 Yuan
- Year

Yearly investment for the CAD program from 1988 to 2009, with a steady increase over the years.
The CAD Program - Yearly Investment

Yearly Investment (000 Yuan)

Central Gov.
Provincial Gov.
Farmers
Bank

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- **Main Areas of Agriculture Policy Focus**
  - Promote adjustment of agricultural structure and cropping systems.
  - Optimize regional arrangement of agriculture.
  - Promote the centralization of preponderant agro-products to preponderant production areas in order to form the industrial zones of preponderant agricultural products and to increase agricultural productivity.
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Actions
- Extend the planting areas of economic and forage crops, and promote the shift of the structure of cropping systems from dual structure with food crop and cash crop to ternary structure with food crop, cash crop and forage crop. Adjust cropping systems, develop multiple cropping and raise multiple cropping indexes.
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– Continue to improve agricultural infrastructure.

– Accelerate the construction of supporting facilities of large-scale, water-saving irrigation areas;

– Maintain/promote field engineering quality; upgrade aging electromechanical equipment;

– Improve irrigation and drainage systems;

– Continue to expand demonstration on water-saving irrigation, build pilot projects in the main grain production area
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• **New Areas of Focus**
  – In the recent few years, SOCAD focused also on two areas:
    A) More integrated agriculture development
    B) Mainstreaming climate change adaptation into irrigated agriculture
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A) Integrated Agriculture Development

• **Engineering aspects**
  - Rehabilitation and improvements of irrigation and drainage systems, ground water management, and water saving techniques etc.

• **Agronomic aspects**
  - Improved agricultural practices, introducing IPM,
  - Green houses and plastic tunnels, introducing new varieties of improved seeds, increase coverage of forestry, promoting organic and green food production etc.

• **Institutional aspects**
  - Irrigation reform, establishing WUAs (over 52,000 in China at present), FAs and FCs.
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2) Irrigated Agriculture Intensification Loan 3 (IAIL 3) Funded partially by the World Bank

Components
- Water Saving Irrigation and Drainage Component;
- Agricultural Modernization and Organization Development Component;
- Agro-ecological Environmental Protection and Management; and
- Institutional Strengthening and Project Management Support
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Achievements

• A total of 505,504 ha of low-and-medium-yield farmland have been improved under the project, including 392,306 ha of water saving and land development;

• Canal water delivery efficiency in the improved areas has reportedly risen from 53% to 79% at present;

• Irrigation quota has reduced from 6,173 m³/ha to 3,792 m³/ha;

• A total of 1,020 WUAs established;

• Collection fee rate reached 97-100%.
Decline of the groundwater table decrease from 2.5 m in 2005-2006 to 0.5-1.1 m meter in 2009, and withdrawal of groundwater in 2009 was reduced by about 454 million m$^3$ compared to that of 2006 (using ET to monitor groundwater);

- Water productivity increased from baseline value of 1.05 kg/m$^3$ to 1.57 kg/m$^3$;
- Cropping intensity increased from 1.72 to 1.87;
- IPM programme now covers 100% of the project areas;
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• Increased forestry coverage rate by 4% in the project areas, from 15% to 19%;

• The production of non polluted, green and organic food has reached the target;

• 209 Farmers Associations (FAs) were created; and 20 pilot Farmers Cooperatives (FCs) were also created with 42,000 households involved; and

• Training to Project Management Office, WUAs and farmers.
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<td>Improvement of low-yield and medium-yield land</td>
<td>505,504 ha</td>
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<td>Introducing water saving measures</td>
<td>396,302 ha</td>
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<tr>
<td>Increase canal water delivery efficiency</td>
<td>53% - 79%</td>
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3) Mainstreaming Climate Change Adaptation into Agricultural Production

Expected Impacts of Climate Change on China’s Agriculture

Occurrence impacts:
• Climate change has had certain impacts on agriculture, primarily shown by the 2-to-4-day advancement of spring phenophase since 1980’s

Impacts of climate change in the future:
• Increasing instability in agricultural production
• Changes in distribution and structure of agricultural production
• Changes in agricultural production conditions
GEF project will be partially blended with IAIL3 project. Both projects are a part of national CAD program.

Objectives:

• Introduce the rationale of adaptation to climate change into water resource management and agricultural development

• Increase the capacity of agricultural development adaptation to climate change through capacity building and demonstration activities

• Take the lead in establishing a system of adaptation measures to climate change in the project areas

• Set up demonstration and action models for the incorporation of adaptation to climate change into nationwide agricultural development system and projects

• Formulate the policies recommendation and action plan on climate change adaptation for CAD program
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GEF MAISTREAMING CLIMATE CHANGE ADAPTATION INTO IRRIGATED AGRICULTURE PROJECT

Components

– Identifications and Prioritization of Adaptation Measures and Options;
– Demonstration and Implementation of Adaptation Measures; and
– Mainstreaming and Adaptation into National CAD Program and Institutional Strengthening
Achievement

• The main studies were completed during the project preparation, but the additional studies on Provincial Climate Change Adaptation Action Plan” for the overall provincial CAD program (for the whole province) are under Component A are now underway;

• The project has so far introduced, demonstrated and implemented specific CC adaptation measures in 16 demonstration counties, and integrated appropriate adaptation measures into the implementation of IAIL3 (project adaptation measures implemented in the field have already helped greatly to mitigate serious damage due to the extreme drought event in early 2009 in the project provinces);
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• The work on mainstreaming and institutional support has picked up with more training provided and study tours as well as information dissemination and providing specialised TA.
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4) CONCLUSIONS

• CAD Program has achieved impressive results and succeeded in improving the living conditions in rural areas and increase farmers income;

• CAD Program has used integrated approach to agricultural development including engineering measures, agronomic measures and institutional measures;

• CAD Program has mainstreamed its work with climate change adaptation to help farmers deal with and adapt to increasing droughts and floods.
THANK YOU