ENVIRONMENTAL ASSESSMENT FRAMEWORK

FUJIAN SOIL CONSERVATION AND RURAL DEVELOPMENT II PROJECT

IN THE

PEOPLE’S REPUBLIC OF CHINA

August 2003
CURRENCY EQUIVALENTS

Currency Unit — Yuan (Y)

Y1.00 = $0.1211
$1.00 = Y8.26

ABBREVIATIONS

ADB — Asian Development Bank
EAR — environmental assessment report
EPB — environmental protection bureau
EMP — environmental management plan
IEE — initial environmental examination
PMO — project management office
PRC — People’s Republic of China

NOTE

In this report, “$” refers to US dollars.
I. INTRODUCTION

1. The Project is categorized as environmental category B. As the Project follows a sector-like approach, procedures for environmental assessment for sector loans have been adopted. An overall initial environmental examination (IEE) was undertaken as a part of the feasibility study for assessment of generic impacts of each subcomponent. The overall IEE shows that the impacts of the Project are expected to be positive especially for the subcomponent of orchard rehabilitation, and forestation and soil conservation. It also shows that no significant adverse environmental impacts are anticipated from other subcomponents, and a detailed environmental impact assessment is not required. In addition to the overall IEE, subproject specific IEEs have been prepared for two most environmentally sensitive subprojects (one for Dahe Pig Breeding Farm and one for Sancengji Small Hydropower Scheme) to serve as demonstration for preparation of IEEs and summary IEEs during project implementation. The subproject specific IEEs have indicated that overall environmental impacts would continue to be positive and the proposed interventions do not pose any significant threats to social and ecological environment.

2. This Environmental Assessment Framework (EAF) has been prepared to guide the environmental assessment of subprojects for each subcomponent and facilitate compliance with environmental requirements of the Asian Development Bank (ADB), the People’s Republic of China (PRC), and the Fujian Provincial Government (FPG) during implementation.

II. OVERVIEW OF TYPE OF SUBPROJECTS TO BE ASSESSED

3. The proposed Project have three main components: (A) Soil Conservation and Integrated Agriculture, (B) Rural Infrastructure, and (C) Project Support Services. The Project area would include 50 counties, more than 650 townships and 10,200 villages, with a population of 1.9 million. Environmental assessment requirements are applied to all the subprojects under Components A and B:

(A) Soil Conservation and Integrated Agriculture to provide direct support to individual households for conservation oriented farming including
   (i) conservation farming and orchard rehabilitation,
   (ii) forestation and soil conservation,
   (iii) aquaculture,
   (iv) agro-processing, and
   (v) integrated livestock farming.

(B) Rural Infrastructure
   (i) agriculture marketing;
   (ii) rehabilitation and development of rural road, flood protection levees, and drainage system;
   (iii) rehabilitation and development of small hydropower schemes; and
   (iv) rehabilitation and development of rural water supply.
III. SPECIFIC PROCEDURE OF ENVIRONMENTAL ASSESSMENT TO BE USED FOR SUBPROJECTS UNDER THE PROJECT

A. Responsibilities, Authorities, and Procedure for Environmental Assessment of Subprojects

4. An environmental assessment report (EAR) will be carried out for each subproject under all components during the Project implementation. Careful screening of potential subprojects will be conducted based on the EAR review. The environmental impact analysis for each proposed subproject will be conducted by an agency with EIA certifications in Fujian Province. For each of the subprojects, the EAR will include an Environmental Management Plan (EMP) with specific mitigation measures and financial sources as pre-requisite for approval of credit, and implementation of monitoring and enforcement program will be developed to ensure that none of the Project components would have any major adverse environmental impacts.

5. Public consultation will be conducted through interviews, meetings, or surveys as part of environmental assessment for each subproject based on the public involvement procedures and guidelines established in PRC. The results of public consultation will be documented and reflected in EAR.

6. The EAR preparation for all small hydropower subprojects will follow the contents and format of ADB’s guidelines on the preparation of IEE, and the EAR will be submitted to ADB for review and approval 6 weeks before the implementation of the subproject in addition to Fujian Environmental Protection Bureau (EPB)/county EPB’s review and approval. For other subcomponents, for a subproject with a total cost equal or smaller than $800,000, Fujian EPB/county EPB will review and approve the EAR and the project management office (PMO) will submit it to ADB for record. For a subproject with a total cost between $800,000 - $1.5 million, Fujian EPB/county EPB will review and approve the EAR and PMO will submit it to ADB for endorsement on a no-objection basis four weeks before implementation of the subproject. For a subproject with a total cost larger than $1.5 million, the EAR will follow format and contents of ADB’s guidelines for IEE preparation, and will be submitted to ADB for review and approval six weeks prior to implementation of the subproject in addition to Fujian EPB/county EPB’s review and approval. ADB will approve/comment on the EAR within three weeks of its submission. ECAE of ADB would be responsible for review and approval in consultation with RSDD.

7. To mitigate any potential adverse impacts, identified environmental measures will be incorporated into the subproject design. The Fujian EPB and its subordinate offices at the county and township levels would undertake monitoring of environmental mitigation measures as detailed in the EMPs for various components. In addition, PMO would be provided additional expertise for regular environmental monitoring and reporting during the Project implementation.
### B. Environmental Criteria of Subproject Selection

8. The following table summarizes environmental criteria for subproject selection:

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<tr>
<th>Overall Requirements</th>
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<tr>
<td>No subproject of the investment component will entail new clearing of forestland nor seek to replace any of natural ecosystems with designed agricultural systems and rural infrastructure. The proposed interventions are located at an appropriate distance from population centers and meet the national and local environmental standards. An environmental assessment report (EAR) will be carried out for each subproject and submitted to an authorized environmental protection agency for review and approval. The EAR will include an Environmental Management Plan (EMP) with specific mitigation measures and financial sources as pre-requisite for approval of credit, and implementation of monitoring and enforcement program will be developed to ensure that none of the Project activities would have any major adverse environmental impacts. Public consultation will be conducted during environmental assessment process, and documented in EAR.</td>
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<th>Project Activities</th>
<th>Special Specifications</th>
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<tr>
<td><strong>A. Soil Conservation and Integrated Agriculture</strong></td>
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<tr>
<td>1. Conservation Farming and Orchard Rehabilitation</td>
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<td>Site orchard on slopes in slightly to moderately eroded areas (&lt;25°)</td>
<td>Full technical and service support including training farmers/workers in use of best practices in new harvesting techniques, environmental safety, handling and disposal of fertilizers and pesticides</td>
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<td>Build terraces according to the standards issued by Ministry of Water Resources Management</td>
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<td>Put soil and moisture conservation measures in place</td>
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<td>Trees that are either unproductive or unsuitable for marketing should be top-grafted using scions of preferred cultivars</td>
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<td>When trees begin to shoot and new branches formed, top branches should be pruned to form a thick canopy to increase crop yield.</td>
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<td>Cover crops and forage grasses should be planted in bare areas, such as inter-rows and terrace walls, to improve soil fertility and reduce erosion.</td>
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<td><strong>2. Forestation</strong></td>
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<td>The area selected must be over 25 degree slope and in a degraded conditions certified by appropriate authorities at the country level; the density of existing vegetation must be less than 60%</td>
<td>Draw up the forest management plans in consultation with local villagers and community-based organization</td>
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<td>The species to be planted must be ecologically appropriate</td>
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<td>Construct windbreak</td>
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<td>Put soil and water conservation measures in place (i.e., construction of side drainage, cross drainage, check dams, water retention pits for access road building)</td>
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<td><strong>3. Aquaculture</strong></td>
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<td>Cage density to be kept at a low level to reduce oxygen solubility level and the incidence of disease</td>
<td>Provide technical and service support including training to fishers on preventive measures to avoid disease outbreak</td>
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<td>Reduced frequency and amount of feed supplied to minimize water pollution</td>
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<td>Added appropriate amount of lime in sheltered bays with naturally slow waters</td>
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<td>Cage culture will be combined with that of oysters and kelp to provide a complementary food supply chain to mitigate the impact of effluents</td>
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<td>Freshwater sites are in remote areas, and occupy less than 1% of its area</td>
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<td>Use of hazardous and toxic chemicals must be banned</td>
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4. Agro-processing
- Factories should be located at the fringe of urban centers
- All wastes discharged from factories is treated or deposited appropriately, and meet national and local standards
- Each factory must prepare an environmental assessment form/report as required by PRC regulations. The factory design, construction, and operation must comply with all state and local environmental standards
- Each factory must prepare an EMP to ensure that all the proposed agro-processing plants comply with environmental mitigation requirements and conditions of loan approval.

5. Integrated Livestock Farming
- Farms should be located at least 5km away from the population centers/residential areas
- All wastes discharged from factories is treated or deposited appropriately, and meet national and local standards
- Each farm/company must prepare an environmental assessment form/report as required in PRC regulations. The farm design, construction, and operation must comply with all state and local environmental standards
- Each farm/company must prepare an EMP to ensure that all the proposed livestock farms comply with environmental mitigation requirements and conditions of loan approval

B. Rural Infrastructure
1. Agriculture Markets
- The markets must be designed, constructed and operated with incorporating several environmental friendly features including: (i) appropriately designed wastewater disposal system, (ii) proper drainage of channel storm water, (iii) separation of wholesale and retail areas for proper hygienic conditions, (iv) adequate public toilet, (iv) creation of a buffer zone/green lung, and (vi) detailed planning to prevent traffic congestion and parking problems
- Each farm/company must prepare an environmental assessment form/report as required in PRC regulations, with an EMP to ensure that all the proposed markets comply with environmental mitigation requirements and conditions of loan approval

2. Rehabilitation and Development of Rural Road, Flood Protection Levees and Drainage System
- Rehabilitation is limited to improve minor flood protection and improvement of drainage and rural access roads that have no any significant adverse environmental impacts
- Each subproject under this component must prepare an environmental assessment form/report as required in PRC regulations, with an EMP to ensure that all the proposed subprojects comply with environmental mitigation requirements and conditions of loan approval
- All rural access roads should only include the rehabilitation/upgrading of existing roads, and the roads would follow existing alignment
- Construction of road, flood protection levees and drainage system should not involve any cutting of trees or cleaning of forest
- Construction teams must comply with the requirements and take measures specified in environmental assessment form/report on soil and water erosion control, and wastes and noise reduction during construction period
### 3. Rehabilitation and Development of Small Hydropower Schemes

- All subprojects are limited to small-scale schemes that have no any significant adverse environmental impacts
- Rehabilitation is limited to replacement of turbines, powerhouse and transmission lines, upgrading existing channels, and tunnels construction; Construction of rehabilitation subprojects should not involve any cleaning of forestland
- New dams is limited to the schemes with a height lower than 10 meters, all subprojects should not seek to replace any of natural ecosystems
- Subprojects with reservoir must be designed to guarantee the minimum ecological flow
- Each subproject must prepare an EAR as required in PRC regulations and in accordance with ADB’s guideline on contents and format of IEE preparation, with an EMP to ensure that all the proposed subprojects comply with environmental mitigation requirements and conditions of loan approval by both government authority and ADB
- Construction teams must comply with the requirements and take measures specified in environmental assessment form/report on soil and water erosion control (including the prohibition of random disposal of soil, reducing the time of soil digging and filling, stopping construction during the rainy season and restoring ground cover by planting trees and grass after construction), and wastes and noise reduction during construction period

### 4. Rehabilitation and Development of Rural Water Supply

- All subprojects would be designed, constructed and operated following the PRC’s regulation/standards on drinking water supply as well as environmental protection laws/regulations
- For new water supply development schemes, wastewater disposal should be connected to environmentally sound drainage systems and in conformity with national and local environmental standards
- Each subproject must prepare an environmental assessment form/report as required in PRC regulations, with an EMP to ensure all the proposed subprojects comply with environmental mitigation requirements and conditions of loan approval
- Construction teams must comply with the requirements and take measures specified in environmental assessment form/report on soil and water erosion control (including the prohibition of random disposal of soil, reducing the time of soil digging and filling, stopping construction during the rainy season and restoring ground cover by planting trees and grass after construction), and wastes and noise reduction during construction period

### IV. STAFFING REQUIREMENTS AND BUDGET

9. An environmental specialist (local consultant) with a 72 person-month service will be recruited during project implementation to (i) review the EARs, (ii) inspect and ensure compliance with the mitigation measures proposed in the EARs and EMPs for all components or subprojects funded by the Project, and (iii) provide necessary trainings. Appendix 6 of the RRP for the Fujian Soil Conservation and Rural Development II Project provides the outline terms of reference.