

Document of
The World Bank

Report No: 22271-CHA

PROJECT APPRAISAL DOCUMENT
ON A
PROPOSED LOAN
IN THE AMOUNT OF US\$93.9 million
AND A
GEF GRANT
EQUIVALENT TO SDR 12.8 million
TO THE
PEOPLE'S REPUBLIC OF CHINA
FOR A
SUSTAINABLE FORESTRY DEVELOPMENT PROJECT
February 21, 2002

**Rural Development and Natural Resources Sector Unit
East Asia and Pacific Region**

CURRENCY EQUIVALENTS

(Exchange Rate Effective February 15, 2002)

Currency Unit = Yuan
Y 1 = US\$0.12
US\$1 = Y 8.28

FISCAL YEAR

January 1 -- December 31

ABBREVIATIONS AND ACRONYMS

BC	British Columbia
BP	Bank Procedures
CAF	Chinese Academy of Forestry
CAS	Country Assistance Strategy
CBD	Convention on Biological Diversity
CCE	Community Conservation Education
CCF	Community Conservation Funds
CFA	Community Forestry Assessment
CFB	County Forest Bureau
CIDA	Canadian International Development Agency
CIFOR	Centre for International Forestry Research
CP	Consultant Prequalification
CNAO	China National Audit Office
COP	Conference of Parties
CQ	Consultant Qualification
CRMP	Community Resource Management Plan
CTF	Consultant Trust Fund
DDFRP	Daxinganling Forest Fire Rehabilitation Project
DNR	Division of Nature Reserves
DO	Development Objective
DWPP	Department of Wildlife and Plant Protection
EA	Environment Assessment
EACCF	East Asia Country China Field Office
EC	European Commission
EIA	Environment Impact Assessment
EMDP	Ethnic Minorities Development Plan
ENV	Environment Department
ERR	Economic Rate of Return
ESIA	Environment and Social Impact Assessment
ETL	Economic Threshold Level
EU	European Union
FAO	Food & Agriculture Organization
FDPA	Forestry Development in Poor Areas
FRDPP	Forest Resource Development and Protection Project
FRR	Financial Rate of Return
GEF	Global Environment Facility

GOC	Government of China
GPN	General Procurement Notice
GPS	Global Positioning System
GTZ	German Development Cooperation
KFW	Kreditanstalt fuer Wiederaufbau (Credit Institute for Re-construction)
ICB	International Competitive Bidding
IDF	Institutional Development Fund
IDRC	International Development Research Council
IIED	International Institute for Environment & Development
IP	Implementation Progress
IPM	Integrated Pest Management
ITTO	International Tropical Timber Organization
IUCN	International Union for Conservation of Nature
LA	Loan Agreement
LACI	Loan Administration Change Initiative
MAB	Man and Biosphere
MBD	Model Bidding Document
M & E	Monitoring & Evaluation
MOF	Ministry of Finance
MP	Management Plans
MF	Management Forum
NAP	National Afforestation Project
NCB	National Competitive Bidding
NEPA	National Environment Protection Agency
NFM	Natural Forest Management
NFPC	Natural Forest Protection Center
NFPO	Natural Forest Protection Office
NFPP	Natural Forest Protection Program
NGO	Non-Government Organization
NR	Nature Reserves
NRMP	Nature Reserves Management Project
NTFP	Non-Timber Forest Products
OD	Operational Directives
ONRP	Office of Nature Reserve Protection
OP	Operational Policies
OWPP	Office of Wildlife and Plant Protection
PAM	Protected Areas Management
PDF	Preparation Development Fund
PE	Plantation Establishment
PFB	Provincial Forest Bureau
PFD	Provincial Forestry Department
PHRD	Policy and Human Resources Development
PMC	Project Management Center
PMO	Project Management Office
PMG	Project Management Group
PMR	Project Management Report
PO	Project Office
PRA	Participatory Rural Assessment

PRC	People's Republic of China
PSR	Project Supervision Report
QAG	Quality Assurance Group
SA	Social Assessment
SFA	State Forestry Administration
SFDP	Sustainable Forest Development Project
SFE	State Forest Enterprises
SOE	State-Owned Enterprise
STAP	Scientific and Technical Advisory Panel
TNC	The Nature Conservancy
TOR	Terms of Reference
TWU	Township Working Unit
UNDP	United Nations Development Program
UNESCO	United Nations Educational, Scientific and Cultural Organization
WWF	World Wildlife Fund

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CHINA
SUSTAINABLE FORESTRY DEVELOPMENT PROJECT

CONTENTS

A. Project Development Objective	Page
1. Project development objective	3
2. Global objective	3
3. Key performance indicators	3
B. Strategic Context	
1. Sector-related Country Assistance Strategy (CAS) goal supported by the project	3
2. Main sector issues and Government strategy	4
3. Sector issues to be addressed by the project and strategic choices	6
C. Project Description Summary	
1. Project components	7
2. Key policy and institutional reforms supported by the project	9
3. Benefits and target population	10
4. Institutional and implementation arrangements	10
D. Project Rationale	
1. Project alternatives considered and reasons for rejection	13
2. Major related projects financed by the Bank and other development agencies	14
3. Lessons learned and reflected in the project design	16
4. Indications of borrower commitment and ownership	17
5. Value added of Bank support in this project	17
E. Summary Project Analysis	
1. Economic	18
2. Financial	18
3. Technical	20
4. Institutional	20
5. Environmental	21
6. Social	23
7. Safeguard Policies	25

F. Sustainability and Risks	
1. Sustainability	27
2. Critical risks	27
3. Possible controversial aspects	28
G. Main Loan Conditions	
1. Effectiveness Condition	28
2. OtherCondition of Negotiations	29
H. Readiness for Implementation	33
I. Compliance with Bank Policies	33
Annexes	
Annex 1: Project Design Summary	35
Annex 2: Detailed Project Description	40
Annex 3: Estimated Project Costs	56
Annex 4: Financial and Economic Analysis Summary	57
Annex 5: Financial Summary	64
Annex 6: Procurement and Disbursement Arrangements	65
Annex 7: Project Processing Schedule	78
Annex 8: Documents in the Project File	80
Annex 9: Statement of Loans and Credits	85
Annex 10: Country at a Glance	89
Annex 11: Incremental Cost Analysis	91
Annex 12: Environment Impact Assessment	99
Annex 13: Social Assessment Summary	118
Annex 14: Policy Framework for Involuntary Loss of Assets and Loss of Access to Collective land	122
Annex 15: Process Framework for Mitigating Potential Adverse Livelihood Impacts	126
Annex 16: Ethnic Minorities Development Plan	132
Annex 17: Financial Management	137

CHINA
Sustainable Forestry Development Project

Project Appraisal Document

East Asia and Pacific Region
EASRD

<p>Date: February 21, 2002 Country Manager/Director: Yukon Huang Project ID: P064729 Lending Instrument: Specific Investment Loan (SIL)</p>	<p>Team Leader: Mohamed N. Benali Sector Manager/Director: Mark D. Wilson Sector(s): AT - Forestry, VM - Natural Resources Management Theme(s): Environment; Rural Development Poverty Targeted Intervention: N</p>																								
<p>Global Supplemental ID: P060029 Focal Area: B - Biodiversity Supplement Fully Blended? No</p>	<p>Team Leader: Mohamed N. Ben Ali Sector Manager/Director: Mark D. Wilson Sector(s): VM - Natural Resources Management</p>																								
Program Financing Data																									
<p><input checked="" type="checkbox"/> Loan <input type="checkbox"/> Credit <input type="checkbox"/> Grant <input type="checkbox"/> Guarantee <input type="checkbox"/> Other: IBRD Loan GEF Grant</p>																									
<p><u>For Loans/Credits/Others:</u> Amount (US\$m): IBRD Loan \$93.90/ GEF Grant \$16.00</p>																									
<p>Borrower Rationale for Choice of Loan Terms Available on File: <input type="checkbox"/> Yes</p>																									
<p>Proposed Terms (IBRD): Variable Spread & Rate Single Currency Loan (VSCL) Grace period (years): 7 Years to maturity: 16 Commitment fee: 0.75 Front end fee (FEF) on Bank loan: 1.00%</p>																									
Financing Plan (US\$m):	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;">Source</th> <th style="width: 20%;">Local</th> <th style="width: 20%;">Foreign</th> <th style="width: 20%;">Total</th> </tr> </thead> <tbody> <tr> <td>BORROWER</td> <td style="text-align: right;">105.68</td> <td style="text-align: right;">0.00</td> <td style="text-align: right;">105.68</td> </tr> <tr> <td>IBRD</td> <td style="text-align: right;">76.45</td> <td style="text-align: right;">17.45</td> <td style="text-align: right;">93.90</td> </tr> <tr> <td>EC: EUROPEAID AGENCY</td> <td style="text-align: right;">10.00</td> <td style="text-align: right;">5.00</td> <td style="text-align: right;">15.00</td> </tr> <tr> <td>GLOBAL ENVIRONMENT FACILITY</td> <td style="text-align: right;">9.87</td> <td style="text-align: right;">6.13</td> <td style="text-align: right;">16.00</td> </tr> <tr> <td>Total:</td> <td style="text-align: right;">202.00</td> <td style="text-align: right;">28.58</td> <td style="text-align: right;">230.58</td> </tr> </tbody> </table>	Source	Local	Foreign	Total	BORROWER	105.68	0.00	105.68	IBRD	76.45	17.45	93.90	EC: EUROPEAID AGENCY	10.00	5.00	15.00	GLOBAL ENVIRONMENT FACILITY	9.87	6.13	16.00	Total:	202.00	28.58	230.58
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Total:	202.00	28.58	230.58																						
<p>Borrower/Recipient: PEOPLE'S REPUBLIC OF CHINA Responsible agency: STATE FOREST ADMINISTRATION (SFA) Address: 18 East Street, Hepingli, Beijing, China 100714 Contact Person: Mr. Song Shikui, Director, World Bank Loan Project Management Center Tel: 86-10-8423-9030 Fax: 86-10-6421-7796 Email: pmcsfa@cenpok.net or pmc@forestry.gov.cn</p>																									

Estimated disbursements (Bank FY/US\$m):								
FY	2003	2004	2005	2006	2007	2008		
Annual	11.94	27.40	32.80	22.20	11.20	4.36		
Cumulative	11.94	39.34	72.14	94.34	105.54	109.90		
Project implementation period: 6 years: September 2002-August 2009								
Expected effectiveness date: 09/30/2002 Expected closing date: 08/31/2009								

(These figures include both IBRD Loan and GEF Grant)

A. Project Development Objective

1. Project development objective: (see Annex 1)

The project objective is to ensure that viable, participatory, and locally-managed system for conservation, management, and sustainable use of forest resources and associated biodiversity are developed and adopted in project sites to promote sustainable development and management of forest resources and protect the natural environment. These practices developed and applied for the protection and sustainable management of natural forest resources in pilot areas in China would provide models for wider replication under the government's Natural Forest Protection Program (NFPP).

2. Global objective: (see Annex 1)

The global environmental objective is to foster improved conservation and sustainable management of biodiversity in remaining natural forest areas by ensuring effective *in situ* protection of threatened and globally important forest habitats and rare and endemic species. Monitorable indicators to measure achievement of the global environment objective are: (a) over 1 million hectares of important biodiversity areas brought under improved management; (b) substantial involvement and participation of local communities in nature reserve management planning and implementation; (c) reduction of community reliance on forest resources inside biodiversity important zones; and (d) increase in local government's capacity to supervise, monitor, and implement conservation and sustainable resource use activities.

3. Key performance indicators: (see Annex 1)

Achievement of the project development objective would be monitored by four key performance indicators: (a) 6 natural forest management areas under effective management on-the-ground by end of project; (b) 13 nature reserves under active and effective management by end of project; (c) 6900 villages benefiting from participation in project activities by end of project; and (d) project generates 13.3 million m³ of timber and 2.73 billion kg of bamboo by December 31, 2025, and RMB 1.1 billion net income from tree crop production by December 31, 2022.

B. Strategic Context

1. Sector-related Country Assistance Strategy (CAS) goal supported by the project: (see Annex 1)

Document number: 16321-CHA (CAS) **Date of latest CAS discussion:** 04/22/99

CAS goal supported by SFDP

The proposed Project is consistent with the China CAS, which identifies *protecting the environment* as an overarching objective for support by the World Bank Group. The Project would help address one specific objective set out in the CAS: preserving productive natural forest reserves and biodiversity by promoting sustainable natural resources management.

1a. Global Operational strategy/Program objective addressed by the project:

China ratified the Convention on Biological Diversity (CBD) in January 1993. The Project is consistent with the GEF Operational Strategy, which emphasized *in situ* conservation of globally significant biodiversity, and aims at consolidating conservation efforts in tropical and sub-tropical forests (OP 3) and in monotone ecosystems (OP 4). It responds to Conference of Parties 3 (or COP 3) and COP 4 guidance by promoting conservation and sustainable use through adaptive management of forest ecosystems; capacity building; and integrating biodiversity conservation into improved management of the forestry sector. The GEF-financed activities will address the incremental costs of protecting globally significant

biodiversity, while the overall SFDP will address the root causes of biodiversity loss by implementing a comprehensive approach to promote sustainable forestry development to meet China's growing timber needs.

The Project is also consistent with the national *Biodiversity Conservation Action Plan* (1994) which was prepared with support from the GEF Pre-Investment Facility during the GEF Pilot Phase and the *China's Biodiversity - A Country Study* (1998). The *Action Plan* identified the project regions as centers of China's biodiversity. In addition, the project's proposed interventions are consistent with other planning exercises regarding the significance of Chinese biodiversity; the priorities for its protection and management; and the specific areas targeted for development and implementation as described in the national *Forestry Action Plan for China's Agenda 21*, WWF-supported *Biodiversity Review of China* (1996), and the national *Forest Nature Reserves Conservation Plan* under preparation with funds from the GEF-financed Nature Reserves Management Project.

The three key project provinces, Sichuan, Hainan, and Hunan each represent a different forest type and contain high biodiversity. Sichuan Province is in the transition zone from sub-tropical to cold temperate conifer forests. The province contains the third highest number of endangered plant species, second in terms of mammal species richness, and second in terms of richness of bird species in China. This province also contains large tracts of remaining Giant Panda habitat. Hainan Province is biologically very rich containing evergreen tropical rainforests and monsoon forests with mangroves scattered intermittently along the coast around river inlets. The flora is estimated at 4,200 species, 630 of which are said to be endemic to the island. The bird and mammal lists are also very rich for an island and a total of 98 mammal and 291 bird species have been recorded. The island has several important species found nowhere else in China or that are nationally or internationally endangered. Hunan Province contains broad-leaved evergreen forests and high diversity of plant species. Flora is estimated at 5,000 species of which 51 plant species are endangered.

2. Main sector issues and Government strategy:

The forestry sector plays a critical role not only in protecting biodiversity and watersheds but also in the Chinese economy, providing 40 percent of rural household energy, almost all of the lumber and panel products for the large construction sector, and raw material for the large domestic pulp and paper industry. The resource base is small. Forest cover amounts to only 0.13 hectares per capita which is significantly below the world average of 0.6 hectares per capita. Forest land is divided into two categories: natural forests (about 106.9 million hectares), which are located in isolated areas in the northeast and southwest and account for 92 percent of standing wood volume; and plantations (about 46.7 million hectares), which account for only 10 percent of standing volume, since most are newly established. China is the third largest consumer of timber in the world and faces a widening imbalance between supply and demand for wood products. The present consumption level (about 300 million cubic meters of standing stock) exceeds the annual growth of the forests. This deficit is being made up by imports and over-cutting, contributing substantially to the loss of 500,00 hectares of natural forest area per year. This situation has been allowed to persist because logging enterprises do not bear the full cost of over-harvesting, are not efficiently regulated, and lack knowledge of sustainable natural forest management.

Although the Government of China (GOC) has taken steps to address the widening wood deficit by investing in plantations until recently, it had not tackled the fundamental imbalances in the sector. Triggered by the devastating flooding that occurred in the Yangtze Basin and northeast China during the summer of 1998, GOC recently took bold actions to restructure the forest sector.

- *First*, the State Council issued an emergency circular in August 1998 announcing the following immediate policy changes: ban on logging in natural forests; no opening up of new lands at the expense of forests; freezing of all construction projects on forest land for one year; and a new requirement for direct cabinet approval for any occupation of forest land. Supplemental regulations have been issued by the provinces that provide detailed guidelines for implementation at the local level.
- *Second*, GOC launched an ambitious new investment program (Natural Forest Protection Program - NFPP) in 17 provinces. NFPP supports increased protection of natural forests, establishment of timber plantations, and the transfer of state loggers to more environmentally sustainable employment. More specifically, NFPP covers (a) protection of 61.2 million hectares of forests along upper reach of the Yangtze River and upper and middle reaches of the Yellow River by banning commercial logging in natural forests and establishing plantations; (b) protection of 39.4 million hectares of forests (of which 34.4 million are natural forests) in state-owned forest enterprises in Northeastern provinces including Inner Mongolia by reducing annual timber production of 7.5 million cubic meters and restructuring the enterprises; and (c) protection of natural forests outside of the key program areas by the provincial governments. The plan is being implemented in two phases (1998-2000 and 2001-2010), at a total cost of 106.3 billion yuan, financed in part by budgetary allocations and subsidized loans from central and local governments.
- *Third*, the government enacted additional legislation, such as a new land use law in September 1998, to promote more efficient use of land and increased reforestation.
- *Fourth*, GOC launched another program in 1999 to convert around 3.6 million ha of steep lands (over 25 percent slope) in the upper reaches of the Yangtze and Yellow Rivers from agriculture back to forest (and grasslands). The program was piloted in 1999-2000 in 17 provinces and being implemented from 2001 to 2010.

The environmental impact of these reforms could be enormously positive both locally and globally: an additional 30 million hectares of remaining natural forests will be brought under legal protection as nature reserves, forest parks, or watershed protection forests according to their biodiversity and watershed protection values, and 40 million hectares under sustainable management, which will strengthen forest cover, biodiversity conservation, watershed management, and other important environmental benefits. However, the transitional social and economic costs will be extremely high, and there may be an ongoing justification and need for targeted international and domestic subsidies to support provision of environmental services. These include the following:

- Since a significant share of the natural forests are located in poverty areas and are an important source of fuelwood and non-timber forest products for poor upland households, the ban could reduce their income and consumption levels;
- About 65 large state-owned harvesting enterprises are being closed down and another 70 scaled back operations, resulting in a loss of approximately one million jobs by 2000; a comparable number of non-state workers, mostly people from the local communities, have also lost their jobs;
- About 200 counties lost more than one-half of their fiscal revenues as a result of lower tax payments from the forestry sector, the major impacts of which will not be felt until 2001 and beyond;

- Prices of domestic and imported raw materials are likely to increase, which will be passed through in higher prices for building materials, furniture, and other products, adding further stress on the relatively inefficient wood processing sector; and
- Timber imports are expected to increase which will draw down foreign exchange reserves and create new pressures for (illegal) harvesting of forests elsewhere, particularly Russia, East Asia, and Africa.

Effective implementation of this new investment program is the biggest challenge facing the forest sector. Successful implementation will require (a) developing comprehensive integrated management plans for forest resources, particularly for natural forests, that maximize economic and environmental benefits for local communities; (b) improving the efficiency of the wood processing sector through continued reform of the policy framework for state-owned enterprises; (c) expanding forestry resources to support continued growth of construction and agro-processing sectors, with an emphasis on productivity gains through improvements in silvicultural technologies, particularly planting stock development and silvicultural management; and (d) developing more participatory approaches for the design and implementation of natural forest management and afforestation programs to strengthen incentives for sustainable resource management by local communities.

3. Sector issues to be addressed by the project and strategic choices:

Creation of new resources, through afforestation, and rehabilitation of forest fire affected areas has been the major thrust of previous Bank involvement and has been largely successful within the established policy and institutional framework. While considerable effort has been given to strengthening the technical basis of plantation forestry, previous projects have had limited impact on technical approaches to the management of natural forest areas, with the exception of the GEF-funded Nature Reserves Management Project (NRMP) which has introduced a more scientific basis for nature reserve management. GOC's new policy provides an opportunity to also focus on natural forests. Among the specific issues to be addressed are the appropriateness of incentives facing resource users and producers including small-holders; arrangements for governance and effective management and co-management of forest resources; land use planning within production forest areas; resource assessment methods; and rationalization of harvest calculations.

Several strategic choices were made in the design of the Project:

- *First*, although the restructuring of forestry logging enterprises and redeployment of redundant workers remains a critical task for government, the project would not tackle these difficult issues, for the following reasons (a) Central Government is already providing a significant amount of funding for the restructuring of logging enterprises under NFPP, so there is less need for additional Bank financing; (b) the Bank's policy is to support diversification of enterprise ownership and not new SOE establishment, as SOEs absorb a disproportionate share of resources in China, have inadequate systems of governance, and are still insufficiently subject to market discipline; (c) the previous experience of Bank support for enterprise restructuring in China is poor, as many SOEs have encountered operational difficulties and failed to repay their loans; and (d) enterprise restructuring is extremely complex and time-consuming to prepare and supervise, and the project design is already quite complicated. Instead, the Project has a much stronger emphasis on community-based management of natural resources, and will support a wider range of social and economic activities for rural households affected by NFPP, including household loans, vocational training, and small-scale village infrastructure.

- *Second*, the emphasis will be on introducing much more participatory, community driven, and bottom-up approaches to forest resources planning and management by involving local governments and communities much earlier on in forest resource assessment and management plan development. This will lead to more ownership by local governments and communities leading to better adherence to management prescriptions and resource use zoning; greater likelihood that local government poverty alleviation programs can be directed to areas to reduce the reliance on unsustainable forest exploitation; and, this will also facilitate discussions of trade-off in the planning phase and building of consensus on how to protect and manage the remaining forest resources and associated biodiversity sustainability.
- *Third*, there will be stronger linkages between conservation and sustainable income generation at all levels, including local governments. Oftentimes, conservation objectives are forgotten in the interest of local economic development needs. Therefore, the focus will be placed on community protection and sustainable use without losing the incentives for community participation. Community development projects identified as part of the co-management process, to the extent possible, would be linked to long-term and sustainable management of the forest resources. Community extension programs need to find alternative and diversified agroforestry and cultivation approaches to replace revenues lost from shrinking supplies of non-timber forest products (NTFP). Conservation education and awareness program under the Project would target specific groups of rural community households whose actions are adversely impacting the biodiversity.

C. Project Description Summary

1. Project components (see Annex 2 for a detailed description and Annex 3 for a detailed cost breakdown):

The Project will finance, over a period of six years, the following main components and activities:

(a) Natural Forest Management Component (NFM) would support the development and dissemination of new sustainable management techniques in natural forest areas protected under the Government's NFPP and community development and livelihood enhancement activities targeting selected rural communities. The latter targets the most forest dependent rural communities in the project areas who would potentially be most affected by the NFPP restrictions. The component includes the following subcomponents and key activities: (i) natural forest management including development of forest management plans through resource assessment, zoning, and forest classification; yield regulation and control; policy studies relating to opportunities for forest ecological benefit compensation systems, marketing, and market intelligence systems; implementation of forest management plan through demonstrations, non-timber forest products (NTFP) domestication, establishment of yield plots to model growth and yield and assessment of biodiversity change; and monitoring and evaluation; (ii) forest management training to employees and vocational training to laid-off workers of State Forest Enterprises in the project areas; (iii) community development activities including small household loans, household training, implementation of small village infrastructure based on village development plans developed by the project communities and associated technical studies (e.g., rural energy, animal grazing, and so on); and (iv) training directed at forest administration staff, and dissemination beyond the project area using mass media and in-country workshops. The EU is expected to finance this component in its entirety.

(b) Protected Areas Management Component (PAM-Global Component) would support conservation and improved management of biodiversity of global importance in selected, high priority nature reserves in

natural forest areas. The subcomponents and key activities include: (i) participatory nature reserves planning and management including management plan development and implementation, strengthening of field-level management and targeted applied research; (ii) community-based nature conservation including co-management activities that link biodiversity conservation with sustainable income generation, energy conservation demonstration, wildlife management to reduce damage to local community livelihoods, community conservation education and awareness, and delivery of sustainable alternatives and enhancement of community skills; (iii) training and capacity building to strengthen institutions responsible for biodiversity conservation and management at the provincial and nature reserve levels; and (iv) project management, monitoring and evaluation including key policy studies. The Global Environment Facility is expected to finance this component in its entirety.

(c) Plantation Establishment Component (PE) would support increasing the production of wood to meet the growing gap between domestic supply and demand, generate new employment and income for forestry farms and rural households and improve environmental management. It will be implemented in the three key provinces plus eight more and will include the following subcomponents and key activities: (i) establishment of commercial wood plantations for fiber, pulp, plywood, bamboo, and construction timber; (ii) establishment of economic forest crops, including fruit, nut and medicinal trees, and rattan; (iii) pre-commercial thinning of existing plantations to demonstrate increase productivity and financial gains from proper thinning and tending; and (iv) provision of related technical support services such as planting stock development and nursery management, training and extension, small-scale rural infrastructure required for afforestation and post-harvest treatment and marketing of horticultural crops, and monitoring and evaluation including environmental and social parameters.

Component	Sector	Indicative Costs (US\$M)	% of Total	Bank financing (US\$M)	% of Total	GEF financing (US\$M)	% GEF financing
Natural Forest Management*	Forestry	20.00	8.7	0.00	0.0	0.00	0.0
Plantation Establishment	Forestry	186.79	81.0	93.00	99.0	0.00	0.0
			0.0		0.0	0.00	0.0
Global Components							
Protected Areas Management	Natural Resources Management	22.85	9.9	0.0	0.0	16.00	100.0
Total Project Costs		229.64	99.6	93.00	99.0	16.00	100.0
Front-end fee		0.94	0.4	0.94	1.0	0.00	0.0
Total Financing Required		230.58	100.0	93.94	100.0	16.00	100.0

*This component is expected to be co-financed in parallel by a US\$15 million grant from the EU

Project Areas and Beneficiaries

All project activities would be implemented in three key provinces: Sichuan, Hainan, and Hunan. These three key provinces were selected based on their interest and willingness to participate in the Project, natural forest resources, biodiversity value, and commitment to natural forest protection. Within these provinces, several representative natural forest areas were selected for inclusion under the Natural Forest Management component based on agreed selection criteria and through an extensive consultation process. The selected counties include three in Sichuan, two in Hunan, and one in Hainan covering approximately 203,000 ha of natural forest and representing major ecological forest types in their respective provinces. Within the six project counties, 59 villages in 13 townships have been selected for the community development sub-component. These villages were chosen based on their relative relationship to and

dependence on the selected natural forest areas. Approximately 29,000 beneficiaries would be supported by this component of which 40 percent are ethnic minorities. In addition to the three key provinces, the Protected Areas Management component would be implemented in four adjacent provinces of Gansu, Hubei, Yunnan and Guizhou in order to strengthen transboundary biodiversity protection and exchanges between these adjoining provinces. These provinces are also included under the NFPP and this provides opportunity to strengthen and mainstream biodiversity conservation into the program at the provincial-level, where the impact will be greatest. Approximately 57,200 individuals would directly benefit from this component with over 71 percent belonging to an ethnic minority group. The Plantation Establishment component would be extended to a larger number of provinces with suitable conditions for high yield commercial plantations to meet the increasing demand for wood and other forest products as a result of the logging ban. The provinces of Shanxi, Liaoning, Anhui, Shandong, Hebei, Henan, Hubei, Hunan, Hainan, Sichuan, and Gansu are included in this component. Participation is voluntary based on technical, institutional, and economic/financial criteria. This component would support approximately 2.67 million beneficiaries of which less than 1 percent are ethnic minorities.

Co-Financing Arrangements

Co-financing have been sought for two of the three components—Protected Areas Management and Natural Forest Management. The GEF has approved the inclusion of the Protected Area Management component into the March 2001 GEF work program for the amount of US\$16 million. Final endorsement by the GEF Council was obtained on March ??, 2002. The newly-established European Aid Agency of the European Union convened a technical review in late March 1991 of the Natural Forest Management component. It recommended that the proposal be submitted to the European Commission's Asia and Latin America Committee which is equivalent to the World Bank Executive Directors in June 2001. The Commission gave its approval in September 2001. The EU will co-finance in parallel and will be responsible for processing, management, and supervision of its own technical assistance package. GEF financing would be implemented by the World Bank, and therefore the Bank is responsible for processing, management, and supervision. Where possible, joint supervision and mid-term reviews will be carried out with the EU for effective review of cross-cutting issues.

2. Key policy and institutional reforms supported by the project:

The Project supports China's efforts to (a) develop more integrated and participatory approaches to sustainable forest management thus fostering better local ownership and commitment; (b) ensure a more rational and standardized scientific approach to forest land (including nature reserves) classification and use zoning; and (c) devolve more responsibilities to the provinces for implementation, supervision, and monitoring. Although not explicitly linked to specific investment operations, the Bank recently assisted in the establishment of a Forestry/Grasslands Task Force under the China Council for International Environment and Development Council which will focus on development of key policy-related recommendations for consideration by the State Council. Various other donors/NGOs such as CIDA, Ford, UNDP, AusAid, and WWF-China Program are also providing support for studies which will identify additional reform steps needed to effectively implement the NFPP and to address inefficiencies in forest resource use.

3. Benefits and target population:

The Project would generate the following benefits: (a) environmental--1.2 million ha of natural forests would be protected and managed sustainably for multiple benefits and 0.17 million ha of trees planted thus reducing soil and water erosion, flooding and river sedimentation, preserving globally important biodiversity, and reducing greenhouse gas emissions through carbon sequestration; (b) economic--an increase in supply of forest products that would support the continued growth of the construction and agro-processing sectors including approximately 13.3 million cubic meters of commercial timber, 0.42 million tons of bamboo, fruit, and nut, and miscellaneous forest production amounting to RMB 1.89 billion net income at current financial prices at full development; (c) social--sustainable resource use and improved income generating opportunities for rural households living within the project areas; and (d) institutional--improvement in the administrative and implementation capacity particularly of the local and provincial governments and strengthening coordination and collaboration between units, departments, and communities.

The total number of beneficiaries is estimated at 687,500 households or approximately 2.75 million individuals. The beneficiary groups include a large share of women and ethnic minorities. Of the 55 recognized ethnic minority groups in China, a total of 18 (Li, Tibetan, Qiang, Tujia, Miao, She, Dong, Dulong, Hui, Mongols, Manchus, Yao, Bai, Lisu, Nu, Yi, Pumi and Naxi) reside in SFDP project counties and sites. Project activities and benefits would accrue to collective forest farms and local communities in proportion to the social and economic dependency on natural resource extraction (for example, in Hunan province where approximately 95 percent of the natural forests are managed by collectives and local communities, the vast share of project benefits would accrue to them).

4. Institutional and implementation arrangements:

Project Management. Project management would build upon the successful implementation structure developed under earlier Bank forestry projects. Leading Groups at the central, provincial, and county levels would be established to provide general policies and guidelines, review work programs, and ensure coordination, linkages, and sharing of experiences between the three components. Project entities at the national, provincial, county, and nature-reserve levels would be responsible for day-to-day implementation, supervision, and monitoring.

National-Level. The Leading Group at the national-level would be chaired by the Administrator of the State Forestry Administration (SFA) with membership from the Project Management Center (PMC), Natural Forest Protection Center (NFPC), Department of Wildlife and Plant Protection (DWPP), Department of Planning and Finance, and other relevant departments in SFA. Within SFA, the existing Natural Forest Protection Center (NFPC) will be responsible for overseeing the EU-financed Natural Forest Management component since it is directly responsible for the implementation of the NFPP. The Project Management Center (PMC) will be responsible for the Plantations Establishment component based on its successful implementation track record of three previous World Bank-financed plantation projects. Management of the PAM component would be carried out and supervised by a central Project Office (PO). PO would work closely with the Division of Nature Reserves (DNR) in the DWPP and would be staffed with appropriate technical expertise in required fields, including a full-time Protected Areas Management officer, a full-time Community-based Conservation officer, and a full time Nature Reserve Training Coordinator who will also be responsible for coordinating the M&E.

Provincial-Level: Overall implementation would be overseen by the provincial Leading Group chaired by the Director of the Provincial Forestry Department (PFD) and would be carried out by existing organizations under the Provincial Forestry Department (PFD) to ensure institutionalization of project

activities. The Natural Forest Protection Office (NFPO), the Project Management Office (PMO), and Office of Wildlife and Plant Protection (OWPP) and would be responsible for the NFM, PE, and PAM components, respectively. The NFPOs, PMOs, and OWPPs in each of the three key provinces will meet on a semi-annual basis to ensure complementarity of activities, identify concrete areas for collaboration particularly between NFM and PAM components, and share implementation experiences. The results of the meetings will be included in the semi-annual progress reports. In addition, an annual workshop would be convened in each of the three key provinces to disseminate lessons learned with participation from project staff, non-project, staff, relevant NGOs, and staff from relevant donor-funded projects.

Local-Levels: For NFM component, 6 county PMOs and thirteen township working groups would be established to oversee implementation. For PAM component, each nature reserve would create a Project Management Group (PMG), directly under the nature reserve director. The PMG would be responsible for supervision of all aspects of project activities in that reserve. For PE component, county PMOs in the County Forestry Bureaus would manage the work and provide technical support while individual households, groups of households, share-holding forest farms, village or township collective forest farms and state forest farms will carry out the plantation activities.

An assurance was obtained at negotiations that: (a) all implementation units would be established and maintained in forestry agencies, staffing, functions, and responsibilities acceptable to the Bank; and (b) annual work and financing plans for the PAM and PE components for the next calendar year would be furnished to the Bank for review by December 31 of each year.

Production Arrangements. All plantation activities are organized as follows: First, households would receive use rights for a term of not less than thirty years for land directly under their responsibility and management under the Project. Second, the Project would not introduce any changes in existing land use that would inadvertently create tenure insecurity in project villages, such as the revocation of existing land-use contracts in order to develop "easier" production arrangements for project activities. Third, the relative priority for land tenure and organizational arrangements for plantations during selection are: (a) land directly under the responsibility and management of beneficiary households or groups of beneficiary households; (b) households or groups of households participating in a shareholding arrangement with another party, such as a village committee, village/township collective farm, a township extension station, or a state farm; (c) village or township collective forest farms; and (d) state forest farms. Fourth, production arrangements based on a shareholding structure would ensure all the stakeholders will receive satisfactory and equitable profits from production outputs. Fifth, since production arrangements vary widely throughout the project areas, the structure for shareholding farms will be clearly described including the specific input, expected output (rights and responsibilities) for each partner and governance structure of the farms. Sixth, all loan recipients including individual households would sign a loan contract with the relevant on-lending agency. Seventh, all production arrangements including different parties (such as share-holding arrangements, large household arrangements with other households, or land renting for nursery development) would require the signature of a joint co-operation contract ensuring transparency and fair distribution of benefits. Each household participating in such co-operative productive arrangement would sign an individual copy of this documents, and each participant would keep a copy of the signed document. An assurance was obtained at negotiations that all afforestation activities would be organized in accordance with guidelines in the Project Implementation Manual.

On-Lending Arrangements: The NFM and PAM components are grant financed. Project funds for the PE component would be on-lent as follows. The Ministry of Finance (MOF) would on-lend the Loan to the provincial finance departments on the same terms and conditions as received from the Bank (7 years grace and 16 years maturity). Modification of IBRD loan terms from 5 to 7 years of grace corresponds with

timing of the fruiting of economic trees and the first thinning of timber trees, and the corresponding reduction in the repayment period to 16 years coincides with the average of various harvesting data of the tree species. Foreign exchange risk between USD and the local currency would be borne by the provinces. The provinces would ensure the on-lending terms and conditions for the final project beneficiaries are at the same terms and conditions as received by the provinces, with the establishment of an appropriate foreign exchange rate risk mechanism which may include the option of an additional exchange rate risk fee of up to two percent per annum for any loan on-lend in the Borrower's currency. No foreign exchange risk would be passed onto the final project beneficiaries who earn all of their income in local currency and have no capacity to hedge against exchange rate movement. The PMC would manage the portion of funds used for international procurement, consultancy services, overseas training and study tours, and other central government training and extension activities, although the provinces would assume the debt responsibility for these services. An assurance was obtained at negotiations with respect to these on-lending terms and conditions.

Monitoring and Evaluation Arrangements: Monitoring will be done at three levels--delivery of inputs by the project activities, outputs including the use of project goods/services by beneficiaries, and the extent to which project objectives have been achieved (outcome/impact). The detailed M&E plan for PE component was reviewed at appraisal and found satisfactory. However, the detailed overall M&E plan for PAM component will be further revised during the first year of implementation with full participation of the nature reserves and submitted to the Bank for review and approval by December 31, 2002. It is critical that staff who will be implementing the M&E plan participate fully in its design; otherwise, there is little ownership, understanding and commitment to its implementation. During implementation, project performance, including the achievement of project outputs and progress toward the attainment of development objectives, would be monitored through the use of semi-annual progress reports prepared by the PMC and PO. The first such monitoring report would be submitted by March 31, 2003 for both PE and PAM components.

Financial Management and Auditing Requirements: An assessment of the adequacy of the project financial management system was conducted at pre-appraisal and concluded that this Project meets minimum Bank financial management requirements (see Annex 17). All previous forestry projects have been in full compliance with audit and accounting covenants. The project entities would produce project financial management reports in line with the format and content agreed to between the Bank and China. In addition, traditional disbursement methods would be used as opposed to the PMR-based disbursement systems. As with other Bank Group-financed projects in China, the Foreign Investment Audit Bureau of China National Audit Office (CNAO) would have overall responsibility for auditing the accounts of the Project. Audits of the financial statements of implementing agencies and of the Special Accounts would be submitted to the Bank within six months after the end of the financial year. An assurance was obtained at negotiations with respect to this auditing arrangement.

Supervision and Reporting Arrangements: The Project will be supervised through Bank missions scheduled for twice a year consisting of both Field Office and Headquarters staff. A project launch workshop will be arranged soon after Board approval which will focus on (a) project concept and objectives; (b) project management activities including procurement, financial management, implementation arrangements; and (c) project environmental protection guidelines and resettlement policy framework. A joint mid-term review will be undertaken with the EU by July 31, 2005. Prior to that, a mid-term report will be prepared by the PMC, NFPC and PO summarizing the results of monitoring and evaluation, identify problems encountered during implementation, revise project costs, and discuss measures to complete the Project as scheduled. In addition, an implementation completion report, reviewing the planned objectives and achievements of the Project, including costs and benefits derived and performance and

contribution of all parties associated with project execution, would be prepared by the PMC and submitted to the Bank within six months of the project completion date of February 28, 2009.

D. Project Rationale

1. Project alternatives considered and reasons for rejection:

The following different design options were considered and rejected:

- The team considered splitting the overall Project into three smaller projects (natural forest protection and management, plantation establishment, and wood processing) to reduce complexity and simplify institutional arrangements. This was rejected because of the critical importance of taking an integrated approach to sustainable natural forest management that ensures strong linkages and synergy across all land use activities, as emphasized in the Lessons Learned Section below. In this context, each of the Project's components has been designed with complementary objectives and activities which will be linked during implementation in the three key project provinces.
- The team considered supporting the redeployment of redundant state enterprise loggers to new jobs. This was rejected because (a) the Central Government is already providing a significant amount of funding for the restructuring of logging enterprises under NFPP and therefore less critical need for additional Bank financing; (b) the Bank's policy is to support diversification of enterprise ownership and not new SOE establishment, as SOEs absorb a disproportionate share of resources in China, have inadequate systems of governance, and are still insufficiently subject to market discipline; and (c) previous Bank experience for enterprise restructuring in China is poor, as many SOEs have encountered operational difficulties and failed to repay their loans.
- The team considered developing a much larger program of income generating activities for households potentially adversely affected by the logging ban, many of which are located in nationally or provincially designated poverty counties. This was scaled back because government is insisting on full cost recovery of project loans from project beneficiaries and IBRD lending terms are not suitable for many of these household activities.
- The team considered piloting natural forest management activities in a larger number of provinces to increase the development impact of the Project. This was rejected because of the complexity of project activities, the limited familiarity of implementing agencies with sustainable forest management, and the need for extensive capacity building and technical assistance--which highlight the importance of a phased, pilot approach in a small number of closely monitored project areas.
- Similarly, the team considered including a much smaller number of nature reserves for simplicity, but rejected it because of (a) the urgency of strengthen protection of these globally important areas; (b) the opportunity presented by the logging ban to strengthen protection and management of more areas (this ban can be lifted in the near future); and (c) the demonstrated satisfactory implementation of the on-going GEF-financed Nature Reserves Management Project by SFA.
- The team considered and rejected a separate Planning, Monitoring, and Policy Development Component which was originally envisioned to address project-specific, provincial-wide, and national-level requirements. Instead, the critical planning, monitoring, and policy issues necessary for effective implementation of specific project activities (natural forest management, protected area management, and commercial afforestation) will be picked up and incorporated in each of the three

separate components). A more ambitious agenda to support the development of improved inventory assessment and monitoring at the provincial and national levels, and development of a comprehensive monitoring and evaluation program to review the environmental, biological, social, financial, and economic impacts of NFPP at the national level has been rejected in view of the limited availability of donor grant support and the need to reduce the overall complexity of the Project.

- The team considered structuring the Project as an Adaptable Program Loan to support the phased implementation of the government's long-term NFPP. This was rejected because of the difficulty in developing a standard menu of investment activities for all 17 provinces participating in NFPP and specific performance indicators to trigger subsequent projects (extensive preparation work and stakeholder consultant has to be done in each project area to identify the appropriate mix of activities and performance indicators).

2. Major related projects financed by the Bank and/or other development agencies (completed, ongoing and planned).

Sector Issue	Project	Latest Supervision (PSR) Ratings (Bank-financed projects only)	
		Implementation Progress (IP)	Development Objective (DO)
Bank-financed Develop forest resources in poor areas of central and western China on a sustainable and participatory basis to support poverty reduction and improved forestry management;	Forestry Development in Poor Areas Project	S	S
Support dissemination of the NAP plantation program to another 620,000 hectares in 16 provinces and establishment of improved models for watershed management on 280,000 hectares of protection forests;	Forest Resource Development and Protection Project (FRDPP)	S	S
Support establishment of 1.35 million hectares of improved commercial timber plantations in 16 provinces, with emphasis on development of improved planting materials, new silvicultural technologies, and new environmental management guidelines;	National Afforestation Project (NAP)	HS	HS
Salvage burned timber and establish a comprehensive fire protection system in Northeast China;	Daxinganling Forest Fire Rehabilitation Project (DFFRP)	HS	HS
Increase agricultural production and incomes and reduce soil erosion in Loess Plateau, including extensive afforestation;	Loess Plateau Watershed Rehabilitation Project	S	S

Strengthen institutional framework for private sector investment, SFA's regulatory role, and public sector management of environmental forests;	Changing Institutional Roles in the Forestry Sector (IDF)	S	S
Other development agencies			
Promote improved management of high priority nature reserves;	Nature Reserves Management Project (GEF)		
Support improved management of nature reserves, promote participation of local communities in conservation, and strengthen research on key species;	Various projects by NGOs--WWF, The Nature Conservancy, San Diego Zoo, International Crane Foundation		
Strengthen sectoral policy framework, including land tenure, property rights, trade, pricing, and taxation;	Forestry Policies and Institutions in a Market Economy Project (FAO) and projects financed by Ford Foundation, IIED, CIFOR, CIDA, etc.		
Develop improved models for sustainable and participatory management of natural forests, and institutional development of forestry agencies;	Various projects in several provinces, including Hainan, Sichuan, and Yunnan (GTZ)		
Develop improved models for commercial plantation establishment by households;	Various projects in several provinces, including Sichuan (KfW)		
Support institutional development for natural forest management;	Capacity Building, Research and Extension for Sustainable Forest Management Project (UNDP)		
Develop new models for intensive management of forests and sustainable utilization in Langxiang Forest Bureau;	Integrated Intensive Forest Management Project (CIDA)		
Pilot new forest management model in Linan County in Zhejiang;	China Model Forest Network Program (IDRC)		
Support demonstration forest farm, forest road construction, pulp and paper technology development, and resource inventory and monitoring;	Various projects (Finland Government)		
Research on plantation establishment, sustainable management, land-use planning, and GIS in tropical forests in	Demonstration Program for Sustainable Forest Management in Hainan (ITTO/CAF)		

Hainan;			
Develop improved models for household forestry in poor upland areas in Yunnan and Sichuan;	Ford Foundation and WWF (various projects)		

IP/DO Ratings: HS (Highly Satisfactory), S (Satisfactory), U (Unsatisfactory), HU (Highly Unsatisfactory)

3. Lessons learned and reflected in the project design:

The main lessons are summarized below, which come from **project work** (including the 1998 QAG/AGR review of the forest portfolio and GEF supported projects in the Bank), **analytic and advisory activities** (including the 1999 draft China Case Study for the OED Review of the 1991 Forest Policy and Its Implementation, the 1999 Strategic Framework for Natural Resource Management in East Asia, and the 1994 ENV/AGR review of implementation of the Bank's forestry policy), and the **Bank's knowledge management system** (including the 1998 workshop on sustaining tropical forests), and **donor/NGO consultations** (including the background documents for the WWF-World Bank Alliance).

Key issues for effective natural forest management:

- Forestry cannot be considered in isolation from other land uses and must be fully integrated into land use planning;
- Successful management is only possible with a defined and enforced permanent forest area;
- Accurate inventory of multiple forest resources are needed to guide forest planning;
- Management objectives need to be tailored to the potential of specific sites and the demands of local communities and linkages between conservation and development should be explicit;
- The interests of all stakeholders must be taken into account in decisions on forest management;
- All management options for forests -- even total protection -- incur financial and economic costs; consequently, the options selected must have long-term financial and economic sustainability;
- Commercial timber plantations and trees in farming systems must play a role in securing sustainable management of natural forests and need to be planned and monitored to appropriate standards; and
- Institutions and agencies charged with forest management must raise technical standards and provide structures that are conducive to the outputs sought

Key recommendations for Bank-financed natural forest management projects:

- Support modernization and implementation of more appropriate legislation, regulation, and resource rights;
- Support alternative resource control systems, such as deconcentration, decentralization, and co-management with government agencies, local communities, the private sector, NGOs, and others;
- Closely coordinate technical training with the timing and needs of institutional change and development for locally responsible resource management agencies;
- Give priority to effective policy analysis and development, since policy and market failures have been more serious than technical problems of forest management, silviculture, and conservation;
- Support investments in boundary demarcation, resource assessment and inventories and growth and yield studies; and
- Strengthen systems for monitoring resource management and audit of institutional performance.

Key recommendations for the China forestry program:

- Mobilize concessional cofinancing to soften IBRD terms, as IBRD funding alone may be too costly for poor households and lead to their exclusion from project activities;
- Strengthen data collection and monitoring and evaluation (particularly of socio-economic factors) at project, provincial, and national levels, as it is currently difficult to evaluate the impact of project loans, management innovations, and forest policies on overall sector performance and Bank projects;
- Deepen policy dialogue and support sectoral reforms, particularly in the areas of SOE restructuring, private sector development, and land tenure, and resource taxation;
- Continue to support commercial plantation development, which will reduce pressure on natural forests, expand domestic wood supply, and generate environmental benefits;
- Expand GEF program, as China's global biodiversity resources warrant a larger share of international support than is presently received; and
- Diversify participants in sector dialogue by reaching out to the wider academic community, a broader range of institutions, and NGOs in the forest sector.

4. Indications of borrower and recipient commitment and ownership:

GOC has shown its commitment to the protection of remaining natural forests by launching the NFPP and allocating substantial funds for its implementation. This Project will be assisting SFA and pilot provinces in the design and implementation of the NFPP and its goal of conserving and managing the remaining natural forests and its biodiversity. SFA, 13 participating provinces, and a cross-section of county and township governments have shown strong commitment and ownership through their high level of preparedness throughout the complicated project preparation process. The final design has been developed and shaped by inputs and participation from these major stakeholders.

5. Value added of Bank and Global support in this project:

The Bank and GEF involvement in the Project and NFPP would provide the following contributions:

- The Project would introduce and disseminate the latest scientific management approaches (i.e. international best practices) in natural forest planning and management, management of nature reserves, community participation in co-management, and monitoring and evaluation. Previous Bank projects have proven to be very effective vehicles to transfer technology and knowledge.
- The NFPP's main focus is on reforming state forest enterprises and redeploying redundant workers. The Project would seek to redress the potential loss of income to rural forest communities which the NFPP has not been able to fully address. There are a number of small-scale pilot initiatives supported by bilateral donors and NGOs (especially GTZ, Ford Foundation, WWF, The Bridge Fund) from which lessons for larger scale replication can be learned, particularly with regard to participatory community planning and development. The Bank is in a good position to facilitate this process, which will involve not only project initiatives but also the resolution of key policy issues that are systemic in nature.
- The Bank has been involved in biodiversity conservation in China since the initiation of the Biodiversity Action Plan and assisted China with the preparation and implementation of the first GEF-supported biodiversity project--NRMP. Through this and other activities, the Bank has gained a comprehensive understanding of and experiences on the key biodiversity conservation issues facing China. The Bank can facilitate integration of experiences and results into its policy

dialogue on environment and development.

- The Project will require multiple sources of financing. The Bank's experience in coordinating multiple donors in financing a range of sub-projects is an area of distinct comparative advantage.
- The Social Assessment process has driven the design and re-design of specific sub-components of the Project. As a result, specific project activities are more aligned with the needs of local communities. Moreover, areas of possible conflict (between community demands and natural resources protection objectives, between participating and non-participating communities in the project area, and between communities and government agencies) have been identified and appropriate instruments have been designed to safeguard against any potential risk to community livelihoods. The Project will continue to conduct social assessments and use this instrument in strengthening design and implementation of the Project.

E. Summary Project Analysis (Detailed assessments are in the project file, see Annex 8)

1. Economic (see Annex 4):

- Cost benefit NPV=US\$216 million; ERR = 25 % (see Annex 4)
- Cost effectiveness
- Incremental Cost
- Other (specify)

Standard benefit-cost analysis has been used to evaluate the IBRD-financed PE component, cost-effectiveness analysis was used to assess the EU-financed NFM component (see EU Brief in project files), and incremental cost analysis for the GEF-financed PAM component (see Annex 11).

Economic cost-benefit analysis has been carried out for each timber and economic tree crop species, other income generating components such as pre-commercial thinning, and for the Project as a whole (the analysis is based on direct costs and benefits, and does not reflect any indirect environmental benefits such as reduced soil erosion or carbon sequestration). The results are summarized below and presented in greater detail in Annex 4, along with detailed assumptions about production levels, markets, prices, and methodological assumptions.

The overall ERR for the entire Project is 25%. The economic rate of return (ERR) for demonstrations of pre-commercial thinning is estimated at 22%. The ERR for most timber species range from 16 to 20 percent, reflecting their long gestation period and the moderate price levels for non-speciality timber used in the construction and paper making industries in China; however, several species generate particularly high returns, including poplar, moso bamboo and casuarina, as a result of their shorter rotations and higher market values. The overall ERR for the timber component is 30 percent. The ERRs for the economic tree crops are higher, generally ranging from 15 to 37 percent, and reaching as high as 48 percent for a specialty prickly-ash variety. The overall ERR of the economic tree crop component is 26 percent. Sensitivity analysis indicates that these findings are relatively robust to wide changes in key parameters.

2. Financial (see Annex 4 and Annex 5):

NPV=US\$ 153 million; FRR = 22 % (see Annex 4)

The results of the financial analysis and detailed assumptions about production levels, input and output prices, and methodology are presented in Annex 4. The overall financial rate of return (FRR) for the plantation establishment component is 22%. The FRRs for timber and economic tree crop species are 21 and 29 percent, respectively. Pre-commercial thinning yields a FRR of approximately 19%.

Market Risks. Changing domestic market conditions have heavily undermined the profitability of past investments in commercial wood plantations, economic tree crops, and forest-sector enterprises in China. While NFPP, and particularly the logging ban, is expected to contribute to a decrease in domestic timber supply and thereby an increase in domestic wood prices (at least in the short- to medium-term), careful attention has been paid to locating plantation sites near commercial wood markets and large-scale industrial consumers. Similarly, the selection of appropriate tree crops is based on market studies evaluating the potential market for various tree-crops.

Fiscal Impact:

The Project is not expected to generate negative fiscal impacts since beneficiaries of the PE component would assume full responsibility for repayment of the IBRD loan. Moreover, the projected fees and taxes under the Project would cover the government's counterpart funding contribution, and beneficiaries would be responsible for financing almost all recurrent operating costs. However, the likely negative budgetary impact of the logging ban on local government finances will likely squeeze local government reserves which may adversely affect the Project in its ability to generate the necessary counterpart funds and in a timely way. In order to better assess the fiscal impacts of the logging ban on local government reserves, a study was conducted in one of the project counties, Pingwu County in Sichuan Province.

Overall, the impact of the logging and timber transport bans on County government finances are broad and severe, covering four dimensions: budgetary, extra-budgetary, financial and enterprise-related. Public (and quasi-public) revenues and expenditures are shrinking significantly because of the bans, although the overall impact will not be clear until end of 2000 when the full impact of ban on log transport is felt. Local tax revenues in 1999 were 34 percent below what they would have been without the bans, and in 2000 they are expected to be 58 percent below what they otherwise would have been. Budgetary expenditures were down 10 percent in 1999 and are expected to be down 45 percent in 2000. In addition to tax revenues, extra-budgetary income is also severely affected by the bans. The loss of logging and timber processing fees traditionally paid to the county Forestry Bureau appears itself to be a loss of a fifth of overall county extra-budgetary income. Other fee sources were reduced 15 to 25 percent from normal levels in 1999. The impact on extra-budgetary revenue in 2000 will certainly be greater, and trends in 1999 show that required extra-budgetary outlays are increasing, such as payments for pensions, unemployment compensation, and basic subsistence assistance. In addition to budgetary and extra-budgetary funds, local governments rely to some degree on the lending of local financial institutions to implement public programs.

Available data show that deposit growth in most county financial institutions has slowed dramatically since the bans, and for the Agricultural Bank of China, net deposit growth is expected to become net withdrawals in 2000. The provincial forestry bureau has made an appeal to provincial and central governments for assistance in repaying the bank debts of logging and timber-related enterprises, which have become non-repayable since the logging and transport bans. Finally, enterprises themselves are required by law to make public expenditures and investments, and available data show that some of these expenditures in Pingwu County were greatly reduced in 1999 and are expected to decline even more in 2000. The impact of the bans is even more severe at the township level. For one project township (Wuzuo Township, Sichuan Province), revenues from fees and other extra-budgetary sources are expected to decline by more than 60 percent in 2000.

In addition, while the county government is responsible for paying township officials' salaries, it failed to pay any salaries at all in the county for May 2000, and the prospects for salary payments in the rest of 2000 are uncertain. Overall, local government finances in project counties are already severely affected by the bans. However, the overall level of economic activity in the county is also reduced, and it is not clear to

what degree the need for government finance may adjust downward in the medium-to-long run. For the near future, at least, as costs of adjusting the formerly logging- and timber-related labor force to other employment patterns goes forward, there is if anything a greater need for local government resources than there has been in the past. SFDP, through the PE component will help to generate revenue and thereby reduce the overall negative fiscal impact of the logging ban.

3. Technical:

Forest land use zoning. The existing forest zoning and nature reserve zoning systems embody some weaknesses, such as lack of standardization, subjective and inconsistent application, and lack of grounding in sound ecological principles. A rational zoning system that is technically sound, easily understood and simply applied in practice, will be essential to meet the objective of the Project. Zoning issues are addressed up-front in both the NFM and PAM components.

Nature reserve management plans. At present it is not possible to obtain official approval by SFA of management plans as envisioned under the Project. This is because the current official approval process means commitment to fund all activities specified under the plan. To overcome this constraint, the Project will produce management plans in 2 separate volumes. Volume 1 will include details of the baseline conditions, management objectives, and proposed zonation and management activities for the target site. Volume 2 will include a detailed budget specifying those expenditures which are one-time investments (civil works and equipment) and those which are recurrent costs (e.g. salaries, fuel, supplies and spare parts). Although both volumes of each management plan produced by the Project will be submitted jointly to the appropriate authorities for review purposes, only the technical aspects of the plan (i.e. Volume 1) will require official endorsement (from DNR) that recognize this document as the overall plan for the nature reserve. Volume 2 will be used (with cross referencing to Volume 1) by the nature reserve authorities as the basis for soliciting funds from local, provincial, national, and international sources as and when required.

Pre-commercial thinning of plantations. In China, there are large areas of existing plantations which are densely stocked and have not been thinned due in part to a lack of financing. This has led to less than optimal growth, a loss in overall productivity and subsequent loss in yield. Therefore, pre-commercial thinning is considered an investment cost not a routine recurrent cost since the investment will lead to net productivity gains at harvesting time. Experiences in China and elsewhere have shown that it is particularly important to thin between ages 8-12 years after which the productivity gains decline. Thinning models under a broad range of plantation conditions have been developed based on available research results. The Project will finance pre-thinning on a demonstration basis and monitor the results carefully.

4. Institutional:

4.1 Executing agencies:

SFA and the provincial forestry departments have demonstrated excellent institutional capacity in the management of five previous Bank-supported forestry projects and one GEF-financed biodiversity project over the past decade, reflecting effective governance mechanisms, extremely competent and committed staff, and well developed rules and procedures for management and supervision of Bank-financed project activities. Because the Project involves the participation of several different units within SFA at the central-level and within the Department of Forestry at the provincial-level, mechanisms have been designed through the project Leading Groups and project management offices to ensure more effective coordination. In addition, funds have been set aside to facilitate exchanges of information among the components and stakeholders, particularly with regard to annual work planning and management.

4.2 Project management:

Although SFA and all project provincial forestry departments with the exception of Gansu Province are familiar with Bank procedures, grassroots forestry staff at the county, township and nature reserve levels, particularly in remote areas, have either no or very little experience with Bank operating procedures, and consequently will need significant training to support implementation. The Project includes comprehensive training and extension programs for project staff as well as communities and households, including project management skills such as computer, finance, and procurement training; technical skills such as planting materials development, non-timber forest products domestication, and improved cultivation; both domestic and international technical assistance; study tours such as farmer-to-farmer exchanges; and demonstrations to pilot activities.

4.3 Procurement issues:

The procurement assessment (see Project File, Annex 6) found no concerns of substance, since most project provinces have implemented Bank-financed forestry projects. However, the lack of experience with undertaking procurement in accordance with Bank guidelines by provincial OWPPs and Gansu PMO will be addressed as follows: First, procurement training will be provided to such staff handling procurement. The training will be overseen by PMC of SFA and will start during the Project Launch Workshop. Second, the provincial PMOs will work closely with the OWPPs during the first two years of implementation to develop capacity. Third, a strict Bank review of procurement procedures will be in place during the early stages of project implementation which would include Bank prior review of all ICB contracts, the first two NCB contracts for works, all NCB contracts for goods irrespective of contract values, and first two contracts for shopping for each province.

4.4 Financial management issues:

The financial management system will be similar to those for earlier loans in the forestry sector in China. The Project will have in place an adequate financial management system that can provide, with reasonable assurance, accurate and timely information on the status of the Project in the reporting format needed by the Bank. Training will be provided to project financial staff on an annual basis.

5. Environmental: Environmental Category: A (Full Assessment)

5.1 Summarize the steps undertaken for environmental assessment and EMP preparation (including consultation and disclosure) and the significant issues and their treatment emerging from this analysis.

The SFDP has been assigned an EA category "A" in the Bank's classification system.

An Environmental and Social Impact Assessment (reviewing the Project's likely positive and negative environmental and social impacts) and an Environmental Management Plan (covering mitigation measures, monitoring, and institutional strengthening) have been prepared given the broad scope of coverage of the Project. The report incorporated the findings and recommendations of the Social Assessment (SA) which was conducted separately.

Overall, the Project focuses on high-priority natural resource management issues and is expected to generate significant environmental benefits. The NFM and PAM components are expected to have positive environmental impacts, both directly, by protecting some of the most important remaining natural forests and associated biodiversity in China, and indirectly, through protecting key watersheds and thus lowering the risk of downstream flooding. Any negative environmental issues arising from these components are expected to be insignificant and easily mitigated. Simple environmental guidelines will be formulated for village-level small-scale infrastructure once they are identified through the community assessment and planning process under the NFM component. Guidelines for infrastructure development proposed for nature reserves would be included in the reserve management plan.

The PE component should also have positive environment impacts through the reduction of pressures on the natural forest as well as decreased demand for imports of forest resources from outside of China, and contributions to local community income. Negative environmental issues arising from this component are expected to be limited in scope and easily mitigated. Nonetheless, these will require an in-depth process to be followed, principally due to the wide geographic coverage of the component. An objectively verifiable process of screening of sites identified for conversion to plantation under the component has been developed to ensure that the component sites are outside of intact forest, will not convert or degrade natural habitats, or adversely affect cultural property. In addition, a pest management plan as well as a set of environmental protection guidelines for plantations establishment (revised from an earlier version developed under previous Bank-financed plantations projects) providing plantation planning, establishment and operations protocols will be applied to ensure that unintended environmental impacts are avoided, with special attention to issues of pest management.

5.2 What are the main features of the EMP and are they adequate?

See 5.1 and Annex 12

5.3 For Category A and B projects, timeline and status of EA:

Date of receipt of final draft: 12/06/00

See Annex 12

5.4 How have stakeholders been consulted at the stage of (a) environmental screening and (b) draft EA report on the environmental impacts and proposed environment management plan? Describe mechanisms of consultation that were used and which groups were consulted?

A **three**-phase on-going consultation process well integrated into the SA process has been followed. Project information leaflets and brochures describing the proposed project concept were developed, distributed and explained on two occasions--December 16, 1999 and March 6, 2000--in each of the proposed project sites and prior to the SA consultations. The distribution of leaflets was followed up during the pilot phase of the SA from January 3, 2000 to February 15, 2000, where a **first round** of consultations with potential project affected peoples was conducted. A **second round** of consultations occurred during the wider SA process. The SA included semi-structured interviews of over *1,500 households* in approximately 242 project villages across thirteen project provinces and over *70 focus group discussions* involving some 8,000 community residents. Of those consulted, 900 households belonged to one of the 18 ethnic minority groups (i.e. *Li, Tibetan, Qiang, Tujia, Miao, She, Dong, Dulong, Hui, Mongols, Manchus, Yao, Bai, Lisu, Nu, Yi, Pumi* and *Naxi*) that may participate in the Project. In addition, dozens of institutional stakeholder meetings (with administrative village leaders, township, county and provincial government officials) were held.

During the pilot SA work in Hainan province, the issue of no written language for the Li people was addressed by discussing the material in the local spoken language and providing the materials for the consultations in pictorial form. Sichuan provincial SA teams also used drawings in order to communicate with village communities (many whom are illiterate) during the SA process. Similarly, for other ethnic minority areas or in areas with a relatively low level of literacy, care was taken to ensure that the materials for the consultations were provided in a form and a language that are accessible to the groups being consulted. The general rule for the Project has been that if standard Chinese is not widely understood by the groups being consulted, the materials for the consultations would be provided in a language suitable to the locality and/or in pictorial form.

The **third round** of formal consultations discussed the draft ESIA. As part of this consultation, all project affected people were informed of the ESIA findings and more than one hundred villages were randomly selected for village meetings. Leaflets of the ESIA findings and recommendations were distributed and posted in each village at least 10 days prior to a meeting. The village representative assigned a responsible person to keep minutes and summarize the discussion. Particularly, (a) the number of men and women who attend the meeting will be disclosed, (b) who they are (villager, village leader, township/county officials, PMO staff, and so on), and (c) a summary of the questions, comments, and concerns raised at the meeting.

5.5 What mechanisms have been established to monitor and evaluate the impact of the project on the environment? Do the indicators reflect the objectives and results of the EMP?

Refer to the Environmental Protection Guidelines and Pest Management Plan for PE component which contains monitoring indicators which are included in the project monitoring and evaluation plans.

6. Social:

6.1 Summarize key social issues relevant to the project objectives, and specify the project's social development outcomes.

Areas of remaining natural forest and natural habitat in China are located in relatively remote, steeply sloping areas. These areas are also home to significant ethnic minority populations. As both the NFM and the PAM components focus on remaining areas of natural forest and natural habitat, the project areas for these two components include large populations of relatively poor ethnic minorities.

These local communities, many of which are impoverished, are typically forest-dependent in that they derive substantial portions of their income from the use of non-timber forest products, rely on firewood as a major energy source, and use forest areas for other subsistence and economic activities such as farming staple grains, grazing livestock, and medicinal herb production. In some areas, these activities increasingly exceed sustainable levels, undermining already meager livelihoods. Moreover, coupled with widespread wildlife hunting and illegal extraction of timber products, excessive levels of forest-resource use can adversely affect the sustainability of natural forests and the biological integrity of nature reserves.

The significant forest dependence of the local communities presents a three-fold challenge to protecting the China's natural forests and nature reserves from overuse and other threats. The first facet of the challenge is how to engage local people in management, during the Project and over the long-term? The second is what are the appropriate incentives for local people to use forest resources sustainably? And, the third is what types of alternatives could be developed to forest-resource-dependent activities which would both support more sustainable livelihoods and maintain the integrity of the natural forests and nature reserves?

The Project aims to address these challenges by: (a) increasing the participation of communities in nature conservation and the sustainable management of forest resources; and (b) providing assistance to local communities for identification of appropriate measures to enhance the sustainability of natural resource-based activities, as well as identification of alternatives to forest-dependent livelihood activities.

6.2 Participatory Approach: How are key stakeholders participating in the project?

SFA prepared the Project with extensive inputs from the thirteen provincial forestry departments, some 113 county forestry bureaus and 13 nature reserves with assistance from a team of domestic and international experts. The SA process enabled high levels of consultations with and participation of diverse stakeholder

groups during project design. The SA provided useful information about the existing social conditions, flagged any potential negative impacts, assisted in improving the social design particularly the community development planning process, and served as baseline for future monitoring. The summary of the findings of the Social Assessment is presented in Annex 13.

Consultations and participation will be continued throughout implementation. The PE component has a formal transparent applications process to encourage wider participation by households. The management planning process in both the NFM and PAM components give considerable emphasis to participatory approaches to addressing current pressures and dependencies on the natural forests or nature reserves. Under these two components, the planning process would provide an opportunity for structured consultation and participation of local people during the management plan development process. Meetings and informal village level consultations would provide an opportunity to improve public participation in this process. The principal objective of these meetings/consultations would be to find mutually agreed solutions to mitigate negative mutual impacts--either through directly decreasing these impacts or through finding compensatory mechanisms.

6.3 How does the project involve consultations or collaboration with NGOs or other civil society organizations?

Preparation process included formal and informal consultations and briefings with international NGOs working in China including WWF, the Nature Conservancy, Conservation International, the Bridge Fund, KhamAid, and the Zoo community. WWF and The Nature Conservancy provided valuable inputs in the SA for Yunnan nature reserves and are expected to be partners during implementation. Other donors involved in forestry in China have either participated on Bank missions (e.g., EU, GTZ, and Finland) or have been consulted separately (e.g., AusAid CIDA, and UNDP) and at briefing meetings convened during the identification, preparation, and pre-appraisal missions by SFA.

6.4 What institutional arrangements have been provided to ensure the project achieves its social development outcomes?

In the PAM component, a community development officer will be designated at central, provincial, and nature reserves levels and be responsible for working with local communities to ensure that the Process Framework developed by the Government to ensure participation of local communities in co-management of the nature reserves are implemented effectively. Regular reporting will be provided through the M&E system, reviewed by the provincial OWPP and central PO and during regular Bank supervision missions.

6.5 How will the project monitor performance in terms of social development outcomes?

In addition, to regular semi-annual progress reports, regular Bank supervision and mid-term review, for NFM component, household case studies will be carried out of small samples of villager groups and annual updates will be carried out for the same sample to provide information on impact of both improved forest management and community development. For PAM component, several PRA surveys will be carried out by nature reserve staff and villagers to study impact of community-based nature conservation on the various stakeholder groups. For PE component, impact monitoring will include random selection of counties, townships, and villages during supervision to review applications and loan contracts and client satisfaction survey among a representative sample.

6.6 Gender

During the three-phase consultation process, the views of women have specifically been sought. To

overcome illiteracy among women and especially those from minority groups, pictorial leaflets and other documentations were produced to seek their inputs on project design components and activities as well as monitoring and evaluation. The SA problem ranking surveys revealed that men and women have different development priorities. The activities identified by women that would yield higher benefits for them, particularly women of poorer households, include access to drinking water facilities, education and health facilities, village roads, small animal raising and sustainable NTFP uses. Unemployed women in State Forest Enterprises requested specific vocational training courses and basic education retraining. The SA conducted in many nature reserves identified the need for project activities that support training in literacy, accounting and farm management. Moreover, women of the Li ethnic minority tend to be in a more vulnerable position as compared to women of other ethnic groups. As a result, greater attention would be placed on incorporating their needs into specific activities planned under the Project.

7. Safeguard Policies:

7.1 Do any of the following safeguard policies apply to the project?

Policy	Applicability
Environmental Assessment (OP 4.01, BP 4.01, GP 4.01)	<input checked="" type="radio"/> Yes <input type="radio"/> No
Natural Habitats (OP 4.04, BP 4.04, GP 4.04)	<input checked="" type="radio"/> Yes <input type="radio"/> No
Forestry (OP 4.36, GP 4.36)	<input checked="" type="radio"/> Yes <input type="radio"/> No
Pest Management (OP 4.09)	<input checked="" type="radio"/> Yes <input type="radio"/> No
Cultural Property (OPN 11.03)	<input checked="" type="radio"/> Yes <input type="radio"/> No
Indigenous Peoples (OD 4.20)	<input checked="" type="radio"/> Yes <input type="radio"/> No
Involuntary Resettlement (OP/BP 4.12)	<input checked="" type="radio"/> Yes <input type="radio"/> No
Safety of Dams (OP 4.37, BP 4.37)	<input type="radio"/> Yes <input checked="" type="radio"/> No
Projects in International Waters (OP 7.50, BP 7.50, GP 7.50)	<input type="radio"/> Yes <input checked="" type="radio"/> No
Projects in Disputed Areas (OP 7.60, BP 7.60, GP 7.60)*	<input type="radio"/> Yes <input checked="" type="radio"/> No

7.2 Describe provisions made by the project to ensure compliance with applicable safeguard policies.

Environmental Assessment. A comprehensive ESIA was conducted, incorporating the results of the SA, a summary of which is provided in Annex 12. The ESIA is based on three major field missions in which the EIA team of international and national consultants traveled parallel to, but independent of, the project preparation team. The ESIA incorporated the findings and recommendations of the SA and included an Environmental and Social Impact Management Plan which includes the following: Environmental Protection Guidelines for PE component, Pest Management Plan for PE component, Resettlement Policy Framework for PE and NFM components and Process Framework for PAM component.

Forestry. The Project fully complies with the Bank's Forest Policy. As evidenced by the imposition of the logging ban and the initiation of the NFPP, GOC has made a commitment to move toward sustainable management of its natural forests, and to retain as much effective forest cover as possible. The Project focuses on development, pilot implementation and dissemination of innovative management approaches to better manage the last remaining forested areas in China and to establish plantations to relieve pressures on those forest resources. The site screening process undertaken as part of the ESIA (see annex 12), and continued during implementation, will confirm that plantations would be established on sites outside areas of intact forest.

Natural Habitats. No conversion or degradation of critical or other natural habitats will occur as a result of the Project. The government's own laws and regulations prohibit plantation established in such areas and the supplementary site screening procedures included in the Project will provide an additional level of assurance that this will be the case.

Pest Management. Increasing the area of timber forest and economic tree crops could increase the incidence of pests and disease which, in turn, could increase the use of pesticides. The SFA advocates and follows an integrated pest management (IPM) approach, which promotes the use of non-chemical methods of pest and disease control as a first option and use of chemicals as last resort based on objective monitoring of pest and disease levels. These procedures have been institutionalized within the Project in the form of a *Pest Management Plan*. The pest management plan includes a substantial training program for both participating households and forestry bureau staff responsible for project implementation. A review of the specific pests and diseases and proposed chemicals to be used was carried out at appraisal. All chemicals fall within the WHO's hazard categories II (moderately hazardous) and III (slightly hazardous) or are listed in Table 5 (chemicals unlikely to present acute hazard in normal use).

Cultural Property. No adverse impacts to cultural property are envisaged as a result of the Project. The site process undertaken as part of the ESIA, and continued during implementation, will confirm that cultural property will not be adversely affected by the PE component. The NFM and PAM components, through protection of natural forests and natural habitats in selected nature reserves, may also indirectly protect any cultural property in these areas.

Indigenous Peoples. Of the 55 recognized nationalities in China, a total of 18 reside in the project area. As part of the SA process, ethnic profiles/briefs were prepared highlighting (i) the location and population of the ethnic minorities; (ii) different sub-groups, specific language types and levels of literacy; and (iii) key measures being taken under the Project to ensure cultural and location-specific appropriateness. In total over 900 ethnic minority households were interviewed and over 50 focus group discussions were held in ethnic minority areas and the results contributed to the development of a separate *Ethnic Minorities Development Plan* (see Annex 16 for a summary).

Involuntary Resettlement. No involuntary physical relocation or land acquisition is envisaged under the Project. However, a *Policy Framework for Resettlement and Land Acquisition* has been prepared in accordance to Bank's Operational Directive 4.30 (see Annex 14 for details) in the event that the development of small-scale infrastructure (e.g., village roads, storage sheds, fruit storage facilities, and so on) under the NFM and PE components require taking of land or assets. The exact site of this small infrastructure will not be known until implementation when the communities themselves determine what they need. The PAM component will have no involuntary physical relocation, and therefore the requirement of OD 4.30 for a resettlement policy framework or resettlement action plan is not triggered. Nonetheless, to achieve the objectives of the policy and to adequately address possible adverse impacts on peoples' livelihoods arising from new restrictions on access to resources inside the nature reserves, a *Process Framework for Mitigation Potential Adverse Livelihood Impacts* has been prepared by the Borrower in accordance with the new OP 4.12 (which replaces OD 4.30). This Process Framework reflects good practice in the implementation of this type of project component and fulfills the objectives of OD 4.30. The Process Framework will ensure that the implementation of the project component includes a participatory process which would be used during project implementation to avoid significant adverse impacts on peoples' livelihoods, select and agree on measures to mitigate those impacts which cannot be avoided, as well as resolve any conflicts which may arise (see Annex 15 for details).

F. Sustainability and Risks

1. Sustainability:

Experience from earlier Bank involvement in Chinese forestry strongly supports the expectation of sustainable impact. Forest resources established under earlier projects have demonstrated good technical performance in terms of growth rates, survival, preliminary economic returns, and environmental impact. Similarly, the ongoing GEF-NRMP is demonstrating good outcomes in terms of not only raising the quality of staff and management but also institutionalizing project activities into the SFA system. Institutional sustainability will be addressed through a comprehensive program of technical assistance, training, and study tours to strengthen existing capacity and ensure development of long-term management skills in project management units, extension institutions, and beneficiaries. In addition, the Project is relying on existing administrative and organizational structures especially at the local levels to implement activities. Financial sustainability will be addressed through a cost recovery program for the PE component and through self-managed community development funds for the NFM and PAM components. These funds will be designed during the first year of implementation and will build on the experiences of micro-financing/revolving fund schemes. Demanding cost sharing arrangements have proven to be an effective way of ensuring adherence to high operational standards and have resulted in high levels of cost recovery. Furthermore, partnerships with NGOs and other donors for PAM component at the reserve-level will ensure continuation of incremental field activities beyond the life of the Project. Staff and routine operating expenses are already and will continue to be provided by the Government. Environmental sustainability will be addressed through the introduction of environmentally sound forest management (including co-management) plans and detailed environmental protection and monitoring guidelines for the Plantation Establishment component. Social and cultural sustainability at the village level will be addressed by ensuring representation of all groups including ethnic minorities and women and, in the Tibetan areas, the involvement of monks, in developing the community plans.

2. Critical Risks (reflecting the failure of critical assumptions found in the fourth column of Annex 1):

Risk	Risk Rating	Risk Mitigation Measure
<p>From Outputs to Objective Project experience, including for sustainable forest-dependent activities, can be extended to areas with similar conditions.</p>	M	The Project, particularly NFM component, has explicit dissemination activities to promote extension of project lessons learned to other areas; provincial and national leading groups also will be in position to extend project experiences.
Key stakeholders willingly participate and support conservation measures	M	Forest management and nature reserve plans will be developed with close participation of all key stakeholders.
Alternatives to forest resource-dependent activities which both support more sustainable livelihoods and be compatible with natural forest management are available.	S	Provision of substantial TA resources to assist in identification of alternatives and diversification of strategy including helping former forestry employees find alternative, off-site employment through skills upgrading.
Land of adequate productivity is available without upsetting resource rights of forest farmers and forest-dependent communities	M	Community forestry assessments will ensure that farmers with suitable land participate willingly; clear and transparent production

and without converting natural forests		arrangements will minimize change of use rights; and monitorable screening procedure will ensure no conversion of natural forests.
From Components to Outputs		
Sufficient counterpart funds are available and that project funds are disbursed in a timely manner	M	For NFM and PAM components, much of the counterpart funds are to be provided in-kind; for PE component, the ability to provide counterpart financing was a criteria for county/province participation; Disbursement procedures are to be agreed and approved upfront.
Goods and services are procured in a timely manner	N	Provision of training upfront and on an annual basis.
Institutional capacity is sufficient; project staff are technically qualified	N	The Project will provide substantial training, technical assistance, and other capacity building activities for NFM and PAM components. PE component is the 4th plantation project and capacity is not an issue.
Overall Risk Rating	M	

Risk Rating - H (High Risk), S (Substantial Risk), M (Modest Risk), N (Negligible or Low Risk)

3. Possible Controversial Aspects:

Some project sites in Sichuan, Yunnan, and Gansu provinces are inhabited by ethnic Tibetans, and three project areas are in areas that have special status as Tibetan autonomous areas. In the Natural Forest Management component, Songpan County, Aba Tibetan-Qiang Autonomous Prefecture, Sichuan Province was included because of its rich natural forests and biodiversity. Similarly, the Protected Area Management component includes Baimaxueshan Nature Reserve in Diqing Tibetan Autonomous Prefecture in Yunnan Province, because of the condition of the natural forest and globally significant biodiversity found there. In addition, Ganzi Tibetan Autonomous Prefecture, a part of western Sichuan, is the focus of a biodiversity survey. Local consultations undertaken as part of the Social Assessment confirmed interest and willingness on the part of Tibetan communities and their leaders to participate in the Project. Feedback from international (environmental) NGOs working in China, and Bridge Fund and KhamAid working specifically with Tibetans in China thus far have indicated that the Project should not avoid Tibetan areas.

G. Main Loan Conditions

1. Effectiveness Condition

- An Implementation Arrangement has been executed between the Borrower and each participating Project Province [LA, Article VI, Section 6.01, (a)].
- Co-financing of the Natural Forest Management Component approved by the European Commission Asia and Latin America Committee [LA, Article VI, Section 6.01, (c)].

- Co-financing of the GEF Grant is effective [LA, Article VI, Section 6.01, (b)].
- For Protected Areas Management component, the central PO is staffed with at least three technical staff to handle nature reserve management plan development, community-based conservation, and conservation-related training, and procurement/accounting staff with qualification and experiences acceptable to the Bank [LA, Article VI, Section 6.01, (d)].

2. Other [classify according to covenant types used in the Legal Agreements.]

Default Condition:

- If the proceeds of the co-financing by EU and GEF are suspended, terminated, or cancelled, the Project could be suspended [LA, Article V, Section 5.01, (d)].

Disbursement Condition for Plantation Establishment Component:

- Bank approval of the summary report on project marketing arrangements, as a condition of disbursement of the corresponding loan category (Category 4) [LA-Schedule 5, Section D.7].

Disbursement Condition for Protected Areas Management Component:

- Bank approval of the Community Resources Management Plans, as a condition of disbursement of Community Conservation Fund category (GEF Grant Category 6) [LA-Schedule 5, Section C.3].

For Protected Areas Management Component:

Project Management:

- All PO in SFA, the provincial level project office in OWPP of each Project province, and the PMG in each Project Nature Reserve shall be maintained with functions and responsibilities acceptable to the Bank, with competent staff in adequate numbers, with appropriate arrangement for coordination with SFA's Division of Nature Reserves at the national level and the Department of Forestry at the provincial level [LA-Schedule 5, Section B.1.(a) and (b)].

Implementation:

- Nature reserve management plans for Jianfengling Minshan Cluster of Reserves (4), and Motianling (2) incorporating time-bound implementation schedule, description of civil works required, and environmental assessment, carried out in accordance with guidelines acceptable to the Bank are prepared and furnished to the Bank for comment, no later than December 31, 2004 for Jianfengling Minshan Cluster of Reserves (4), and Motianling (2), and December 31, 2005 for Wulingshan Cluster (3), Fanjingshan Nature Reserve, and Nujiang Nature Reserve. No civil works construction such Project nature reserve shall commence until it has been provided for and agreed upon in such plan [LA-Schedule 5, Section C.1.(a)].
- A program for financing community activities shall be established in 26 communities selected for co-management activities in the 13 Project nature reserves which shall be operated in accordance with guidelines acceptable to the Bank, including the following: (a) community conservation grants should be used to finance activities identified in the Community Resource Management

Plan; (b) grants shall be approved by the provincial OWPP; and (c) each grant shall be made under a contract between the beneficiary individual or group and the Project Nature Reserve administration, on the basis of a model contract acceptable to the Bank, which shall specify, inter alia, procurement procedures [LA-Schedule 5, Section C.3].

- Demonstration activities to reduce human/wildlife conflicts and energy conservation would be carried out in pilot communities based on plans developed in accordance to guidelines acceptable to the Bank which would include problem analysis, proposed action, and budget [LA-Schedule 5, Section C.4].
- Community conservation education activities for each nature reserve would be implemented based on Community Conservation Education Program developed in accordance to guidelines acceptable to the Bank which would include a description of proposed activities and justification, expected output/impact, and budget [LA-Schedule 5, Section C.5].
- A training program with implementation schedule would be furnished to the Bank for review by June 30, 2003 prior to commencement of in-service training [LA-Schedule 5-Section C.6].
- Policy studies would be carried out in accordance to terms of reference and timing acceptable to the Bank, and that each study would be furnished to the Bank for comment [LA-Schedule 5, Section C.7].

Financial:

- Consolidated accounts would be maintained for all sub-components for annual auditing by independent auditors acceptable to the Bank, and the consolidated project accounts together with the auditor's report would be submitted to the Bank within six months of the close of each financial year [LA, Article IV, Section 4.01.(b)].

Environment and Social:

- All project activities would be carried out in accordance with the Process Framework for Mitigation Potential Adverse Livelihood Impacts prepared by PMC of SFA dated April 10, 2001 [LA, Schedule 5, Section C.8].
- All project activities would be carried out in accordance with the Ethnic Minorities Development Plan prepared by PMC of SFA dated April 10, 2001 [LA-Schedule 5, Section C.8].

Reporting and Monitoring:

- Adequate policies and procedures would be maintained to monitor and evaluate project implementation and achievement of objectives on an on-going basis, in accordance with indicators satisfactory to the Bank; and a proposed revised plan for such monitoring and evaluation would be prepared and furnished to the Bank for review and approval by December 31, 2002 [LA-Schedule 5, Section A.1.(a)].
- An annual work and financing plan for the Project for the next calendar year would be furnished to

the Bank for review by December 31 of each year [LA-Schedule 5, Section D.14.(a)].

- Semi-annual progress reports would be furnished to the Bank for review by September 30 and March 31st of each year, beginning with March 31, 2003; and the semi-annual progress reports shall contain results of monitoring and evaluation activities performed pursuant to above, beginning March 31, 2003 [LA, Schedule 5, Section A.1.(b)].
- A mid-term report on the progress of and prospects for implementation would be furnished to the Bank by April 30, 2005, and a joint mid-term review with the EU would be conducted by July 31, 2005. The report shall contain findings of follow-up social assessment reports based on the participatory rural appraisals carried out during the nature reserve management planning process [LA-Schedule 5, Section A.1.(d)].

For Plantations Establishment Component:

Project Management:

- All PMOs at the national, provincial and county levels would be maintained in forestry agencies, with staffing, functions, and responsibilities acceptable to the Bank [LA-Schedule 5, Section B.1.(b)].

Implementation:

- All afforestation sites would be established in accordance with afforestation models acceptable to the Bank; all afforestation activities (including land tenure arrangements, production arrangements, and project implementation and cooperation arrangements involving afforestation entities) would be carried out in accordance with guidelines acceptable to the Bank; and provincial PMOs would complete the review of all technical design plans for afforestation sites in accordance with guidelines acceptable to the Bank by December 31, 2002 [LA-Schedule 5, Section D.1].
- All project seedlings would conform to standards set out in the Planting Material Development Plan prepared by PMC of SFA dated April 10, 2001; all project nurseries would operate in accordance with the Nursery Management Guidelines prepared by PMC of SFA dated April 10, 2001; and PMC would furnish to the Bank for review by December 31 of each year, commencing December 31, 2002, an evaluation report for the current year and an annual work plan for the next calendar year for the planting stock development and nursery management program [LA-Schedule 5, Section D.2].
- All forest trails and guard/storage sheds would be established in accordance with technical design criteria acceptable to the Bank [LA-Schedule 5, Section D.3].
- All training and study tours would be carried out in accordance with the Training and Extension Plan prepared by PMC of SFA dated April 10, 2001 [LA-Schedule 5, Section D.4].
- Each project province would compile prices for the main economic tree species computed from roadside prices to monitor price fluctuations [LA-Schedule 5, Section D.5].
- For economic tree crops, any changes in a single species planted in area above 1,000 ha at the provincial-level would be based on market analysis and revised ERR and FRR calculations and

approved by the Bank [LA-Schedule 5, Section D.6].

- Each county PMO interested in participating in sub-loans for market infrastructure would prepare a study on the specific marketing arrangements for project horticulture production based on terms of reference acceptable to the Bank by March 31, 2006, and PMC would prepare and furnish to the Bank for its review a summary report of these marketing studies by June 30, 2006 (3 months later) [LA-Schedule 5, Section D.7].
- Sub-loans for marketing infrastructure under the Technical Support Services program would be made in accordance with the following guidelines. Sub-component would be located within project counties and would market project economic tree crops; be financially viable and technically feasible, on the basis of a feasibility study conducted in accordance with guidelines acceptable to the Bank; have a total estimated cost of not more than \$150,000 per investment; have been identified as priority investments in the county level marketing studies to be prepared under the Project. A sub-loan would not exceed 75 percent of the total estimated cost of a sub-project; and the sub-borrowers would be credit-worthy and contribute at least 25 percent of the total estimated cost of the sub-project in the form of equity [LA-Schedule 5, Section D.9 and 10].

Financial:

- MOF would on-lend the loan to each project provinces with a maturity period of 16 years including a grace period of seven years, with all other terms and conditions as received from the Bank [LA-Schedule 5, Section D.8].
- Project provinces would ensure implementation of the following on-lending terms and conditions for the final project beneficiaries: same terms and conditions as received by the provinces but including a possible option of an additional exchange rate risk fee of not more than two percent per annum for any loan on-lend in the Borrower's currency. No foreign exchange risk would be passed onto the final beneficiaries [LA-Schedule 5, Section D.8].
- Consolidated accounts would be maintained for all sub-components for annual auditing by independent auditors acceptable to Bank, and the consolidated project accounts together with the auditor's report would be submitted to the Bank within six months of the close of each financial year [LA, Article IV, Section 4.01.(b)].

Environment and Resettlement:

- All project activities would be carried out in accordance with the Environmental Protection Guidelines dated April 10, 2001 prepared by PMC of SFA [LA-Schedule 5, Section C.8].
- All sites to be converted to plantation under the component will be screened to ensure that the sites are outside of intact forest, will not significantly convert or degrade natural habitats, or adversely affect cultural property using the objectively monitorable process as described in Annex 12 of Project Appraisal Document [LA-Schedule 5, Section D.1].
- All project activities would be carried out in accordance with the Pest Management Plan prepared by PMC of SFA dated April 10, 2001 [LA-Schedule 5, Section D.12].
- In the unlikely event that any involuntary resettlement is deemed necessary, a resettlement action

plan would be prepared and implemented based on procedures and principles set forth in the Policy Framework for Resettlement and Land Acquisition prepared by PMC of SFA dated April 10, 2001 [LA-Schedule 5, Section D.13].

Reporting and Monitoring:

- Adequate policies and procedures would be maintained to monitor and evaluate project implementation and achievement of objectives on an on-going basis, in accordance with indicators specified in the Monitoring and Evaluation Plan specified in the Project Implementation Manual [LA-Schedule 5, Section A.1.(a)].
- An annual work and financing plan for the Project for the next calendar year would be furnished to the Bank for review by December 31 of each year. The annual work plan would include a table of market price information for economic tree crops by province [LA-Schedule 5, Section D.14.(a)].
- Semi-annual progress reports would be furnished to the Bank for review by September 30 and March 31 of each year, beginning with March 31, 2003; and the semi-annual progress reports shall contain results of monitoring and evaluation activities performed pursuant to above beginning with March 31, 2003 [LA-Schedule 5, Section A.1.(b)].
- Annual progress report on training and extension would be furnished to the Bank for review by March 31 of each year beginning with March 31, 2003 [LA-Schedule 5, Section D.4].
- A mid-term report on the progress of and prospects for implementation including revised economic and financial analyses would be furnished to the Bank by April 30, 2005, and a mid-term review would be conducted by July 31, 2005 [LA-Schedule 5, Section A.1.(d)].

H. Readiness for Implementation

- 1. a) The engineering design documents for the first year's activities are complete and ready for the start of project implementation.
- 1. b) Not applicable.
- 2. The procurement documents for the first year's activities are complete and ready for the start of project implementation.
- 3. The Project Implementation Plan has been appraised and found to be realistic and of satisfactory quality.
- 4. The following items are lacking and are discussed under loan conditions (Section G):

I. Compliance with Bank Policies

- 1. This project complies with all applicable Bank policies.
- 2. The following exceptions to Bank policies are recommended for approval. The project complies with all other applicable Bank policies.

Mohamed N. Benali
Team Leader

Mark D. Wilson
Sector Manager/Director

Yukon Huang
Country Manager/Director

Annex 1: Project Design Summary
CHINA: Sustainable Forestry Development Project

Hierarchy of Objectives	Key Performance Indicators	Data Collection Strategy	Critical Assumptions
<p>Sector-related CAS Goal:</p> <p>Bring China's forest resource under sustainable management</p>	<p>Sector Indicators:</p> <p>Area and quality of natural forest and natural forest habitat stabilized.</p>	<p>Sector/ country reports:</p> <p>Five-year Forest Resources Assessment</p>	<p>(from Goal to Bank Mission)</p> <p>Sustainable use of forest resources and biodiversity will benefit rural communities and enhance rural development and poverty reduction.</p>
<p>GEF Operational Program:</p> <p>Improve conservation, management and sustainable use of globally significant biodiversity.</p>			
<p>Project Development Objective:</p> <p>Viable, participatory and locally-managed system for conservation, management, and sustainable use of forest resources and associated biodiversity developed and adopted in SFDP project sites.</p>	<p>Outcome / Impact Indicators:</p> <p>6 natural forest management locations under effective management.</p> <p>13 nature reserves management improved by 1.5 points by end of the Project.</p> <p>Project generates 13.3 million m³ of timber and 2.73 billion kg of bamboo by December 31, 2025; RMB 1.1 billion net income from tree crop production by December 31, 2022.</p> <p>6,900 villages benefiting from participation in project activities by February 28, 2009.</p>	<p>Project reports:</p> <p>Management Plans and progress reports. PA scorecards applying IUCN-WCPA methodology</p> <p>Mid-term and final review</p> <p>Beneficiary assessments and patrolling and monitoring reports.</p> <p>PMO progress reports</p>	<p>(from Objective to Goal)</p> <p>Government forestry policies will be sufficiently flexible to be compatible with participatory planning and management approaches, community livelihood development schemes, and conflict resolution mechanisms.</p>
<p>Global Objective:</p> <p>Foster improved conservation</p>	<p>Over 1 million hectares of</p>		

<p>and sustainable management of remaining natural forest areas.</p>	<p>nature forests and protected areas brought under active management,</p> <p>Substantial involvement and participation of local communities in forest management planning and implementation.</p> <p>Reduction of community reliance on forest resources inside biodiversity important zones.</p> <p>Increase in local government's capacity to supervise, monitor, and implement conservation and sustainable resource use activities.</p>		
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Hierarchy of Objectives	Key Performance Indicators	Data Collection Strategy	Critical Assumptions
<p>Output from each Component:</p> <p>(1) New approaches for protection and sustainable management of natural forest resources developed and demonstrated in selected areas.</p> <p>1.1 Viable natural resource management models in pilot areas of selected natural forests developed, tested and introduced</p> <p>1.2 Capacity of government implementing agencies and people increased, including vocational training of forestry workers.</p> <p>1.3 Livelihood options for villagers improved through training, technical support, market information and inputs; and sustainable land use practices adopted;</p> <p>(2) Participatory approaches for conservation and sustainable use of biodiversity in nature reserves developed and demonstrated in selected areas.</p> <p>2.1 Nature Reserve Management Plans developed and implemented with participation of local communities;</p> <p>2.2 Community Resource Management Plans developed and implemented;</p>	<p>Output Indicators:</p> <p>6 natural forest management plans developed and approved by December 31, 2005; 59 village co-management contracts signed by December 31, 2006.</p> <p>6 county training plans approved by December 31, 2003; 3,500 personnel trained by December 31, 2005.</p> <p>59 Participatory Village Development Plans developed and agreed upon by June 30, 2004; implemented by December 31, 2008; 15,000 villagers (persons) trained by December 31, 2005; 5,700 households receiving first project loan by December 31, 2008.</p> <p>13 technically sound and participatory NRMPs developed and adopted by SFA and relevant provincial authorities in the first 2 years of implementation.</p> <p>26 CRMPs developed and adopted by local communities and NRs and approved by county government in the first</p>	<p>Project reports:</p> <p>Copy of plans; Progress reports</p> <p>Copy of plan; Progress reports</p> <p>Copy of plans; Progress reports</p> <p>Copy of NRMPs, approval documents, and key stakeholder endorsements</p> <p>CRMPs, approval documents, and local community/NR endorsements</p>	<p>(from Outputs to Objective)</p> <p>Project experience, including for sustainable forest-dependent activities, can be extended to areas with similar conditions</p> <p>Forestry staff will continue to work in their assigned role. Former SOE employees find alternative employment with upgraded skills</p> <p>Alternatives available to forest-resource-dependent activities which would both support more sustainable livelihoods and be compatible with natural forests management.</p> <p>Re-zoning approved in timely manner. Key stakeholders willingly participate and support conservation measures</p> <p>Alternatives are available to forest-resource-dependent activities which would both support more sustainable</p>

<p>2.3 Capacity of staff at 13 NRs, 7 provincial ONRs, and community representatives strengthened.</p> <p>(3) Plantations to relieve pressure on natural forests established in selected areas and operated sustainably</p>	<p>2 years of implementation</p> <p>1,491 person time training carried out at nature reserve-level, 147 person time for OWPP level, and 694 person time for local community-level by December 31, 2008</p>	<p>Progress reports on training and community environmental education</p>	<p>livelihoods and maintain the integrity of the nature reserves</p> <p>Staff with improved skills will continue to work in their original assignments.</p>
<p>3.1 Commercial wood and economic tree crop plantations established with community participation</p>	<p>115,100 ha of commercial wood plantations established by 31 December 31, 2008; 57,900 ha of economic tree crops established by December 31, 2008; 666,900 households participating in commercial wood, economic tree crop plantations and thinning by December 31, 2008.</p>	<p>Progress reports</p>	<p>Land of adequate productivity is available without upsetting resource rights of forest farmers and forest-dependent communities and without converting natural forest</p>
<p>3.2 Pre-commercial thinning to successfully enhance productivity demonstrated</p>	<p>61,300 ha of pre-commercial thinning demonstrated by December 31, 2008.</p>	<p>Progress reports</p>	<p>Farmers have appropriate incentives to adopt pre-commercial thinning practices</p>
<p>3.3 Training, technical support and inputs are provided</p>	<p>265 million seedlings of improved planting stocks developed by December 31, 2008; 60,670 county and provincial staff time and 1.33 million farmer time training by December 31, 2008. Small scale infrastructure valued at \$2.19 million built by December 31, 2008.</p>	<p>Progress reports</p>	<p>Farmers follow approved planting plan and implementation guidelines governing use of improved varieties, fertilizers, pesticides, environmental protection</p> <p>No uncontrolled pest/pathogen outbreaks or major fire damage</p>

Hierarchy of Objectives	Key Performance Indicators	Data Collection Strategy	Critical Assumptions
<p>Project Components / Sub-components:</p> <p>(1) <u>Natural Forest Management Component</u></p> <p>1.1 Natural forest management</p> <p>1.2 Training and capacity building for forestry institution</p> <p>1.3 Community development</p> <p>1.4 Project Management</p> <p>(2) <u>Protected Areas Management Component</u></p> <p>2.1 Participatory nature reserves planning and management</p> <p>2.2 Community-based nature conservation</p> <p>2.3 Training and capacity building</p> <p>2.4 Project Management, Monitoring and Evaluation</p> <p>(3) <u>Plantation Establishment Component</u></p> <p>3.1 Establishment of timber and economic tree crops</p> <p>3.2 Pre-commercial thinning</p> <p>3.3 Technical support services</p>	<p>Inputs: (budget for each component)</p> <p>\$ 20 million of which \$15 million--EU</p> <p>\$ 22.85 million of which \$16 million—GEF</p> <p>\$ 187.73 million of which \$93.9 million--IBRD</p>	<p>Project reports:</p> <p>Semi-Annual/Annual Reports</p> <p>Semi-annual/Annual Reports</p> <p>Semi-Annual/Annual Reports</p>	<p>(from Components to Outputs)</p> <p>Sufficient counterpart funds are available; funds will be disbursed in a timely manner</p> <p>Goods and services are procured in a timely way</p> <p>Institutional capacity is sufficient; Project staff are technically qualified</p> <p>Sufficient counterpart funds are available; funds will be disbursed in a timely manner</p> <p>Goods and services are procured in a timely way</p> <p>Institutional capacity is sufficient; Project staff are technically qualified</p> <p>Sufficient counterpart funds are available; funds will be disbursed in a timely manner</p> <p>Goods and services are procured in a timely way</p> <p>Institutional capacity is sufficient; Project staff are technically qualified</p>

Annex 2: Detailed Project Description

CHINA: Sustainable Forestry Development Project

By Component:

Project Component 1 - US\$20.00 million (total cost)

Natural Forest Management (NFM)

1.1 The Natural Forest Management (NFM) component would support: development, pilot implementation and dissemination of new sustainable management techniques in approximately 203,000 hectares of natural forest areas within six counties across the three key provinces of Sichuan, Hunan and Hainan; community development and livelihood enhancement activities targeting 59 villages within 13 townships most severely affected by the Government's NFPP; training of forest administration staff and dissemination of results beyond the project areas using focused workshops and mass media; and forest management training for SFE employees and vocational training for laid-off SFE workers. EU funds are being sought to finance this component in its entirety. Co-financing would be implemented in parallel.

1.2 The component comprises the following sub-components and activities:

(a) **Natural Forest Management** to develop viable natural forest management models, and test and introduce them in pilot areas.

Resource assessment, zoning and forest classification, comprising: (i) acquisition and interpretation of satellite imagery, and associated forest mapping to quantify and assess changes in vegetation and landscape; (ii) establishment of locally relevant and objectively verifiable criteria for zoning and classification of forests, based on the national NFPP classification criteria; (iii) development and testing of new inventory systems involving sampling of multiple forest resources, building on existing forest resource survey manuals and instructions as well as best international examples; (iv) development of a resource management data base; (v) re-zoning and reclassification of forest areas based on updated field information including the analysis of biophysical land use and forest management options, and provincial workshops to promote the revised classifications and land use/forest management zoning.

Yield regulation and control activities for timber, fuelwood and NTFPs comprising: (i) review of the current regulatory framework with particular attention to legislation and yield regulation instructions, proposal for revision of these, and development of a revised yield prediction manual; (ii) formulation of economic rationale for sustainable use of natural forests, based on valuation of project biophysical yields from sustainable production as well as valuation of ecological benefits of natural forests; (iii) survey and designation of operable harvest areas based on field work on topographic, hydrological, geological and soil distributions, cross-related to possible harvesting systems under a sustainability regime; (iv) assessment of operable harvest and commercialization options, based on field observations incorporating (ii) and (iii) above, to develop operational yield forecasts and associated marketing plans.

Policy studies comprising: (i) economic valuation of forest products and services; (ii) appropriate mechanisms to charge consumers for benefits derived from forests (forest ecological benefit compensation systems); and (iii) market development and marketing of forest goods and services, as well as market intelligence systems.

Forest management planning and implementation comprising: (i) revision of SFA manual on forest management planning as basis for training SFA staff on forest management planning; (ii) compilation of a participatory forest management plans based on: (a) development of a co-management process including mechanisms for joint management of forest resources by government, enterprise and communities based on joint forest management and co-management experiences in China and relevant experience elsewhere, (b) development of detailed harvesting plans based on detailed field surveys following the identification of operable areas above, (c) diagnosis of status of secondary forest areas after logging and/or farm fallow, as well as of land proposed for "conversion" and mountain closure, (d) development and pilot field testing of detailed land use options including the ecologically and economically sound options for land use and silviculture for secondary forest, farm fallow, and land proposed for "conversion" and mountain closure to confirm the socio-economic appropriateness of proposed options; (iii) formalization of co-management arrangements and legal contracts among stakeholders; and (iv) implementation of forest management plans.

Monitoring and evaluation comprising: (i) a check on delivery of inputs against milestones in project work plans; (ii) review of effectiveness of inputs and consequent outputs based on criteria and indicators for sustainable forest management; (iii) implementation monitoring of forestry policies related to the planning and implementation of land conversion, hill closure and logging restrictions policies will be assessed with respect to their relevance and impact on the Project and its expected results; and (iv) recording of changes in co-management arrangements.

(b) **Community Development** to enable local communities to improve their livelihoods and to develop land-use practice compatible with sustainable forest management. Funding would be provided to support the following key activities:

Establishment of village development plans. During project preparation, PRA surveys identified and prioritized menus of community development options in each of the 11 township participating in the component. These cover village infrastructure, the diversified productive activities likely to be undertaken through small household loans, and household training needs. During project implementation, townships and administrative villages will form NFM component working groups, and local PRA teams will work with them to prepare village development plans comprising: (i) a draft map showing boundaries of village groups and of forest management units, and locations of existing and proposed infrastructure; (ii) basic population and agricultural data per village group; (iii) menu of microcredit options, and prioritization of training and infrastructure needs; and (iv) estimate the number of participating households for each activity. These plans will be established at administrative village level to ensure community ownership and will be updated annually. County Project offices will review village plans annually to take into account arising needs and opportunities, and ensure they become increasingly integrated with forest management activities as community capacity in forest co-management builds. Implementation of the village development plans will be funded under the component.

Small-scale village infrastructure. As part of village development plans, communities will identify and prioritize the small-scale infrastructure they propose to be constructed under the component. Given limited resources, not all infrastructure identified under the village development plan would be financed by the component. Priority would be given to, for example, construction of community drinking water systems, and construction or upgrading of village schools. Infrastructure needs specific to Hainan include upgrading and expanding an irrigation system. The rehabilitation of degraded roads and electricity networks would not be eligible for funding under the component, but the component will finance studies to analyze the rural energy sector in Sichuan, with a focus on electricity and on fuelwood balance, and assess the feasibility of township-to-village roads, village paths and bridges development and rehabilitation under the supervision of

the Project and within the concept of NFM. County Project offices will carefully organize technical design, based on representative designs, and carry out quality control and monitoring to ensure quality of all works, based on procedures established under the Project. They will transfer ownership of the infrastructure to communities and train them in maintenance. Investments in schools or health stations will be coupled with sending school teachers or village health workers to existing retraining courses.

Micro-credit to households and informal groups comprising: (i) establishment of township microcredit institutions and of village microcredit boards; (ii) development of simple guidelines for the micro-credit application and approval, based on technical appropriateness, technical capabilities of the applicant and need for training, and environmental acceptability; and (iii) small household loans from RMB 500 to a ceiling of RMB 3,000 to individual households or informal groups to fund productive activities, such as animal production, cash crops and tree crops including cultivation of NTFPs, small processing, transportation and service activities including tourism.

Household Training comprising: (i) training in basic farming skills; (ii) household training focused on the main microcredit activities, household cash flow management and forest management; and (iii) functional literacy courses will in low-literacy areas, including Songpan County in Sichuan Province, and in Hainan.

Specific technical studies comprising: (i) a rural energy study to assess fuelwood usage and trends consumption, rural electricity usage and future prospects for energy savings; and (ii) an animal carrying capacity study in those areas where livestock are important for ethnic minorities (especially in Sichuan).

Monitoring comprising: (i) project monitoring with key implementation and output indicators; (ii) external social impact monitoring to assess the social risks not fully mitigated by the social assessment process; and (iii) project Impact Monitoring to document the impact of both improved forest management and community development on individual households and communities.

(c) **Training and Dissemination** to draw lessons from local-level experience and support their broader dissemination. Funding would be provided to support the following key activities:

Training activities would be directed at forest administration staff including NFPC, NFPOs, and provincial and county staff involved in the planning, organization, supervision and monitoring of natural forest management related activities and in co-management; as well as staff of other organizations involved in co-management, mainly management staff and those involved in policy and planning. In-country training through organized training and seminars is directed to the introduction of skills required for NFM and co-management. An important task of this training provision is the production of training modules and blueprints for the introduction of NFM in other areas of China, through the NFPP structures and the SFA and regional forest administrations. Key trainers will further undergo training in activities related to the multiplication of project concepts and will participate in training abroad in countries with proven experience in natural forest management and co-management, like Nepal, and Europe.

Dissemination activities would be directed at a broader public not immediately involved in the Project, such as Press and Media; stakeholders and decision makers of other similar areas/ecosystems in China, both in the Project provinces and beyond. The benefits from improved natural forest management and co-management will be emphasized and promoted through dissemination beyond the Project's scope. Press releases and invitations to journalists would be used to present information to a wide audience. Experience elsewhere suggests that such mass media publicity can encourage rapid changes in policies and legislation. In addition, study tours will be arranged to project communities in order to demonstrate natural forest management techniques to others. These visits will be targeted towards staff of the government agencies

(PFBs, CFBs, TWUs) as well as village committees and forest-user groups.

(d) **Training of laid-off workers of State Forest Enterprises (SFEs)** to upgrade their skills and thereby assist them in their efforts to find alternative employment, possibly in the area of forestry management. Funding would be provided for the following key activities

Planning of an overall training plan for SFE employees comprising: (i) forest management in enterprise by project foresters; (ii) vocational courses in enterprise by outside trainers; and (iii) joining existing vocational courses in prefecture cities.

Training and Monitoring comprising: (i) subcontracting training courses ; (ii) supervision of training implementation; (iii) monitoring and evaluation of training performance ; and (iv) ex-post training impact assessment.

**Project Component 2 - US\$22.85 million
(total cost)**

Protected Areas Management

2.1 In addition to Sichuan, Hainan, and Hunan, this component would also be implemented in four adjacent provinces of Gansu, Hubei, Guizhou and Yunnan to strengthen trans-boundary protection and exchanges between these adjoining provinces. These provinces are also included under the Government's NFPP and provides opportunity to strengthen and mainstream biodiversity conservation into the Government's program at the provincial-level, where the impact will be greatest. The component would support conservation and improved management of biodiversity of global importance in selected, high priority clusters of nature reserves in natural forest areas. The Project sites comprise 13 areas of international biodiversity significance that have been identified as priorities in the *China Biodiversity Conservation Action Plan* located in the three key provinces of Sichuan (5 sites), Hunan (2 sites) and Hainan (1 site), as well as four adjacent provinces of Gansu (1 site), Guizhou (1 site), Hubei (1 sites), and Yunnan (2 sites). GEF funds have been sought to finance the incremental costs of this component. The principal features of the sites are shown in the following tables.

**Sites proposed for GEF financing
in Gansu, Sichuan and Hainan provinces**

Characteristics	Motianling NR cluster	Minshan NR cluster	Jianfengling NR
Provinces)	Sichuan/Gansu	Sichuan	Hainan
Project focus	Baishuijiang and Tangjiahe NRs	Baiyang, Si'er, Piankou and Xiaozhaizigou NRs	Jianfenling NR
Size	2,537 km ²	1,415 km ²	212 km ²
Population	96,000 people reside in Baishuijiang's experimental zone/there are no people inside Tangjiahe	No people live inside the Minshan reserves but there is significant pressure from communities living	No people inside the park, but 12 villages, four forest farms and one tourist enclave are located nearby

		nearby	
GEF Justification	Priority reserves for giant panda conservation. Recognized as sites of global significance in the <i>Biodiversity Review of China</i>	China's best preserved tropical rain forest outside Xishuangbanna. Identified as a priority site in the national <i>Biodiversity Conservation Action Plan</i>	
Biodiversity	The reserves protect viable populations of the giant panda and other globally threatened species such as the golden monkey, clouded leopard, takin, Temminck's tragopan and blue-eared pheasant	68 mammal species (83% of Hainan's mammals); 215 bird species (65% of the island's avifauna; and 38 amphibian species (83% of Hainan's amphibians.	
Current Status	National-level NRs	Provincial-level NRs. Some areas expanded to increase viability.	National Forest Park. Area expanded to increase viability.
Main threats	Hunting, NTFP harvesting, fuelwood collection and fire	Hunting, NTFP harvesting, fuelwood collection and the presence of domestic livestock	Hunting, small-scale illegal logging and NTFP harvesting
Key interventions (proposed)	(1) <u>Participatory NR Planning and Management</u> : Including nature reserve management plan development, preparation of ecological baseline maps, improvement of field level management systems, provision of equipment and a small amount of civil works, research. (2) <u>Community-based nature Conservation</u> : Including Co-management, community conservation education and public awareness, energy conservation, delivery of sustainable technologies, and demonstration of wildlife management systems to reduce crop depredation (3) <u>Training and Capacity Building</u> : Including in-service training at all levels, building local capacity for training delivery and institutional capacity building.. (4) Management, monitoring and evaluation. Including project		

	management training, regular patrolling and periodic sampling as well as policy studies.		
Cultural features	Mostly Han people/ ethnic minorities present include Baima Tibetans and Hui	Qiang, Tibetan, and Hui ethnic minorities	Project site has Li and Miao ethnic minorities
Existing or proposed programs	No programs in Baishuijiang. Tangjiahe has small GTZ training and TA program to end Aug. 2000 focusing mainly on education and eco-tourism planning.	WWF China has ongoing programs in the Minshan reserves which are related to biodiversity monitoring and community-based nature conservation including conservation education.	No programs

**Sites proposed for GEF financing
in Hunan, Hubei, Guizhou and Yunnan provinces**

Characteristics	Wulingshan NR Cluster	Fanjingshan NR	NW Yunnan
Provinces)	Hunan/Hubei	Guizhou	Yunnan
Project focus	Badagongshan, Hupingshan and Houhe NRs	Fanjingshan NR	Baimaxueshan and Nujiang NRs
Size	765 km ²	419 km ²	5,574 km ²
Population	35,336 people live inside the NR cluster in the experimental zone	13,417 km ²	Baimaxueshan has 12,463 people, Nujiang has 33,000
GEF Justification	Protects some of the largest remaining subtropical monotone broad-leaved evergreen forests in China. Identified as a priority area in the national <i>Biodiversity Conservation Action Plan</i>	UNESCO MAB site. Only reserve in China's Fanjingshan Priority Conservation Unit. Identified as a priority area in the national <i>Biodiversity Conservation Action Plan</i>	The two largest and most important NRs in China's Lancang Priority Conservation Unit. Identified as priority areas in the national <i>Biodiversity Conservation Action Plan</i>
Biodiversity	Wide variety of primitive plants and 53 species of nationally protected vertebrates	Supports the only known population of the Guizhou golden monkey as well as many other threatened vertebrates including the leopard, clouded leopard, black bear and giant salamander	These reserves protect a complex variety of vegetation formations and associated fauna and flora which range altitudinal from mid-montane evergreen broad-leaved forests to cold temperate coniferous associations

Current Status	National-level NRs	National-level NR	Baimaxushan is a national-level NR, Nujiang has provincial-level status. Both recently expanded its area significantly.
Main threats	Fire, fuel-wood collection and NTFP harvesting	Fire, shifting cultivation, hunting and the presence of domestic livestock	Hunting, illegal logging, NTFP harvesting and small-scale mining
Key interventions (proposed)	(1) <u>Participatory NR Planning and Management</u> : Including nature reserve management plan development, preparation of ecological baseline maps, improvement of field level management systems, provision of equipment and a small amount of civil works, research. (2) <u>Community-based nature Conservation</u> : Including Co-management, community conservation education and public awareness, energy conservation, demonstration of wildlife management systems to reduce crop depredation and delivery of sustainable technologies. (3) <u>Training and Capacity Building</u> : Including in-service training at all levels, building local capacity for training delivery and institutional capacity building. (4) Management, Monitoring and Evaluation including Project management training, regular patrolling to collect data and periodic sampling as well as policy studies.		
Cultural features	Tujia, Miao, Hui and Bai ethnic minorities	Tujia, Miao and Dong ethnic minority groups	10 ethnic minority groups but mainly Lisu, Bai, Nu, Dulong, Tibetan, and Naxi
Existing or proposed programs	None	None	WWF/NRMP to prepare a management plan during 2000. TNC is preparing a regional conservation plan for NW Yunnan

2.2 The component includes the following key sub-components and activities:

(a) **Participatory Nature Reserves Planning and Management** (US \$7.3 million of which GEF US \$5.4 million). This sub-component is closely linked to the strategy proposed for the Community-Based Nature Conservation sub-component and gives considerable emphasis to developing participatory approaches to addressing current pressures and dependencies on Project nature reserve resources. To this end, nature reserve planners would employ structured consultations with and participation of local people and other key stakeholders during the management plan development process for the Project's reserves. Funding would be provided for the following key activities:

Management plan development comprising further development of feasibility studies for 12 nature reserves into full management plans. As part of the Project's preparation process, management feasibility studies were drafted by local nature reserve personnel for each of the Project's target sites in Gansu, Guizhou, Hainan, Hubei, Hunan, and Sichuan (11 sites). Of these, the feasibility studies for the Minshan cluster of nature reserves (4 contiguous sites in Sichuan) will be integrated to form a single plan based on ecological rather than administrative considerations (but with each nature reserve having a separate action plan describing implementation activities). In addition, a management feasibility study for the Nujiang Nature Reserve in Yunnan was prepared under the auspices of the ongoing GEF-supported Nature Reserves Management Project (NRMP). The Project would provide support for these 12 feasibility studies to be further developed into full management plans. No project funding is needed plan development for the other project site in Yunnan (Baimaxueshan Nature Reserve), as a management plan is already under preparation under the auspices of the WWF China Program and NRMP.

Baseline ecosystems maps comprising preparation of seven baseline ecosystems maps for (i) the Minshan Nature Reserve Cluster (4 sites) and for the Baodinggou NR (which adjoins the southern edge of this cluster); (ii) the Motianling Nature Reserve cluster (2 sites); (iii) the Wulingshan Nature Reserve Cluster (3 sites); (iv) the Fanjingshan NR (1 site); (v) the Jianfengling NR (1 site); (vi) the Nujiang NR (1 site); and (vii) the Baimaxueshan NR (1 site). These maps would include information on the distribution and diversity of ecosystems within the project sites, along with other information such as management zones, the local road network and the location of villages. They would be developed using existing baseline data and information collected during the project's nature reserve management plan development process. Such maps would be useful for not only site planning but also regional planning purposes for the Natural Forest Protection Program.

Strengthening of Field-level management systems comprising, based on the specific recommendations in the nature reserve management plans of the 13 nature reserves: (i) participatory nature reserve boundary survey and demarcation; (ii) equipment for field protection staff; (iii) improved communications technology and equipment to facilitate reserve administration; and (iv) selected small-scale infrastructure (e.g. guard posts). Civil works would only be supported in cases where there is an unambiguous link to demonstrable biodiversity conservation benefits in line with the nature reserve.

Applied research comprising development and implementation of one research activity at each nature reserve which addresses either long-term or short-term information requirements for more effective nature reserve management. Based on the research needs identified in the management plans, a research proposal for each site would be developed and implemented under the component. These proposals would follow a standard format used under the ongoing GEF-supported NRMP, and they would be developed by the reserve personnel themselves or by the reserve working in collaboration with a local research institution or NGO. The emphasis would be on applied research to solve practical management problems related to three

broad themes: (a) nature reserve/people interactions (e.g. impacts of legal or customary human uses such as grazing and non-timber forest product harvesting on reserve resources); (b) nature reserve management (e.g. zonation and nature reserve boundary definition with reference to the types and extent of various ecosystems and animal ranges; impacts and control of forest fire; tourism); and (c) nature reserve community development (e.g. sustainable income generating opportunities from NTFPs). Panda and panda habitat-related monitoring projects would not be supported as funding for investigations of this type is available from other sources in China.

Biodiversity surveys of Western Sichuan comprising collection of biophysical and socioeconomic information in the Ganzi and Liangshan Autonomous Regions of western Sichuan. Survey areas have not been confirmed but may include Gonggashan, Hanzhishan, Chaqingsongduo and Luguahu. The biophysical and socioeconomic information obtained would be used by the province and autonomous regions as they develop activities under the NFPP including establishing new nature reserves, forest parks, and watershed protection areas. It could also be used by environmental protection bureau in its effort to ensure that proposed development activities for that area do not compromise the biodiversity. The Southwest China Temperate Forests, consisting of a complex of forests in the upper reach of the Yangtze, Mekong (Lancang) and Salween (Nujiang) rivers, is one of the 200 globally important ecoregions most representative of the world's major habitat types. Northwestern Yunnan and Western Sichuan forms this ecoregion, but the distribution and conservation status of the fauna and flora in this part of China is poorly understood. With support from The Nature Conservancy, work is already being undertaken to gather biophysical and socioeconomic information about NW Yunnan in support of a regional planning exercise. GEF funds would be used to carry-out similar surveys in Western Sichuan.. The surveys would complement ecoregional/hot spot planning activities to be initiated by WWF China Program and Conservation International.

(b) **Community-Based Nature Conservation** (US \$5.8 million of which GEF US \$5.1 million). Based upon lessons learned from past experience of NGO- and Bank-financed co-management activities in China, the sub-component would deepen the interactions with communities by increasing opportunities for direct participation of communities in nature conservation and the management of natural resources with the objective of enhancing local levels of sustainable and economically viable development. Financing would be provided to support the following key activities:

Co-management comprising development and implementation of Community Resource Management Plans (CRMP) describing activities linking biodiversity conservation with sustainable income generation and thereby reducing the pressures on resources inside the nature reserve. Each province, and their respective nature reserves, will develop co-management approaches unique to their own conditions. Nonetheless, all co-management activities under the SFDP will follow the Process Framework found in Annex 15. Selection of villages eligible to participate in the co-management activities would be made during project implementation based on the results of the participatory rural assessments as well as analyses of the sources of major threats to the nature reserves conducted a part of the nature reserve management planning process. All "critical" villages (i.e., those which are dependent on the nature reserve, pose a threat to the nature reserve, and would be adversely affected by proposed use restrictions) would be eligible to participate in co-management activities. The participation of a minimum of 26 villages (two per nature reserve) would be funded by the component. Funding for the participation of "critical" villages in excess of the first two per nature reserve will be covered by an increased level of local government counterpart funding. Eligible activities in the CRMP would be financed by grants through the Community Conservation Funds (CCF) established by the component. The CCF would finance small sub-projects identified within the community to solve problems identified in the CRMP. Fifty percent of the CCF moneys should be spent on community sub-projects that directly mitigate threats to the nature reserve while

the other fifty percent can be used for household sub-projects for alternative livelihood. Infrastructure such as hydropower stations or roads would be ineligible for funding under the CCF. The grants will be approved by the provincial OWPP, and each grant will be made under a contract between beneficiary individual or group and the NR administration. The approval of the CRMPs by the Bank is a condition of disbursement of CCF.

Community conservation education and public awareness comprising development and implementation of community conservation education and public awareness plan aimed at increasing target community and local government stakeholders' understanding of the functions, ecology, regulations, and problems of nature reserves and relationship and conflicts of people and nature reserves. The plans would incorporate experiences gained in the ongoing GEF NRMP. Nature reserves and provincial Office of Wildlife and Plant Protection (OWPP) community affairs staff would be trained, using technical assistance and field-based courses, to prepare and implement community conservation education strategies and funds would be provided for each nature reserve to implement their plans within their own communities.

Based on guidelines prepared under the GEF NRMP, each nature reserve would be provided technical assistance to prepare a Community Conservation Education (CCE) plan, which would identify its goals and objectives, determine target audiences and their characteristics, arrange messages and themes, determine methods of delivery, and provide action plans. The Project would provide each nature reserve with funds to implement their CCE plans. Provincial OWPP and nature reserve staff would be trained in materials development and delivery of CCE. Training will be extended to local government technicians, as well as members of community groups, such as schools and management forums. Exchange visits would be arranged for community members and nature reserve staff to view other school-based and community education programs in China.

Energy conservation comprising an assessment of forest-based household fuel demand and targeted demonstrations of appropriate, practical, culturally appropriate, and cost-effective energy conservation approaches to decrease the threats from over-use of forest resources for energy in remote areas. Funds would be provided for nature reserve staff to conduct nature reserve energy surveys as part of community PRA. Energy efficient technologies would be demonstrated for households in the co-management communities and other representative communities surrounding the nature reserve.

Wildlife management methods for the mitigation of the negative impacts of nature reserves on local communities to include the demonstration of wildlife management systems to reduce crop depredation to reduce conflicts between people and wildlife. The problem of wildlife-related crop damage is most acute at the project sites in Sichuan (5 sites), Gansu (1 site), Guizhou (1 site) and Yunnan (2 sites). In order to address this issue, the Project would in the first instance sponsor a workshop at which the lessons learned from other donor-supported initiatives to address this problem would be discussed. Possible workshop participants include WWF which is active in Sichuan and the Wildlife Conservation Society in Tibet. An assessment of the nature and extent of the damage caused to crops by taking bears, wild pigs and macaques at the project nature reserves in these provinces would then be conducted. The assessment would be carried out as part of the PRA activities. The assessment exercise would (i) identify sites in each of the project nature reserves in Sichuan, Gansu, Guizhou and Yunnan where wildlife-related crop damage is most acute; and (ii) find mutually agreed solutions to mitigate negative mutual impacts – either through directly decreasing negative impacts or through the definition of compensatory mechanisms. Potential solutions include the development of a system of community patrols, the use of chemical repellents, and digging trenches. The Project would support the costs of the assessment exercises (part of PRA) and the development and implementation of a plan to mitigate wildlife damage at one demonstration site in each of the project nature reserves in Gansu, Sichuan, Guizhou and Yunnan (i.e., a total of nine sites).

Improving the delivery of sustainable technologies and enhancing community skills to include training and technical assistance for the identification and demonstration of alternative income generating techniques as alternatives to the use of critical forest resources. Coordinated with the community conservation education and public awareness activities, training of both township technicians and rural households in specialized cultivation techniques for medicinal plants, fungi, and other forest products would be supported. Sources of techniques and trainers would be identified and appropriate courses implemented. In order to extend the impact of the project specific demonstrations in both co-management pilot villages and other representative communities would be provided. Training courses for improving the capacity of households and village committees to manage community projects or household economic activities would be developed and delivered in the co-management villages and other selected demonstration communities.

(c) **Training and Capacity Building** (US \$2.8 million of which GEF US \$2.1 million). The training program is designed to improve the capacity of all reserve staff for routine nature reserve management. Management planning and community-based nature conservation in demonstration villages would provide intensive learning opportunities for staff in nature reserves and provincial OWPP. Existing and newly-recruited staff would participate in an integrated program of eight in-service training courses designed to cover different job responsibilities. The training would be organized locally by local Training Coordinators and would be delivered by local expert trainers who themselves would be trained. Funding would support the following key activities:

General staff training comprising a training program for all nature reserve staff tailored to the needs and levels of different job positions, with separate courses targeting decision makers, middle-level managers, scientific staff, community affairs staff, patrol staff, enforcement staff and administrative staff. Training would be based largely on existing Chinese curricula particularly those developed by ongoing GEF-supported NRMP supplemented with additional materials prepared during the management planning and community co-management processes. Most courses would be delivered locally, in the nature reserve, to provide opportunities for practical demonstrations and experiential learning. In addition, the Nature Reserve Planning and Management and the Community-based Nature Conservation sub-components would be supported by a series of workshops for on-the-job training, facilitated by international and national technical experts. This training would be implemented sequentially, linked to the progress of the process. Each workshop would introduce the set of skills needed for the next step and also provide an opportunity to discuss experiences and issues arising from implementation of the previous step in the process. These workshops would be used to generate guidelines and procedures for most of the routine work of nature reserve management, which would eventually be revised and submitted to the Department of Wildlife and Plant Protection (DWPP) of SFA for approval as a National Procedures Manual for nature reserves and distributed to other nature reserves for their use.

Building local capacity for training delivery comprising training of trainers by experts recruited from local institutions, such as the Sichuan Forestry School and Mianyang Normal College in Sichuan, the Southwest Forestry College in Yunnan, and the South-central Forestry Academy in Hunan. For reserves in Guizhou, Hunan and Hubei, the Yunnan, Sichuan, and Guizhou PRA-Networks can provide appropriate sources of experienced local trainers for community affairs staff. Where local educational institutions cannot provide appropriate trainers, local research institutes such as the Institutes of Forest Sciences and Social Sciences in Sichuan, and the Kunming Institutes of Zoology, of Botany and of Social Sciences in Yunnan would be used. Wherever appropriate, partnerships would be formed with other programs providing relevant technical assistance and training such as those sponsored by (i) WWF in Sichuan, Hunan and Yunnan; (ii) GTZ in Hainan; and (iii) TNC and the Sino-Dutch project in Yunnan.

Institutional capacity building. In line with government policy of decentralization of implementation, the main focus of PAM will be on building the capacity of the province and the nature reserves. The principal purpose of this activity set is to assist with the development of appropriate organizational management structures in support of enhanced nature reserve management. Several of the project nature reserves are new or have been recently extended. In these cases, they will be actively recruiting new staff to fill their quotas, and assigning them to newly created positions. Other project reserves already have full staffing, but are still constrained by inefficient organizational structure and personnel management. The Project would assist the reserves to increase their institutional capacity with technical assistance and training in management methods. The Project would also facilitate the establishment of a fully-staffed and equipped OWPP of each Provincial Forestry Department in the Project. These OWPPs would have staff designated as responsible for (a) nature reserve planning; (b) community-based nature conservation; and (c) training co-ordination. The OWPPs would take the lead in identifying local experts and local trainers to support nature reserve management activities.

(d) **Project Management, Monitoring and Evaluation** (US \$7.0 million of which GEF US\$3.4 million). Funding would be provided to support the following key activities:

Training in support of project implementation comprising training in project management procedures, English, clerical skills, computer use and maintenance, accounting and financial management, and training program coordination.

Policy studies comprising topics such as (i) review and development of protected areas classification system including watershed protection forests and forest parks ; (ii) evaluation and revision of specific regulations for nature reserve management zones including definition and regulation of buffer zone ; and (iii) development of a standardized methodology for evaluating the effectiveness of nature reserve management. These policy studies will be implemented by the DWPP, the agency responsible for nature reserve management and biodiversity conservation policies, and will provide useful input to designation of new protected areas under the NFPP. These studies will be closely coordinated with the policy studies under the Natural Forest Management component focused on valuation of environmental services provided by upstream protection and compensation to those communities.

Monitoring and evaluation comprising development and implementation of a simple, inexpensive and sustainable plan for monitoring and evaluation project impacts on (i) biodiversity ; and (ii) the socio-economic state of communities that have an impact on nature reserve resources, and that are in turn impacted by the reserve. The measurement of these indicators would rely principally on direct survey methods such as patrolling forms compiled during routine patrolling for biodiversity indicators, and annual PRAs in selected villages for socio-economic indicators. Based on the agreed project performance indicators, a detailed PAM Monitoring and Evaluation Plan would be prepared in year one with the assistance of an international TA, with full participation of the nature reserves. This work would be guided by the outline and terms of reference provided in the Project Implementation Plan and would build on the M&E of ongoing GEF NRMP. The key lesson learned from NRMP is that it is critical that staff who will be implementing the M&E Plan participate fully in its design otherwise there is very little ownership, understanding, and commitment to its implementation. Monitoring and evaluation data for indicators of project impacts would be collated and analyzed by the scientific and community affairs staff in each reserve. They would produce semi-annual summary reports that would be submitted to the nature reserve's decision-makers and to the reserve's Project Management Group. These reports would also be provided to the provincial OWPP which would be responsible for (a) providing assistance and supervision and (b) submitting the summary reports to SFA's Department of Nature Reserves (DNR) with comments. DNR

would review these reports before submitting them to the World Bank. In addition, each nature reserve would organize an annual review meeting to assess the implementation of the management plan, and a final evaluation of the progress in the last year of the Project. Final evaluation reports will serve as a basis for overall project evaluation.

**Project Component 3 - US\$ 187.79 million
(Total Cost)**

Plantations Establishment

3.1 The Plantation Establishment component would support increasing production of wood to meet the growing gap between domestic supply and demand, to generate new employment and income for forestry farms and rural households affected by the logging ban and other restrictions on forest land use, and to improve environmental management. The Plantation Establishment Component will be implemented in 107 counties in 11 provinces: Sichuan, Hunan, Hainan, Henan Shanxi, Hebei, Hubei, Anhui, Shandong, Liaoning and Gansu. IBRD funds are being sought to finance this component in its entirety.

3.2 The key sub-components and activities are: (a) establishment of timber plantations; (b) establishment of economic tree crops; (c) pre-commercial thinning of existing timber plantations in Anhui, Shanxi, and Hunan provinces as a demonstration; and (d) provision of related technical support services such as planting stock development and nursery management, training and extension, small-scale rural infrastructure required for afforestation and post-harvest, and marketing of horticultural crops, and monitoring and evaluation including environmental and social parameters.

(a) **Establishment of Timber Plantations** (US \$48.71 million). Some 115,090 ha of commercial wood plantations for fiber and pulp, plywood, and construction timber would be established in nine provinces to meet forecast national and local shortages of wood. The main afforestation beneficiaries would be individual households, shareholding cooperative forest farms, village-township collective forest farms and state forest farms. Species, planting sites and project areas have been selected on the basis of guidelines agreed during project preparation. The 20 species were selected on the basis of farmer preferences, growth potential, climatic and ecological suitability to specific site conditions, technical experience and acceptance in China, environmental objectives, and product marketability. The sites were selected on the basis of soil fertility, rainfall, temperature, erosion hazard, and access to end-use markets. All project sites have been identified and detailed technical design plans for the first year plantations will be completed by October 2002. All plantations would be established in accordance with afforestation models for each species agreed with the Bank, which cover technical silvicultural prescriptions, growth targets, establishment costs, and financial and economic rates of return. These models draw on the implementation experience of NAP, FRDPP, and FDPA, and incorporate changes to traditional silvicultural management in China that are expected to improve yields and reduce costs. These include lower planting densities in order to promote shorter production cycles, faster income generation, and agricultural intercropping; revised fertilizer application rates that reflect the specific nutrient requirements of the sites; less intensive site preparation, smaller planting holes, and reduction in tending times, in order to decrease labor requirements and minimize environmental damage on steep sites; and greater reliance on clonal planting stock and other improved planting materials in order to promote faster tree growth. Due to variable conditions in the project areas, the generic afforestation models may be adjusted based on local site conditions and market opportunities but subject to review and approval by PMC.

Financing would cover: (i) all labor requirements for site preparation and planting in the first year and tending in the first to third years; (ii) materials and equipment, including seedlings, and fertilizer; and (iii)

indirect costs related to survey and design, and project and environmental/social management and monitoring.

(b) **Establishment of Economic Tree Crops** (US \$63.75 million). Some 57,940 ha of economic forest crops, including fruit, nut and medicinal trees would be established in eleven provinces. The tree crops include chestnut, walnut, ginkgo, eucommia, apricot, jujube, apple, pear, prickly ash, pomogranate, Chinese yew, and so on. Those participating in this sub-component would include individual households, shareholding cooperative forest farms, village/township forest farms and state forest farms. Varieties and planting sites have been selected on the basis of guidelines agreed during project preparation. The varieties were selected on the basis of farmer preference, market demand, climatic and ecological suitability to specific site conditions, and technical experience and acceptance in China. The sites were selected on the basis of soil fertility, rainfall, temperature, erosion hazard and access to end-use markets. All planting sites have been identified and detailed technical design plans for first year tree crop planting areas will be completed by October 2002. All tree crops would be established in accordance with horticultural models for each variety. Diversified varieties will be planted to minimize economic and biological risks, particularly in view of the over-supply problems experienced by earlier horticultural projects in China that developed large-scale plantings of only one or two varieties.

Detailed market studies have been prepared at the provincial level for all main horticultural crops to assess likely future demand and prices. While demand will likely increase at least at the pace of supply in the short-term, softening of prices of some economic tree crops should be expected over the mid-and long-term due to cumulative increase in production areas and related latent supply which will come onto the market over the next 10 years. To mitigate the risks to significant financial viability of economic tree crops due to market and price uncertainties, the following was agreed: First, participating project households and forest farms will be allowed flexibility, rather than rigid adherence to the current models, in choice of inputs and outputs which are consistent with sound technical standards, financial returns and medium term market opportunities. However, major changes over 1,000 ha at the provincial-level of the area planted of any single economic tree crop species would require a revised market analysis as well as revised financial/economic analyses and be reviewed and approved by the Bank. Second, prices for the main economic tree species computed from roadside prices will be compiled annually by the project provinces and reported to the Bank to ensure more closer monitoring of price fluctuations. Third, PMC would prepare and furnish to the Bank a report summarizing marketing issues and marketing facility arrangements for project horticultural production for the final two years of the Project based on individual marketing reports to be prepared by the county PMOs interested in participating in the sub-loans for market infrastructure. The receipt of the report satisfactory to the Bank would be a condition of disbursement for the sub-loans.

The Project would finance the following costs: (i) all labor requirements for site preparation and planting in the first year (and tending in the first to fourth years); (ii) materials and equipment, including seedlings (and related containers and potting media), organic and chemical fertilizer, and simple agricultural tools; and (iii) indirect costs related to survey and design at the start of the Project and environmental/social management and monitoring.

(c) **Pre-Commercial Thinning** (US \$13.33 million). Some 70 percent of China's plantations are young and middle-aged stands that need pre-commercial thinning, but have not been thinned due in part to lack of finances. The sub-component will finance the thinning of 61,330 ha of existing plantations in three provinces consisting of Chinese fir, masson pine, slash pine, loblolly pine, and larch to demonstrate the productivity and ultimately financial gains from proper thinning/tending. Thinning sites have been selected on the basis of guidelines agreed during project preparation. All project sites have been identified and

detailed technical design plans for first year thinning areas will be completed by October 2002. All thinning would be carried out in accordance with detailed site selection criteria and thinning models for each species, and relevant technical and management regulations and monitoring/inspection system. The plantations would be between ages 8 and 12, where the greatest productivity gain can be achieved and would exclude previous Bank-financed plantations and natural forests, and closed hillsides. Given the demonstration status of the areas to be thinned, the models would be applied flexibly rather than prescriptively based on the site characteristics. In terms of intensity, if a greater proportion of large diameter logs to respond to higher prices for large diameter timber, more intensive thinning would be required. To facilitate effective dissemination of the results of thinning, comprehensive data on stand densities before and after thinning, growth response to thinning, diameter increases and revenue increases as well as the cost of thinning would be gathered and documented.

Financing would be provided for: (i) all labor requirements for thinning; (ii) access trails; and (iii) indirect costs related to survey and design, training and extension, and project and environmental/social management and monitoring.

(d) **Technical Support Services** (US \$60.8 million) would strengthen technical support programs for project afforestation activities in four areas as follows:

Planting Stock Development Program (US \$43.04 million) comprising the introduction of improved genetic materials and nursery management technologies, and support the production of the 265 million seedlings required under the Project. The total project seedling requirement would be grown by existing nurseries operated by state forest farms, collective forest farms, or specialized households under contract with forest farms or county project management offices. Every participating county would have one central nursery and several smaller nurseries located near planting sites, in order to minimize transport distance and handling of seedlings prior to planting. All seedlings would conform to detailed growth standards for each species, including collar diameter, seedling height, and root system configuration.

To simplify disbursement and accounting procedures, the Project would finance the nursery-gate production cost of the final seedling, which would be added into the unit cost for afforestation. In addition, financing would be provided for nursery upgrading and extension including nursery equipment, on-site irrigation system (sublateral or smaller ditches), small-scale on-site civil work such as storage sheds and offices no larger than 150 square meters, and training. The detailed design will be reviewed and approved by the provincial PMOs. However, the provincial PMOs will provide summary reports with short description of the design and list of items and budget for each nursery to the PMC as part of following year's work plan. Procurement arrangement (including civil work) would be incorporated into the annual procurement plan.

Training and Extension Program (US \$2.65 million) comprising dissemination of key research findings and technical silvicultural guidelines to project staff (at the national, provincial, county, and township levels) and to project beneficiaries mainly using existing forestry and agriculture extension networks at the county and township levels. The Project would also encourage developing "non-state" extension channels, such as farmers growers associations and local technical experts at the village level. The program would support: (i) preparation of new training and extension materials; (ii) development and implementation of domestic training programs for project staff and farmers; (iii) overseas training and study tours for project staff; and (iv) local and international technical assistance.

Rural Infrastructure Program (US \$13.98 million) comprising: (i) the construction of forest trails and small guard/storage sheds by local communities, and well drilling; and (ii) the provision of small sub-loans

for post-harvest treatment and marketing of horticultural crops to local marketing groups. For (i), it was agreed that trails would be dirt paths no wider than one meter, generally constructed along the contour; sheds would be no larger than 60 square meters, constructed of brick and concrete in line with local standards for similar construction, and detail design and budget for well drilling would be developed during implementation and reviewed and approved by PMC. To simplify disbursement and accounting procedures, disbursements for forest trails is included in agreed schedule of plantation establishment unit costs **and the disbursement for storage/guard sheds also base on the unit cost**; the schedule for the first year of the Project is included in the Project Implementation Manual, and thereafter it would be revised yearly on the basis of actual cost experience recorded in audited statements of expenditure and monitored by supervision missions.

For (ii) above, sub-loans on commercial terms would finance small-scale equipment and facilities for the grading, packing, storage/cold storage, and transportation of project horticultural production. It is designed to strengthen the marketing infrastructure at the village and township levels, where the marketing links are the weakest, and promote the development of a competitive, multi-channel marketing system that allows local communities to capture the economic benefits of faster and higher quality delivery of production to county and provincial markets. The sub-loans would be implemented in the last two years of the Project, when the economic tree plantations begin fruiting and county PMOs have completed an analysis of project marketing requirements.

The following screening criteria will be used to ensure that all proposed investments will: (i) be subject to a feasibility study conducted in line with terms of reference acceptable to the Bank to ensure that the investments are financially viable, commercially and technically feasible; (ii) be identified as priority investments for strengthening grassroots marketing infrastructure in the marketing studies to be prepared by the county PMOs under the Project; (iii) not exceed a maximum of US\$150,000 per investment; (iv) use Bank funds to finance no more than 50 percent of the total investment cost of each investment; (v) include equity contributions from the sub-borrower equivalent to at least 25% of the total estimated cost of the sub-project; (vi) be appraised by the county PMO and approved by the provincial PMO, before the summary report prepared by each province has been reviewed and approved by the PMC and the Bank; and (vii) support the preparation and implementation of a resettlement action plan acceptable to the Bank, based on the Project resettlement policy framework, if any involuntary resettlement is involved. The TOR for the feasibility study will be agreed and 25% equity contribution requirement will be reviewed at the project's mid-term review when there is a better idea of demand for the sub-loan.

Monitoring and Evaluation Program (US \$1.22 million) comprising measurement of: (i) implementation progress; (ii) growth and quality of established and thinned plantations to evaluate the achievement of the production objectives of the Project; and (iii) environmental and social parameters such as incidence of pests and diseases and participation rate of households to mitigate any adverse impacts and ensure the households benefits are adequately considered. Key performance indicators to facilitate monitoring and evaluation during implementation are in Annex 1. All of these M & E activities would be funded by counterpart funding.

Annex 3: Estimated Project Costs
CHINA: Sustainable Forestry Development Project

Project Cost By Component	Local US \$million	Foreign US \$million	Total US \$million
Protected Areas Management	15.93	5.76	21.69
Plantation Establishment	159.52	15.44	174.96
Total Baseline Cost	175.45	21.20	196.65
Physical Contingencies	1.34	0.07	1.41
Price Contingencies	10.21	1.37	11.58
Total Project Costs¹	187.00	22.64	209.64
Front-end fee		0.94	0.94
Total Financing Required	187.00	23.58	210.58

Project Cost By Category	Local US \$million	Foreign US \$million	Total US \$million
Goods & Vehicles	9.03	15.93	24.96
Works	147.28	1.25	148.53
Services & Training	14.02	3.95	17.97
Community Conservation Fund	0.55	0.00	0.55
Incremental Cost	1.02	0.07	1.09
Recurrent Cost	3.55	0.00	3.55
Physical Contingencies	1.34	0.07	1.41
Price Contingencies	10.21	1.37	11.58
Total Project Costs¹	187.00	22.64	209.64
Front-end fee		0.94	0.94
Total Financing Required	187.00	23.58	210.58

Project Cost by Component ¹	EU (US\$ Million)	Government (US\$ Million)	Total
Natural Forest Management (EU-financed)	15.00	5.00	20.00

1/ Proposed to be parallel co-financed by the EU.

¹ Identifiable taxes and duties are 0 (US\$m) and the total project cost, net of taxes, is 214.58 (US\$m). Therefore, the project cost sharing ratio is 43.76% of total project cost net of taxes.

Annex 4
CHINA: Sustainable Forestry Development Project
Financial and Economic Analysis Summary

I. Introduction

The Sustainable Forestry Development Project (SFDP) includes three major components: natural forest management, protected areas management, and plantation establishment. The first two components would introduce modern management programs for sustainable development in natural forest areas, and for biodiversity conservation in designated natural protected areas. The plantation establishment component would establish timber and economic tree crop plantations, and would demonstrate pre-commercial thinning. In general, investments in natural forest management and protected areas are not revenue generating. However, these components would produce non-quantifiable economic benefits locally, regionally, and globally. The plantation establishment component would generate revenue as a result of producing commercial timber, fruit, nuts, leaves, and other such forest products.

The following analysis includes four sections: (a) assessment of the economic benefit derived from each component; (b) major assumptions for the analysis including the model and prices employed; (c) economic analysis including method, results, and sensitivity analysis; and (d) financial analysis including method and results.

II. Benefit

This section analyzes the qualitative economic benefit generated from preserving and managing biodiversity under the natural forest management and protected areas management components, and analyzes the quantitative economic benefit generated from the plantation establishment component. The economic benefit derived from the first two components would be generated locally, regionally and globally. Another significant impact of the components is its introduction and dissemination function, which would demonstrate the management model beyond the project areas. The plantation establishment component would benefit local people in generating income and in narrowing the gap between supply and demand. The direct economic revenue would be assessed in terms of the value of tree products and the direct income enjoyed by farmers.

A. Natural Forest Management Component

Local Project Areas. With the component of natural forest management, the Project would support the development and dissemination of new sustainable management techniques in approximately 203,000 ha of natural forest areas protected under the government's Natural Forestry Protection Program (NFPP).

The 1998 Yangtze River basin floods, which devastated the downstream areas of the basin's stream bed, resulted from extensive upstream ecological deterioration, which had resulted from over-logging. Following the flood, the government issued a logging ban to prevent further environment degradation. The ban's impact has both positive and negative consequences. On one hand, it would assist natural forestry recovery in upstream areas by stopping of planned logging. On the other hand, the ban would negatively affect on the local economy, which heavily relied on the logging industry, and on the livelihood of local people, many of them depend on forestry. The ban has resulted in the loss of an estimated one million jobs for State Forest Enterprise workers.

To mitigate the negative impact of the ban, the Project would assist the government by developing models to find alternative approaches, with which to sustain the local economy. Under the community development subcomponent, the Project would support the establishment of small-scale village infrastructure such as the construction of drinking water systems, the building or upgrading of village schools, and similar needs, depending on each village's development plan. The Project would also provide a micro-credit program targeted to households and informal groups, while simultaneously providing training in basic farming skills and financial management for households and small-scale enterprises. Specifically, the micro-credit scheme would provide the necessary seed money to allow villagers to engage in alternative, non-forestry production activities. Training for laid-off workers of State Forest Enterprises (SFEs) would be also provided under the Project to retain SFE workers in skills that would enable them to find alternative employment opportunities. This alternative employment model can be introduced and implemented on a pilot scale, and experience gained from its results can be disseminated to non-project areas.

Downstream Benefits. The project areas in Sichuan province are located in designated natural protected areas. Under the Natural Forestry Protection Program, which was developed following the 1998 Yangtze basin flood, these natural forest protected areas were designated for recovery of ecological environment. The Project aims to assist the government's effort by developing and disseminating management techniques, which would be employed under the Program. It would be difficult to quantify the direct project benefits to the downstream Yangtze River valley. These benefits could be estimated in two ways. First, the opportunity cost of the recovery of the ecological environment resulting from the logging ban, as well as the recovering vegetation that would reduce downstream flood risk, can be estimated. The direct and indirect damage are estimated at Y158 billion (close to US\$20 billion). However, the logging ban has reduced local revenues from logging and other forest production activities for which the government has to compensate. Secondly, there is a cost trade-off. Continued logging would protect the local economy, albeit at the risk of further downstream flood damage. Therefore, investments will have to be made in these downstream areas in the form of flood protection, such as embankments along the Yangtze River. This estimation would be based on a flood occurrence rate over the next ten years, and the project benefits to the Yangtze River downstream can be economically justified.

B. Protected Area Management Component

The Project would support conservation and improve the management ecological biodiversity of global importance in selected, high priority nature reserves in natural forest areas. The biodiversity protection regions in China have been designated by the government. Biodiversity Conservation Action Plan issued in 1994 developed strategy and designated priority natural reserve areas. However, the existing biodiversity management programs need to be improved. The management techniques introduced under the Project would include resource surveying, nature reserve planning and management, and community-based nature conservation. Special funds would be provided by the Project for environmental education to the public. Training and capacity building would strengthen all reserve staff in management. The economic benefits of these interventions would be derived from improvements in biodiversity, which contributes to global biodiversity resources, and in a reduction of ecological damage to local community livelihood. It is, however, rather difficult to quantify the intrinsic benefit values related to the impact by biodiversity. An incremental cost analysis was carried out for this component. Since the project sites are identified as priority areas under China Biodiversity Conservation Action Plan, the non-project areas could adopt the management program tested under the Project.

C. Plantation Establishment Component

The Project aims to increase the production of timber to meet the growing gap between domestic supply and demand, thereby generating new employment and income for forestry farms and rural households affected by the logging ban. The Project's economic benefits from this component would be derived from: (i) establishment of 115,090 hectares of timber plantation, which would in part help to meet demand for projected future wood deficits in the construction, pulp and paper making industries; (ii) the establishment of 57,940 hectares of economic tree crop plantations, which would generate an increase in high-value fruit and nut production; and (iii) pre-commercial thinning of 61,330 ha of existing plantation to demonstrate increased productivity and financial gains from proper thinning and tending technologies.

At full development, project timber plantations would produce 13.31 million m³ of timber, 1.24 million tons of fuel wood, and 24.3 million tons of resin. Tree crop plantations would produce 28,023 tons of dry fruit (walnuts, chestnuts, etc.), 414,654 tons of fresh fruit (apples, pears, peaches, etc.), and 10,005 tons of leaves and other products (Chinese herb, rubber, willow branches for use in handicraft weaving, etc.). The net incremental benefit would be RMB 734 million from timber production, RMB 58 million from thinning, and RMB 1.1 billion from tree crop production.

The component would provide alternative employment opportunities to former forest workers, shareholding cooperative forest farms, village-township collective forest farms, and state forest farms, for a total beneficiary number reaching 2.67 million people.

III. Main Assumptions

This section covers main assumptions for economic/financial analysis for plantation component. The assumptions include: (a) models employed in analyzing financial/economic viability of all species of timber and tree crops; and (b) prices of inputs and outputs used in the cash flow.

The Production Models

A one-hectare model for each of the 42 species planted underpins the financial and economic analysis, and ultimately the internal rate of return calculations. Incremental cost and benefit analysis (focusing on with- and without-project scenarios) was used to assess investments in plantation rehabilitation; full cost-benefit analysis was used to assess new construction. The models do not include the benefits derived from inter-cropping, and any such benefits would directly increase the income of beneficiary farmers. The rates of return calculations for individual timber and economic tree crop species include: (i) the costs of materials and equipment such as seeds and seedlings, fertilizers and pesticides, manure, equipment hire and tools; (ii) labor costs for site clearing, preparation, planting, tending, road maintenance, guardhouse construction, and harvesting; (iii) indirect costs such as site surveying and design work, management and quality monitoring, training and extension; (iv) accompanying irrigation costs for relevant tree species; and (v) all relevant provincial and national taxes and fees. A discount rate of 12% is used for estimation.

The cost-benefit analysis for all **timber species** is based on: (i) a single rotation, which implies that none of the costs and benefits of replanting a site has been considered; (ii) a 20-year time period, which captures the full rotation of all timber species financed under the Project; (iii) complete production and harvesting costs, including the costs of extraction trails, logging and skidding to the roadside; (iv) complete investment costs including physical contingencies; and, (v) thinning and tending assumptions for all relevant species and the revenue generated from the sale of thinned wood.

The cost-benefit analysis for all **economic tree crops** is based on (i) a single planting cycle which assumes natural attrition, (ii) a 16 year time period which directly corresponds to the loan period and includes the 7-year grace period; (iii) complete production and harvesting costs, (iv) complete investment costs, including physical contingencies; and (v) pruning assumptions for all relevant species.

Input and Output Prices

The input and output prices used in the financial and economic analysis are summarized below. The financial prices for seeds, fertilizers, etc. are based on the actual import prices from the recent procurement of such goods under previous Bank funded projects. The financial price of labor used is an estimated shadow wage and based on the weighted average of the various daily wage rates currently prevailing in the project areas, which amounts to approximately Y 15 per day. The financial output prices are prevailing average roadside prices for timber products (which incorporate the costs of cutting and skidding) and average market prices for tree crop production (which incorporate the cost of harvesting and marketing).

Standard economic conversion factors are used in the economic analysis to convert the financial cost of specific investments to economic costs, and to convert financial prices of key inputs to economic prices. The economic output prices are based on actual border prices for comparable imported timber, fruits and nuts, and are adjusted for transport and processing costs. The economic input prices of seedlings, pesticides, manure, fertilizers, equipment and tools were assumed the same as the financial prices. The farm gate output price for thinned wood (in terms of the timber crops) and fruit and nuts (in terms of the economic tree crops) were calculated on the basis of the most recent World Bank commodity price projections, with adjustments made to transport and handling costs to reflect local situations. Variations between financial and economic output prices are not exceeding 10 percent. Moreover, a shadow wage of Y 12 per day was used in the economic analysis to reflect the surplus of agricultural workers with little alternative employment opportunities in the project areas, leading to a marginal product of labor below the prevailing market wage.

IV. Economic Analysis

Economic analysis was carried out for each crop species and for the plantation establishment component as a whole. Investment costs include all investment costs that would be incurred under the Project including costs for institutional strengthening, training, and technical extension. Operating costs include all physical inputs and labor. All costs are valued at constant 1999 border prices and are adjusted for physical contingencies. Taxes, fees and interest payment are excluded, which are, however, reflected in the financial analysis.

World Bank price projections of export prices actually realized by China were used to estimate farm gate economic prices for traded goods in constant 1999 terms. Economic prices for non-traded goods were estimated using conversion factors. These conversion factors were estimated on an analysis of the deviation of social opportunity costs from the actual financial prices prevailing in China caused by tax and price distortions in non-traded goods. All economic values were converted to local currency at the prevailing official exchange rate of Y8.28 to US \$1.

Economic Rate of Return

Various timber species have different growth periods, which result in the generation of revenues at different periods of time. Under the Project, the maturity period varies from 6 to 25 years. For timber species with a long growth period, the first and second thinning would generate minor income from small-diameter timber and fuel wood.

For tree crops, revenue generation would start in different years. Most would begin generating revenues from year 3 to 5 and reach full production in Year 7 for fresh fruit and Year 14 for nuts. During the initial growth years 1-4, income would be derived from intercrops. The model has not included, however. For rehabilitated plantations, calculated revenues are only incremental segments.

The Project would support pre-commercial thinning. This practice would promote forming timber in terms of shortening mature time. The Project would develop a model to demonstrate the practice useful. The benefit from thinning is not high-value products. The economic rate of return is estimated at 22% for the subcomponent.

The results of the analysis show that the component and each species has an acceptable economic rate of return, ranging from 16 percent to 46 percent for timber, and from 15 percent to 37 percent for tree crops. In general, timber plantations have lower rates of return because of the extended time (20-25 years) that timber trees require to generate useful timber. However, there are several tree species, such as Casuarina, W.Poplar F, Abrus etc., with a high economic rate of return. These species are early maturing (full harvesting reached in year 6-8), which reduces maintenance costs as compared to tree species with a 20-year maturity. For economic tree crops, the species are either of high value (Pomegranate) or of high yield (jube, apricot, apple), or special use and local specialty (prickly ash).

Overall, the proposed component yields an economic rate of return (ERR) of 25 percent, and a net present value of \$216 million (using a discount rate of 12 percent), over a 20-year period of analysis. At the subcomponent level, investments in timber species yield an ERR of 30 percent; the proposed investment in economic tree crops yields an ERR of 26 percent; and thinning yields an ERR of 22 percent.

Sensitivity Analysis

Analysis was carried out to evaluate the sensitivity of the component's ERR to price and cost variations. The component overall is neither very sensitive to an increase in investment costs and operating costs, nor to a drop in sale prices since the revenue generated at least in year 4 or 5. An increase in investment costs or an increase in operating costs would reduce the ERR to 26 percent. A 10 percent drop in sales price, would reduce the ERR to 25 percent. The analysis of switching values shows that the ERR for the component is robust. It would take a reduction in total benefits of 49 percent or an increase in total costs of 98 percent to bring the ERR down to 12 percent. However, there are a few economic tree crop species that are sensitive to small (e.g. 10%) downward changes in output prices. Market prices for Walnut, Winghackenberry, Chestnut, Eucommia, Chinese Yew, Willow, Citrus and Peach should be monitored closely during implementation. The ERR results for each species is found in the table below and detailed analysis can be found in the project files.

V. Financial Analysis

Financial analysis on plantation establishment is based on a one-hectare model. There are 22 species of timber, and 20 species of tree crops under the Project, and the one-hectare model is developed for each of these species. The assumptions on model above is applied in financial analysis. Benefits would be derived from the plantation itself as well as from its by-products such as fuel wood. Incremental costs and benefits were used for rehabilitated plantation, and full costs and benefits were used for newly developed plantation. The models employ farm gate prices. Investment costs and operating costs are valued at 1999 prices. Farm labor is valued at Y 15.00/person-day.

The investment period for timber would be three years and four years for tree crops. Maintenance costs include thinning, irrigation water charges, fertilizer for some species, and harvesting. Environmental monitoring would be carried out through the life of the plantation. Forest products and fruit (dry and fresh) are subject to the special product tax (8%), payable by project farmers. A reforestation and forest maintenance fee of 2 percent for tree crops and 20 percent for timber is included in the model.

The financial analysis for the timber plantation subcomponent indicates FRRs for species ranging from 12 to 30 percent. For tree crops, the FRRs ranges from 11.3 to 37 percent. The low financial rate of return for some economic tree crop species (ranging 12 to 16 percent) indicate that monitoring market variation would have to be closely carried out. Necessary adjustment in species planted has to be made according to market variation. Moreover, intercropping would help to supplement income in early years when timber plantations are still not mature. The overall financial rate of return for this component is 22 percent.

Summary of Cost Benefit Analysis

Species	Financial Analysis		Economic Analysis	
	NPV (Y '000)	FIRR	NPV (Y '000)	EIRR
Timber				
Masson 14 F.	1,116	14.0%	6,178	18.2%
Masson 16 F.	1,052	13.8%	4,263	17.5%
Slash 14 F.	1,233	15.0%	10,576	19.9%
Slash 16 C.	675	13.1%	3,142	16.1%
Loblolly 14 F.	339	12.9%	1,748	18.0%
Loblolly 16 C.	20	12.0%	1,149	14.8%
Chinese Fir 14 C.	2,064	14.9%	15,959	18.8%
Chinese Fir 16 C.	3,184	16.1%	11,330	20.1%
J. Larch 16 P.	205	12.4%	6,429	16.2%
W. Poplar PW.	2,328	15.6%	22,651	22.6%
W. Poplar F.	1,775	17.7%	25,621	36.2%
P. Simonii C.	2,057	19.3%	10,114	30.7%
I. Poplar PW.	5,315	21.4%	280,071	30.0%
I. Poplar F.	1,856	18.3%	127,808	32.1%
Abrus F.	3,582	22.9%	6,472	36.1%
B. Locust P.	1,905	16.4%	15,760	21.9%
Casuarina F.	6,168	30.5%	45,559	45.5%
Paulownia PW.	6,080	25.8%	26,129	34.3%
Sweetgum PW.	4,494	22.4%	24,316	30.5%
Phyllostachys	1,037	13.7%	7,586	20.0%
Moso bamboo new	1,019	13.6%	22,939	18.1%
Moso bamboo reh.	1,711	16.2%	93,278	23.3%
Timber Production		21.1%		30.0%
Pre-Commercial Thinning				
Larch	1,532	18.0%	15,889	21.2%
Fir 14	457	15.9%	47,944	25.9%
Masson	428	16.0%	8,026	32.1%
Loblolly 16	562	17.9%	15,110	33.5%
Thinning		18.7%		22.0%
Economic Tree Crops				
Walnut	37,115	28.0%	70,099	34.0%
Chestnut	9,606	20.5%	16,740	26.4%
Eucommia	375	12.8%	1,955	17.7%
Gingko	9,631	20.6%	10,230	29.2%
Jujube	12,649	23.1%	237,562	28.9%
Pear	19,151	23.3%	215,403	28.5%
Tea	5,119	17.8%	17,452	29.6%
Apricot	10,449	19.3%	156,814	26.5%
Citrus	1,783	13.8%	1,513	19.1%
Peach	5,595	18.2%	83,905	26.0%
Pricklyash	16,559	35.8%	14,985	48.2%
Apple	8,118	19.0%	15,364	23.9%
Pomegranate	38,739	32.5%	48,907	36.5%
Whinghackberry	-123	11.7%	507	18.6%
Grape	10,811	17.3%	64,081	21.3%
Oil Tea	3,698	18.1%	5,455	23.3%
Rubbertree	22,984	25.7%	9,843	29.1%
Willow	2,635	16.2%	3,068	23.4%
Hickory	40,776	28.1%	71,924	31.4%
Chinese Yew	1,838	15.3%	9,607	21.4%
Tree Crop Production		22.0%		26.0%

Annex 5: Financial Summary
CHINA: Sustainable Forestry Development Project
Years Ending

	IMPLEMENTATION PERIOD						
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Total Financing Required							
Project Costs							
Investment Costs	67.6	46.0	53.7	26.8	9.4	2.5	0.0
Recurrent Costs	0.6	0.6	0.6	0.6	0.6	0.6	0.0
Total Project Costs	68.2	46.6	54.3	27.4	10.0	3.1	0.0
Front-end fee	0.9	0.0	0.0	0.0	0.0	0.0	0.0
Total Financing	69.1	46.6	54.3	27.4	10.0	3.1	0.0
Financing							
IBRD/IDA	31.8	19.5	23.4	13.8	4.4	1.1	0.0
Government	19.8	10.9	12.2	7.4	2.6	0.9	0.0
Central	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Provincial	19.8	10.9	12.2	7.4	2.6	0.9	0.0
Co-financiers(GEF)	9.1	2.2	1.5	1.4	1.0	0.8	0.0
User Fees/Beneficiaries	8.4	14.0	17.2	4.8	2.0	0.3	0.0
Others	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Project Financing	69.1	46.6	54.3	27.4	10.0	3.1	0.0

Main assumptions:

Annex 6: Procurement and Disbursement Arrangements

CHINA: Sustainable Forestry Development Project

Procurement

A. General

1. All Bank-financed Plantations Establishment Component and GEF-financed Protected Areas Management Component procurement under this Project will be carried out in accordance with the *Bank's Procurement Guidelines (January 1995, revised January and August 1996, September 1997 and January 1999)* and the *Guidelines for Selection and Employment of Consultants (January 1997, revised September 1997 and January 1999)*. The Bank-approved Chinese Model Bidding Documents (MBD) will be adopted for all International Competitive Bidding (ICB) and National Competitive Bidding (NCB) for goods and works. In the case where no model documents exist, the relevant Bank Standard Documents (SBD) will be used. A General Procurement Notice (GPN) to advertise all ICB contracts and major consulting assignments will be published and will be updated annually until all the major contracts have been awarded. Staff of the Project Management Center (PMC) who are in charge of the overall administration of the Project have had adequate experience of Bank financed procurement procedures since 1985 under the following Bank-financed projects: (a) Forest Development Project; (b) Daxinganling Forest Fire Rehabilitation Project; (c) National Afforestation Project; (d) Forest Resources Development and Protection Project; (e) Natural Reserve Management Project; and (f) Forestry Development in Poor Areas Project. An assessment of its present capability is provided below. A procurement plan has been prepared which outlines the first year procurement activities. The detailed procurement plan is referred to in the Project Implementation Manuals. Details of procurement arrangements, procurement methods, prior review thresholds are provided below and are also shown in Table A (GEF-financed Protected Areas Management component) and Table B (IBRD-financed Plantation Establishment component).

2. A margin of preference would be allowed for goods manufactured in China under ICB procedures subject to the provisions of paragraphs 2.54 and 2.55 of the Procurement Guidelines and appendix 2 thereto.

B. Implementing Agency Procurement Capacity Assessment

3. A procurement assessment of the implementing agencies, which focused on reviewing the capacity of the PMC and selected provincial PMOs' organization structure and functions, staff skills, quality and adequacy of supporting and control systems, legal and regulatory framework and past experience, was carried out. The assessment concluded that the organization structure, staff skills and support and control system for procurement at both central- and provincial-levels are generally adequate, and past performances of the PMC and PMOs on other Bank-financed forestry projects have been satisfactory. An action plan to address the identified weaknesses has been agreed in the Procurement Capacity Assessment Report. Due to scattered locations, distances between provinces, and different implementation schedules, each participating province would manage its own plantation establishment, procurement for civil works, and shopping. PMC would manage goods under ICB, NCB, and some shopping which are more suitable for centralized procurement. CMC International Tendering Company and INSTRIMPEX International Tendering Company were selected to provide assistance in this regard. PMC would also provide cross-provincial services to coordinate procurement planning, monitoring, and reporting as well as providing training to provincial PMOs. Common incompatibilities of local procurement procedures are highlighted as follows: (a) invitation for bids can be advertised through newspaper, information network or

other media; (b) cost estimate is mandatory; (c) bracketing is used for evaluation; (d) the merit point system (scoring system) is used for bid evaluation; and (e) time for preparation of bids can be 20 days which is shorter than 30 days required for NCB; (f) the whole contract with less than three bidders should be rejected and needs re-bidding. Those incompatibilities are addressed in a side letter.

4. The assessment raised an issue relating to fertilizers and pesticides which was procured through ICB in past Bank-financed forestry projects. However, past experiences have shown that (a) the cost of fertilizers purchased is much higher using ICB than if procured locally; and (b) centralized procurement and time consuming bidding process led to prolonged delays in delivery to the farmers which had a significant negative impact on the quality of the plantations. Similarly, pesticide is needed only during infestation period. It is difficult to predict when and if ever the infestations will occur and the type of infestations and therefore it is difficult to plan in advance the necessary purchases. Due to scattered project locations within eleven provinces with diverse geography and different planting seasons and 6 years for establishing the plantations, all fertilizer procurement would be decentralized to the provinces. Pesticides would be purchased by project provinces out of counterpart funds.

C. Procurement of Civil Works

5. Protected Areas Management Component: Neither ICB nor NCB contracts are foreseen because of the scattered nature and small sizes of the civil works contracts. Civil works under this component such as nature reserve management stations, remote check/guard posts and boundary markers whose contract value is estimated to be less than US \$30,000 amounting to US\$1.87 million in aggregate would be carried out through force account with Bank's prior agreement under supervision of forestry bureau or nature reserve staff because they are widely scattered in 13 nature reserves in remote and difficult to access areas and across 7 provinces. Disbursements will be made on agreed amounts per unit of output which is specified in the financial management manual.

6. Plantation Establishment Component: Establishment of plantations costing a total of US\$149.24 million comprises of land clearance, land preparation, planting of seedlings, thinning, tending and rural infrastructure construction such as forest trails and small guard or storage sheds. These plantations would not be suitable for competitive bidding, as the works are small, widely scattered, and scheduled according to the time of the year and availability of seedlings, and would be procured under community participation procedures. Under community participation, casual labor will be hired for that purpose and will be paid on a piece-work basis. Plantation will also be implemented in accordance with agreed plantation/models which specify the work to be performed and the rate to be paid per species per hectare and agreed annual plantation plan with each province. The organization and method of payment including unit rate for plantation for each species and province were agreed at appraisal and will be reviewed annually. Implementation and quality of plantation establishment will be periodically supervised by established technical teams led by county forestry bureaus and remedial measures taken when and if necessary.

7. Well drilling for small-scale irrigation in Hebei Province estimated to cost US\$100,000 equivalent or more per contract with an aggregate of US\$1 million will be carried out under NCB procedures acceptable to the Bank. A few contracts expected to cost less than US\$100,000 per contract and US\$1.26 million in aggregate would be procured on the basis of three quotations obtained from at least three qualified domestic contractors and contracted on a lump sum/fixed price basis.

8. Other civil works for new nursery establishment, small buildings and rural infrastructure including rural marketing infrastructure under sub-loans would be procured on the basis of three quotations obtained from at least three qualified domestic contractors and contracted on a lump sum/fixed price basis in view of

the small size of the civil works (on average less than US\$100,000 per contract) and their scattered and remote location with a total cost of US\$8.33 million.

D. Procurement of Goods

9. Protected Areas Management Component: Vehicles excluding motorcycles will be procured through ICB procedures. Motorcycles, field survey equipment and office equipment (e.g., GPS, computers and printers, photocopying machines, projector, and so on) costing less than US\$250,000 per contract for a total of US\$990,000 will be awarded under NCB procedures acceptable to the Bank because the goods are small in quantity and available competitively on the local market and in which no foreign bidders are interested. The smaller purchase of goods for field protection and field kits (e.g., binoculars, tents, sleeping bags, compasses and so on) worth about US\$580,000 in total which is already available off-the-shelf, expected to cost less than US\$50,000 per contract, would be procured through national shopping in accordance with the procedures set out in Paragraphs 3.5 and 3.6 of the Procurement Guidelines. All shopping contracts will require at least three valid quotations.

10. Plantation Establishment Component: Vehicles will be procured through ICB procedures. Contracts for goods consisting of fertilizer, office equipment, and small agricultural, water supply, nursery, and laboratory equipment estimated to cost in total US\$8.40 million which cannot be packaged for ICB in view of small quantities required in scattered locations throughout the 11 provinces and also available competitively on the local market, and costing less than US\$250,000 per contract will be awarded under NCB procedures acceptable to the Bank. The small purchase of goods consisting of production tools, small quantity of office equipment, nursery equipment and equipment for rural marketing infrastructure under sub-loans, small quantity of fertilizer purchase, with value of less than US\$50,000 per contract and aggregate of US\$9.57 million would be procured through national shopping in accordance with procedures set out in Paragraphs 3.5 and 3.6 of the Procurement Guidelines. All shopping contracts will require at least three valid quotations. With regard to fertilizer purchase, experiences from two previous Bank-financed forestry projects have shown that (a) centralized procurement led to prolonged delays in delivery to the farmers thus affecting yields; and (b) no foreign bidders were interested in bidding for the small quantities. Only domestic bidders participated and local prices area quite competitive.

E. Technical Assistance, Consultant Services, and Training

11. Protected Areas Management Component: A total of about US\$2.57 million of technical assistance would be required for project and technical support in the areas of nature reserve management planning, community-based natural conservation, wildlife surveys, monitoring and evaluation, training program development, and interpretation/translation services. All assignments under this component will be carried out by individual consultants, due to the nature of the assignments where the consultants do not need to work together as a team, no additional outside home office support is required, and the experience and qualification of the individuals are the paramount requirement. In particular, two long-term individual consultants--one international (30 person-months) and one national (36 person-months)--will be recruited to assist the Project on community-based nature conservation sub-component.

12. Services worth about US \$9.34 million would be required for the Project comprising research, training implementation, surveys, and development of management and other plans and would be procured in accordance with a program agreed during appraisal. Total cost of training activities will be US\$4.78 million, including domestic training, workshops and camp for children. The rest (US\$4.56 million) will be used for field survey, management plans, mapping, and research activities. Consultant services will be carried out in accordance with Bank Consultants Guidelines. The research, management plans, and

mapping will require the involvement of research institutes and universities. There will be no large consultant contracts because of the nature of the work. Contracts will be small and are not expected to exceed US\$25,000 per assignment up to US\$2 million total, and will be procured under Consultants Qualifications (CQ) procedures. There will be cases where only a particular research institute is available; in this case, sole source selection whose cost is not expected to exceed US\$100,000 per assignment (US\$1.52 million total) would be used. Those other services (US\$3.61 million total) which do not require a team and will be carried out by individual consultants.

13. Plantation Establishment Component: A total of about US\$60,000 equivalent of consultants services would be required to support economic tree crops cultivation, timber plantations design, preparation of extension materials, and pest and disease control. All assignments will be carried out by individual consultants.

14. A total of about US \$3.16 million for training and study tours would be required, of which, about US\$600,000 for overseas training, domestic training and study tours will be financed by the Bank loan and the consultants services required under training will be procured in accordance with the selection methods of Consultant Qualification and sole source for firms as described in paragraph 12 above. Similarly, individual consultants will also be recruited when teams are not required. About US\$2.56 million for domestic training will be financed out of counterpart funds and will be carried out in accordance with domestic procedures and agreed training programs. Detailed training and study tour arrangements are referred to in Annex 2 of the PAD and the Project Implementation Manual.

F. Prior Review and Post Review (both Protected Areas Management and Plantations Establishment)

16. *Prior Review*. All ICB contracts and all NCB contracts for goods would be subject to prior review by the Bank. The first two NCB contracts for civil works and the first two shopping contracts for goods for each province are also subject to prior review. Consultant contracts valued above US \$35,000 for individuals and firms would also be subject to prior review. All TOR for consultants and single source selection should be subject to prior review by the Bank. Overseas training and study tours would not be subject to prior review. This is considered appropriate in view of PMC staff's excellent management of procurement in the four previous projects and their continuing participation in Bank-sponsored courses on national and international procurement.

17. *Post Review*. All other contracts would be subject to ex-post review by supervision missions.

G. Procurement Reporting and Supervision

18. *Procurement Reporting and Filing*. A procurement filing system will be established by the project implementing agencies. Procurement reporting will be provided to the Bank on semi-annual basis in a format satisfactory to the Bank.

19. *Procurement Supervision*. Frequency of procurement supervision missions is proposed as one every 6 months including special procurement supervision for post review/audits.

H. Items not Financed by the Bank Group

20. Natural Forest Management component will be financed by European Union (EU) and its own rules will be followed in the procurement process.

Procurement methods (Table A)

**Table A1: Project Costs by Procurement Arrangements
Protected Areas Management Component (GEF)**

Expenditure Category	Procurement Method ¹				Total Cost
	ICB	NCB	Other ²	NBF	
1. Works			1.87 (1.22)		1.87 (1.22)
2. Goods					
2.1 Survey Equipment & Material		0.27 (0.24)	0.35 (0.26)		0.62 (0.50)
2.2 Office Equipment		0.40 (0.36)	0.23 (0.17)		0.63 (0.53)
2.3 Vehicles	2.40 (1.40)	0.32 (0.29)			2.72 (1.69)
3. Services: Technical Assistance, Consultant Services, and Training					
3.1 Technical Assistance			2.57 (2.57)		2.57 (2.57)
3.2 Training			4.78 (4.06)		4.78 (4.06)
3.3 Research, Field Survey, Management Plan & Mapping			4.56 (3.88)		4.56 (3.88)
4. Incremental Costs			1.21 (1.21)		1.21 (1.21)
5. Community Funds			0.57 (0.34)		0.57 (0.34)
6. Recurrent Cost				3.32 (0.00)	3.32 (0.00)
Total	2.40 (1.40)	0.99 (0.89)	16.14 (13.71)	3.32 (0.00)	22.85 (16.00)

1/ Figures in parenthesis are the amounts to be financed by GEF grant. All costs include contingencies.

2/ Includes national shopping, force account, consulting services, training and study tours.

**Table A2: Consultant Selection Arrangements
Protected Areas Management Component (GEF)**

Consultant Services Expenditure Category	Selection Method							Total Cost ¹
	QCBS	QBS	SFB	LCS	CQ	Other	N.B.F.	
A. Firms					2.00 (1.70)	1.52 (1.02)		3.52 (2.72)
B. Individuals						3.61 (3.45)		3.61 (3.45)
Total					2.00 (1.70)	5.13 (4.45)		7.13 (6.15)

1/ Including contingencies

Note: QCBS = Quality-and-Cost-Based Selection
 QBS = Quality-based Selection
 SFB = Selection under a Fixed Budget
 LCS = Least-cost Selection
 CQ = Selection Based on Consultants' Qualification
 Other = Selection of individual consultants (per Section V of Consultants Guidelines) and single source selection
 N.B.F. = Not Bank-financed
 Figures in parenthesis are the amounts to be financed by GEF grant.

**Table A3: Thresholds for Procurement Methods and Prior Review
Protected Areas Management Component (GEF)**

Expenditure Category	Contract Value Threshold US \$ thousands)	Procurement Method	Contracts Subject to Prior Review/ US \$ millions)
1. Works	<30	FA	none/(0.0)
2. Goods	>250	ICB	all/(2.4)
	>50 to <250	NCB	all/(0.99)
	<50	NS	none/(0.0)
3. Services			
(a) Consulting Services			
Firms		CQ/single source	>0.035/(1.00)
Individuals		Invitation	>0.035/(2.00)

Total value of contracts subject to prior review: US \$6.39 million out of US \$22.85 million

Prior review thresholds (Table B)

**Table B1: Project Costs by Procurement Arrangements
Plantation Establishment Component (IBRD)**

Expenditure Category	Procurement Method ¹				Total Cost
	ICB	NCB	Other ²	NBF	
1. Works					
1.1 Plantation			149.24 (67.85)		149.24 (67.85)
1.2 Small Buildings & Small Rural Infrastructure			7.14 (3.25)		7.14 (3.25)
1.3 Well Drilling		1.00 (0.45)	1.26 (0.57)		2.26 (1.03)
1.4 Marketing Facility (Sub-loan)			1.19 (0.6)		1.19 (0.60)
2. Goods					
2.1 Silviculture Inputs					
2.1.1 Fertilizer		7.00 (7.00)	3.46 (2.60)		10.46 (9.60)
2.1.2 Pesticides				1.52	1.52
2.2 Equipment					
2.2.1 Office Equipment		0.40 (0.40)	0.23 (0.17)		0.63 (0.57)
2.2.2 Minor Agricultural Equipment		1.00 (1.00)	4.88 (3.66)		5.88 (4.66)
2.2.3 Marketing Facility (Sub-loan)			1.00 (0.50)		1.00 (0.50)
2.3 Vehicles	4.25 (4.25)				4.25 (4.25)
3. Services					
3.1 Consultancy Services			0.06 (0.06)		0.06 (0.06)
4.2 Training & Study tours			0.60 (0.60)	2.56 (0.00)	3.16 (0.60)
Total	4.25 (4.25)	9.40 (8.85)	169.06 (79.86)	4.08 (0.00)	186.79 (92.96)

1/ Figures in parenthesis are the amounts to be financed by the Bank loan. All costs include contingencies.

2/ Includes national shopping, FA/CP, consulting services, training and study tours.

**Table B2: Consultant Selection Arrangements
Plantation Establishment Component (IBRD)**

Consultant Services Expenditure Category	Selection Method							Total Cost ¹
	QCBS	QBS	SFB	LCS	CQ	Other	N.B.F.	
A. Firms								
B. Individuals						X		0.06 (0.06)
Total								0.06 (0.06)

1/ Including contingencies

Note: QCBS = Quality-and-Cost-Based Selection
 QBS = Quality-based Selection
 SFB = Selection under a Fixed Budget
 LCS = Least-cost Selection
 CQ = Selection Based on Consultants' Qualification
 Other = Selection of individual consultants (per Section V of Consultants Guidelines),
 Commercial Practices, etc.
 N.B.F. = Not Bank-financed
 Figures in parenthesis are the amounts to be financed by the Bank loan.

**Table B3: Thresholds for Procurement Methods and Prior Review
Plantation Establishment Component (IBRD)**

Expenditure Category	Contract Value Threshold (US\$ thousands)	Procurement Method	Contracts Subject to Prior Review / (US\$ millions)
1. Works			
	>100	NCB	(0.50)
	<100	3 quotations/FA/CP	None/(0.00)
2. Goods	>250	ICB	all/(4.25)
	>50 to <250	NCB	all/(8.40)
	<50	NS	20%/(2.00)
3. Services			
(a) Consulting Services			
Firms			
Individuals	50		>0.035

Total value of contracts subject to prior review: US \$15.2 million out of US \$186.79 million

Disbursement

Allocation of loan proceeds (Table C)

21. *Allocation of Loan/ GEF Grant Proceeds (Table C/D)*. Under IBRD Loan, disbursement for category of civil works would cover three items: irrigation civil works, and guard/storage shed civil works, and other civil works excluding plantations. Irrigation civil works would include all labor, materials, and survey and design costs, but no equipment. Guard/storage sheds civil works would include all labor and material costs. Category of plantations would include: (a) all labor requirements for site clearing, preparation, planting, tending and thinning; (b) seedlings; (c) construction of forest trails; and (d) indirect cost related to survey and design, project and environment management. Disbursement for plantation and guard/storage sheds would be based on an agreed schedule of unit cost. The unit cost schedule for the first year of the project was agreed during appraisal, and thereafter it would be revised yearly on the basis of actual cost experience recorded in audited statements of expenditure and monitored by supervision missions. Disbursement for civil works would be made after county PMOs have inspected afforestation sites and certified that all work complied with the social, technical and environment guidelines agreed with the Bank. No withdrawal shall be made for the expenditures prior to the date of Loan Agreement, except that withdrawals, in an aggregate amount not exceeding US\$8,000,000, may be made in respect of Category (1) and (2) on account of payments made for expenditures before that date but after August 1, 2001.

22. For GEF Grant, civil works include management stations, guard posts, and boundary markers for the nature reserves. Goods include equipment, vehicles and materials. Incremental operating costs include salaries of additional project management staff on contract, travel costs, and allowances; office rent, consumable, and communication charges; and costs associated with project management, monitoring and evaluation.

23. *Disbursement profile (Table C)*. The project disbursement schedule is consistent with the general disbursement profile for forestry investment loans in China.

Table C: Allocation of Loan Proceeds

Expenditure Category	Amount in US\$million	Financing Percentage
1. Plantation	63.17	45%
2. Civil Works	3.98	45%
3. Market Infrastructure sub-loans	1.10	67%
4. Goods & Vehicles	17.76	100% of foreign expenditures, 100% of local expenditures (ex-factory cost), and 75% of local expenditures for other items procured locally
5. Consultants' services, Training & Study Tours	0.66	100%
6. Unallocated	6.29	
Total Project Costs	92.96	
Front-end fee	0.94	
Total	93.90	

Table D: Allocation of GEF Proceeds

Expenditure Category	Amount in US \$ million	Financing Percentage
1. Goods & Vehicles	2.68	100% of foreign expenditures, 100% of local expenditures (ex-factory cost), and 75% of local expenditures for other items procured locally
2. Civil Works	1.19	65%
3. Community Conservation Fund	0.34	60%
4. Incremental Operating Cost	1.19	100%
5. Consultants' service	2.52	100%
6. Training & Research, Field Survey, Management Plan & Maps	7.80	90%
7. Unallocated	0.28	
Total	16.0	

Table E: Estimated Disbursement Schedule (IBRD)

Fiscal year/ semester	IBRD Loan			Disbursement	Profile/a
	Semestral	Cumulat.	Cumulat. (%)	Year/ Semestral	Cumulat.(%)
2003				Year 1	
First (July-Dec.2002)	0.94	0.94	0	First	0
Second (Jan-June 2003)	9.40	10.34	10	Second	30
2004				Year 2	
First (July-Dec.2003)	9.40	19.74	20	First	38
Second(Jan-June, 2004)	14.00	33.74	35	Second	46
2005				Year 3	
First (July-Dec.2004)	14.00	47.74	50	First	54
Second(Jan-June, 2005)	14.00	61.74	65	Second	66
2006				Year 4	
First (July-Dec.2005)	9.50	71.24	75	First	74
Second(Jan-June, 2006)	9.50	80.74	85	Second	82
2007				Year 5	
First (July-Dec.2006)	4.80	85.54	90	First	90
Second(Jan-June, 2007)	4.80	90.34	95	Second	94
2008				Year 6	
First (July-Dec.2007)	3.56	93.90	100	First	98
Second(Jan-June, 2008)	0.00	93.90	100	Second	100
2009				Year 7	
First (July-Dec.2008)	0.00	93.90	100	First	100
Second(Jan-June, 2009)				Second	

Table F: Estimated Disbursement Schedule

Fiscal year/ semester	GEF Grant			Disbursement	Profile/a
	Semestral	Cumulat.	Cumulat. (%)	Year/ Semestral	Cumulat.(%)
2003				Year 1	
First (July-Dec.2003)	0.00	0.00	0	First	0
Second (Jan-June, 2003)	1.60	1.60	10	Second	30
2004				Year 2	
First (July-Dec.2003)	1.60	3.20	20	First	38
Second (Jan-June, 2004)	2.40	5.60	35	Second	46
2005				Year 3	
First (July-Dec.2004)	2.40	8.00	50	First	54
Second (Jan-June, 2005)	2.40	10.40	65	Second	66
2006				Year 4	
First (July-Dec.2005)	1.60	12.00	75	First	74
Second (Jan-June, 2006)	1.60	13.60	85	Second	82
2007				Year 5	
First (July-Dec.2006)	0.80	14.40	90	First	90
Second (Jan-June, 2007)	0.80	15.20	95	Second	94
2008				Year 6	
First (July-Dec.2007)	0.80	16.00	100	First	98
Second (Jan-June, 2008)	0.00	16.00	100	Second	100
2009				Year 7	
First (July-Dec.2008)	0.00	16.00	100	First	100
Second (Jan-June, 2009)				Second	

Use of statements of expenditures (SOEs):

24. Use of statements of expenditures (SOEs). Disbursement would be made against statements of expenditures (SOEs) for expenditures related to: (a) plantation establishment; (c) field surveys, management plans, and mapping; (c) training and study tours; (d) incremental operating costs; (e) contracts for goods and works not exceeding US \$200,000 equivalent; (f) contracts for individual consultants not exceeding US\$35,000 equivalent for Plantation Establishment component and US\$50,000 for Protected Areas Management component, and for consultants' services with firms not exceeding US\$100,000 equivalent; (g) sub-loans; and (h) community conservation grants. The supporting documents for SOEs would be retained by county or provincial PMOs for Plantation Establishment component and by provincial OWPPs for Protected Areas component, and central PMC/PO would retrieve them as required for on-site supervision by the Bank staff and inspection by auditors. In the case of contracts for goods, works and services above these thresholds, disbursement would be made against the full documentation with contracts themselves and other supporting documents.

Special account:

25. Special Accounts. In order to disburse the Loan and GEF Grant efficiently, Special Accounts would be opened. For IBRD Loan, a Special Account would be opened and managed by Ministry of Finance in US Dollars in a bank acceptable to the Bank with an authorized allocation of \$9 million, equivalent to the loan's financing of average expenditures for four months. For GEF Grant, a Special Account would be opened and managed by central PO of SFA with authorized allocation of \$1.8 million, equivalent to the Grant's financing of average expenditures for four months. Applications for replenishment of these two accounts would be submitted monthly, or whenever the accounts are drawn down by 50 percent, whichever comes first.

26. Reimbursement procedures. For IBRD Loan, both finance and forestry staff at every level would be involved in reviewing the reimbursement applications from entities for work financed under IBRD loan and counterpart funds, in order to ensure sound financial and technical management of project activities. The procedures would be as follows: reimbursement documentation would be prepared by the county PMO, with the countersignature of the county finance bureau, and sent to the provincial PMO; the documentation would be reviewed and approved by the provincial PMO, with countersignature of the provincial finance bureau, and sent simultaneously to MOF and PMC; PMC would have a seven-day time period to review the application and raise an objection if the application is not consistent with the technical guidelines of the Project; if MOF does not hear back from PMC within the time period, it would automatically process the application; if PMC raises an objection within the time period, MOF would not process the application until the PMC objection is resolved.

27. For GEF grant, finance bureau at every level would not be involved in reviewing and processing the reimbursement applications since the Special Account would be managed by the central PO in SFA. Reimbursement documentation would be prepared by the nature reserve, and sent to the provincial OWPP; the documentation would be reviewed and approved by the provincial OWPP, and sent to PO; and PO would review and approve the application, then make payment from the Special Account.

Annex 7: Project Processing Schedule
CHINA: Sustainable Forestry Development Project

Project Schedule	Planned	Actual
Time taken to prepare the project (months)	12	37
First Bank mission (identification)	03/20/1999	03/20/1999
Appraisal mission departure	01/15/2001	02/09/2001
Negotiations		01/23/2002
Planned Date of Effectiveness	07/30/2002	

Prepared by:

Government of China, State Forestry Administration
 Government of Sichuan, Hainan, Hunan, Shanxi, Liaoning, Anhui, Shandong, Hebei, Henan, Hubei,
 Gansu, Guizhou and Yunnan

Preparation assistance:

Policy and Human Resources Development fund (PHRD), Government of Japan
 GEF Preparation Development Fund (PDF) Block B
 New Zealand Trust Fund (CTF)
 Canadian Trust Fund (CTF)
 French Trust Fund (CTF)
 Finland Trust Fund (CTF)
 World Bank Budget (BB)
 FAO/CP Fund from the World Bank

Bank staff who worked on the project included:

Name	Speciality
Susan Shen	1st Task Team Leader, Forest Ecologist/Biodiversity
Mohamed N. Benali	Current Task Team Leader, Operations Specialist
Pawan Patil	Natural Resources Economist/Social Assessment
Louise Scura	Natural Resources Economist/Safeguards Coordinator
Guzman Garcia-Rivero	Sector Manager
Jin Liu	Agriculture Specialist/Plantations
Zhong Tong	Agriculture Economist/Project Economist
Zong-Cheng Lin	Anthropologist/Participation and Consultation
Junxue Chu	Disbursement Specialist
Jinan Shi	Procurement Specialist
Rob Crooks	Environment Specialist
Zhang Chaohua	Resettlement/Indigenous Peoples Advisor
Dan Gibson	Resettlement/Indigenous Peoples Advisor
Clifford Garstang	Lawyer
Evelyn Bautista-Laguidao	Program Assistant
Cecilia Belita	Program Assistant

Cecilia Tan	Team Assistant
Louisa Huang	Program Assistant
Victoria Elliott	Economist, Peer Reviewer
Juergen Blaser	Forester, Peer Reviewer
Lars Lund	Sociologist, Peer Reviewer
Jim Harkness	WWF-China Country Representative (External Reviewer)
Lingzhi Chen	Chinese Academy of Sciences, GEF/STAP Reviewer (Ext. Reviewer)

Note: 1st Negotiation took place in 5/21/2001.

Annex 8: Documents in the Project File*
CHINA: Sustainable Forestry Development Project

A. Project Implementation Plan

Project Implementation Manual: Natural Forest Management Component*
Project Implementation Manual: Protected Areas Management Component*
Project Implementation Manual: Plantations Establishment Component*

B. Bank Staff Assessments

Bank Mission Reports/Aide Memoires

Identification Mission March 1999 Aide Memoire*
Preparation Mission June 1999 Aide Memoire*
Preparation Mission November 1999 Aide Memoire*
Preparation Mini Mission February 2000 Aide Memoire*
Final Preparation/Preappraisal May 2000 Aide Memoire*
Appraisal Mission February 2001 Aide Memoire*
Procurement Capacity Assessment Report for Proposed SFDP, May 17, 2000*
Mission Report on Plantation Component--Financial Arrangements for Henan May 2000*
Impact of China's Logging and Timber Bans on Local Government Finances in Pingwu County, Sichuan August 2000*
Study Report on SFDP in Muni and Xiaoxing Townships of Songpan County, Sichuan Province May 2000*
Study Report on SFDP in Diqing Tibetan Autonomous Prefecture, Yunnan Province February 2001*

C. Other

1. Feasibility Study and Annexes of the Plantation Establishment Component - April 10, 2001
2. Environment Protection Guidelines*
3. Pest Management Plan*
4. Planting Material Development Plan (including Planting Stock Development Program, Guideline for Nursery Technical Management, Seeding Criteria for Major Planting Species and List for Sources of Planting Materials for Economic Crops and Timber Trees)
5. Training and Extension Plan
6. Afforestation Models and Benefit-Cost Analysis Models for timber plantation, economic tree crops and bamboo grove afforestation and rehabilitation
7. Thinning Models and Benefit-Cost Analysis Models
8. Monitoring and Evaluation Plan
9. Sample of Township Community forestry assessments
10. Sample of Provincial Marketing Study Reports
11. GEF Project Brief (Protected Areas Component) - September 2000*
12. Natural Forest Management and Community Development Project Proposal for the EU - June 2000*
13. Detailed Project Costs
14. Report on Financial Analysis of the Project
15. Report on Economic Analysis of the Project
16. Assessment on the Marketing Investigation Report for Forestry Products for SFDP (May 2000)
17. Institutional Review and Capacity Building Recommendations (May 2000)*

18. Environmental & Social Impact Assessment including Executive Summary December 6, 2000*
19. Social Assessment Related Documents, as follows:

Component	Province	Document Name	Language
<u>General</u>		Social Assessment Report (Consolidated)	English
		Ethnic Minorities Development Plan & Summary	E, Chinese
		Social Assessment Guidelines	E, C
		Operational Manual of Community Forestry Assessment	E, C
		Project Introduction Brochures	C
		Project Counties Socio-Economic Information Table, Plantation Component	C
		Three-Page Leaflet	C
		Socio-Economic Information of Participation Counties in Plantation Component	E
		Resettlement Policy Framework	E, C
		Process Framework for Mitigation Potential Adverse Livelihood Impacts	E, C
<u>Natural Forest Management Component</u>	Hainan	Social Assessment Report, Changjiang County	C
		Changjiang County Community Work Report, Changjiang County	C
		Wangxia Township Social Assessment Report, Changjiang County	C, E
		Social Assessment Report, Hainan Province	E
		Sample Village Conference Record/Minutes, 2 Villages in Wangxia County (for Public Consultation)	C
	Hunan	Social Assessment Report, Hunan Province	E, C
		Social Assessment Report for Ceyuan Township, Yanling County	E
		Community Development Plan for Shangdong Village, Ceyuan township, Yanling County	E
		The Community Assessment Summary Report of Xiaoxi Township, Yongshun County, Hunan Province	E
		Community Development Plan in Xiaoxi Village, Xiaoxi Commune, Yongshun County	E
		Summary of Community Development Plan, Yongshun County	E
		Selected Key Project Village, Hunan Province	E
		Social Evaluation & Community Development Plan, Longzha Yao Nationality, Yanling County, Hunan	E, C
		Sample Village Conference Record/Minutes, 9 Villages in 2 Counties (for Public Consultation)	C
		Sichuan	Appraisal Report on Yongfu Community of Baoxing County
	Longdong Township Community Appraisal Report, Baoxing		C

		County	
		Social Appraisal Report, Sichuan Province	E
		Assessment Report on Muzuo Township Community and Development Plan of Heping Village, Pingwu County	E
		Baima Township Social Assessment Report and Preliminary Design, Pingwu County	C
		Information on Selected Villages, Songpan County	E
		Community Appraisal Report, Muni Township, Songpan County	E
		Xiaoxing Township Social Assessment Report and Forestry Sector Staff Training Plan, Songpan County	C
		Minutes of an Enterprise Unit Meeting	C
		Sample Village Conference Record/Minutes, 12 Villages in 3 Counties (for Public Consultation)	C
<u>Protected Areas Management Component</u>	Gansu	Minutes of Ethnic Minorities Village Leaders Seminar, Baishuijiang Nature Reserve	C
		Social Assessment Report on Gansu Baishuijiang Nature Reserves	C
		Er She Information Collection, Saikeqiao Village, Tielou Tibetan Township, Wen County, Gansu Province	C
		Sample Village Conference Record/Minutes, 2 Villages in 1 Nature Reserve (for Public Consultation)	C
	Guizhou	Social Assessment Report, Fanjingshan Nature Reserves	C, E
		Sample Village Conference Record/Minutes, 2 Villages in 1 Nature Reserves (for Public Consultation)	C
	Hainan	Information Collection, Dingsi Village, Jianfeng Town, Ledong County, Hainan	C
		Social Assessment Report, Jianfengling Nature Reserves, Hainan	
		Sample Village Conference Record/Minutes, 2 Villages in 1 Nature Reserves (for Public Consultation)	C
	Hubei	Houhe Social Assessment Report, Houhe Nature Reserves, Hubei	C
		Social Assessment Report, Houhe Nature Reserves, Hubei	C
		Sample Village Conference Record/Minutes, 2 Villages in 1 Nature Reserves (for Public Consultation)	C
	Hunan	Nanmuping Pilot Village Rural/Social Assessment Report, Badagongshan Nature Reserves, Hunan	C
		Basic Information Collection, Jinfanshan Village, Hupingshan Nature Reserves, Hunan	C
		Social Assessment Report, Badagongshan Nature Reserves, Hunan	C
		Social Assessment Report, Hunan Province	
		Social Assessment Report, Hupingshan Nature Reserves, Hunan	C
		General Information of Ethnic Minority in Badagongshan	E

		Nature Reserve	
		Sample Village Conference Record/Minutes, 4 Villages in 2 Nature Reserves (for Public Consultation)	
Sichuan		Community Social Assessment Report, Banbianjie Village, Baiyang Township, Songpan County	C
		Social Assessment Team Information Collection, Shaijin Village, Piankou Nature Reserve	C
		Pilot Village Social Assessment Report, Piankou Nature Reserves, Sichuan	C
		Community Social/Economic Information Collection, Chafang Village, Si'er County, Sichuan	C
		Social Assessment Report, Lianmeng Village, Qingxi Town, Qingchuan County, Tangjiahe Nature Reserves, Sichuan	C
		Information Collection, Xiaozhaizigou Nature Reserves, Sichuan	C
		Social Assessment Report, Baiyang Nature Reserves, Sichuan	C, E
		Social Assessment Report, Sichuan Province	C, E
		Social Assessment Report, Piankou Nature Reserves, Sichuan	C, E
		Social Assessment Report, Si'er Nature Reserves and Peipheral Areas	C, E
		Social Assessment Report, Tangjiahe Nature Reserves, Sichuan	C, E
		Social Assessment Report, Xiaozhaizigou Nature Reserves, Sichuan	C, E
		Sample Village Conference Record/Minutes, 10 Villages in 5 Nature Reserves (for Public Consultation)	C
Yunnan		Social Assessment of Nujiang Nature Reserve	C, E
		Social Assessment Report, Yunnan Province	C, E
		Briefing on Current Situation of Tibetans, Baimaxueshan Nature Reserve	C, E
<u>Plantation Establishment Component</u>	Gansu	Forestry Assessment Report, Lianhua Township, Qin'an County, Gansu	C
		Xichuan Township Community Forestry Assessment Report, Qin'an County	C
		Qin'an County Community Forestry Assessment Report	C
		Lianhua Township Community Forestry Assessment Report, Qin'an County	C
	Hainan	Community Forestry Assessment Report, Tongza Municipality, Hainan	E
		Community Forestry Assessment Report, Nansheng Town, Tongza Municipality, Hainan	E
		Sample Village Conference Record/Minutes, 4 Villages in 2 townships in 1 county (for Public Consultation)	

Henan	Project Introduction Brochure, Wen County	C
	Community Forestry Assessment Report, Nanzhang Qiangzhen, Wen County	C, E
	Community Forestry Assessment Report, Wen County	C
Anhui	Sample Village Conference Record/Minutes, 8 Villages in 4 townships in 2 county (for Public Consultation)	C
Hunan	Sample Village Conference Record/Minutes, 4 Villages in 4 townships in 1 county (for Public Consultation)	C
Sichuan	Sample Village Conference Record/Minutes, 4 Villages in 2 townships in 1 county (for Public Consultation)	C
	Appraisal Report on Community Forestry Development, Yonghe Township, Maoxian County	E

*Including electronic files

Annex 9: Statement of Loans and Credits
CHINA: Sustainable Forestry Development Project
06-Feb-2002

Project ID	FY	Purpose	Original Amount in US\$ Millions			Cancel.	Undisb.	Difference between expected and actual disbursements ^a	
			IBRD	IDA	GEF			Orig	Frm Rev'd
P058846	2002	National Railway Project	160.00	0.00	0.00	0.00	160.00	0.00	0.00
P045915	2001	Urumqi Urban Transport	100.00	0.00	0.00	0.00	86.04	20.34	0.00
P058845	2001	Jiangxi II Hwy	200.00	0.00	0.00	0.00	200.00	2.67	0.00
P047345	2001	CH-HUAI RIVER POLLUTION CONTROL	105.50	0.00	0.00	0.00	105.50	0.00	0.00
P056596	2001	Shijiazhuang Urban Transport	100.00	0.00	0.00	0.00	99.00	21.57	0.00
P056516	2001	WATER CONSERVATION	74.00	0.00	0.00	0.00	68.57	5.15	0.00
P056199	2001	Third Inland Waterways	100.00	0.00	0.00	0.00	100.00	1.25	0.00
P051859	2001	CH-LIAO RIVER BASIN	100.00	0.00	0.00	0.00	100.00	0.00	0.00
P058844	2000	3rd Henan Prov Hwy	150.00	0.00	0.00	0.00	133.22	5.22	0.00
P058843	2000	Guangxi Highway	200.00	0.00	0.00	0.00	182.03	33.70	0.00
P056424	2000	TONGBAI PUMPED STORA	320.00	0.00	0.00	0.00	318.00	41.07	0.00
P064730	2000	Yangtze Dike Strengthening Project	210.00	0.00	0.00	0.00	196.63	69.55	0.00
P049436	2000	CN-CHONGQING URBAN ENVIRONMENT	200.00	0.00	0.00	0.00	194.00	15.97	0.00
P042109	2000	CH-BEIJING ENVIRONMENT II	349.00	0.00	25.00	0.00	357.72	69.69	0.00
P045264	2000	SMALLHLDR CATTLE DEV	93.50	0.00	0.00	0.00	63.23	22.50	0.00
P045910	2000	CH-HEBEI URBAN ENVIRONMENT	150.00	0.00	0.00	0.00	142.06	15.73	0.00
P036953	1999	CN-HEALTH IX	10.00	50.00	0.00	0.00	44.91	8.08	0.00
P049665	1999	ANNING VALLEY AG.DEV	90.00	30.00	0.00	0.00	60.10	5.77	0.00
P051705	1999	Fujian II Highway	200.00	0.00	0.00	0.00	149.57	77.32	0.00
P050036	1999	Anhui Provincial Hwy	200.00	0.00	0.00	0.00	118.75	28.09	0.00
P003653	1999	Container Transport	71.00	0.00	0.00	3.13	43.22	45.89	0.00
P043933	1999	CH-SICHUAN URBAN ENVIRONMENT	150.00	2.00	0.00	0.00	100.90	26.92	3.70
P046051	1999	CN-HIGHER EDUC. REFORM	20.00	50.00	0.00	0.00	32.07	27.69	0.00
P042299	1999	TEC COOP CREDIT IV	10.00	35.00	0.00	0.00	39.18	-3.43	0.00
P046564	1999	Gansu & Inner Mongolia Poverty Reduction	60.00	100.00	0.00	0.00	107.97	33.43	0.00
P046829	1999	RENEWABLE ENERGY DEVELOPMENT	100.00	0.00	0.00	0.00	12.87	64.87	0.00
P041890	1999	Liaoning Urban Transport	150.00	0.00	0.00	0.00	79.31	39.78	0.00
P051856	1999	ACCOUNTING REFORM & DEVELOPMENT	27.40	5.60	0.00	0.00	22.77	21.08	0.00
P057352	1999	CN-RURAL WATER SUPPLY IV	16.00	30.00	0.00	0.00	37.69	14.38	0.00
P058308	1999	CN-PENSION REFORM PJT	0.00	5.00	0.00	0.00	3.98	4.02	0.00
P060270	1999	CN-ENTERPRISE REFORM LN	0.00	5.00	0.00	0.00	4.68	6.66	0.00
P063123	1999	YANGTZE FLOOD EMERGY	40.00	40.00	0.00	0.00	0.47	1.19	1.19
P038121	1999	RENEWABLE ENERGY DEVELOPMENT	0.00	0.00	35.00	0.00	26.46	10.56	0.00
P041268	1999	Nat Hwy4/Hubei-Hunan	350.00	0.00	0.00	0.00	230.74	59.41	0.00
P051888	1999	GUANZHONG IRRIGATION	80.00	20.00	0.00	0.00	70.00	27.82	0.00
P056216	1999	LOESS PLATEAU II	100.00	50.00	0.00	0.00	103.30	53.84	0.00
P035698	1998	HUNAN POWER DEVELOP.	300.00	0.00	0.00	100.00	179.92	203.67	1.77
P040185	1998	CH-SHANDONG ENVIRONMENT	95.00	0.00	0.00	0.00	37.56	28.46	0.00
P051736	1998	E. CHINA/JIANGSU PWR	250.00	0.00	0.00	0.00	172.79	170.29	155.41
P036414	1998	CH-GUANGXI URBAN ENVIRONMENT	72.00	20.00	0.00	0.00	80.71	42.26	0.00
P003566	1998	CN-BASIC HEALTH (HLTH8)	0.00	85.00	0.00	0.00	46.48	20.39	0.00
P036949	1998	Nat Hwy3-Hubei	250.00	0.00	0.00	0.00	80.33	-0.50	0.00
P003539	1998	SUSTAINABLE COASTAL RESOURCES DEV.	100.00	0.00	0.00	2.31	57.79	31.77	0.00
P045788	1998	Tri-Provincial Hwy	230.00	0.00	0.00	0.00	100.40	50.44	0.00
P046563	1998	TARIM BASIN II	90.00	60.00	0.00	2.67	76.08	47.14	0.00
P003619	1998	2nd Inland Waterways	123.00	0.00	0.00	0.00	89.84	62.44	0.00
P003614	1998	Guangzhou City Transport	200.00	0.00	0.00	0.00	130.81	122.03	0.00
P046952	1998	FOREST. DEV. POOR AR	100.00	100.00	0.00	0.00	106.31	-19.24	51.13
P003606	1998	ENERGY CONSERVATION	63.00	0.00	22.00	0.00	51.29	11.49	0.00
P049700	1998	IAIL-2	300.00	0.00	0.00	0.00	82.95	12.14	0.00
P037859	1998	EGY CONSERVATION PRO	0.00	0.00	22.00	0.00	6.30	20.93	0.00
P003591	1998	STATE FARMS COMMERCI	150.00	0.00	0.00	80.91	8.45	70.29	8.24
P044485	1997	SHANGHAI WAIGAOQIAO	400.00	0.00	0.00	0.00	266.97	127.42	31.52

Project ID	FY	Purpose	Original Amount in US\$ Millions					Difference between expected and actual disbursements ^a	
			IBRD	IDA	GEF	Cancel.	Undisb.	Orig	Frm Rev'd
P038988	1997	HEILONGJIANG ADP	120.00	0.00	0.00	0.00	29.95	24.67	0.00
P003654	1997	Nat Hwy2/Hunan-Guangdong	400.00	0.00	0.00	0.00	144.11	127.45	0.00
P003650	1997	TUOKETUO POWER/INNER	400.00	0.00	0.00	102.50	171.82	233.25	-4.54
P003643	1997	Xinjiang Hwy II	300.00	0.00	0.00	60.00	64.06	119.73	14.06
P003637	1997	CH-NATIONAL RURAL WATER III	0.00	70.00	0.00	0.00	25.98	20.83	18.34
P003635	1997	CN-VOC. ED. REFORM PROJ	10.00	20.00	0.00	0.00	2.88	4.01	0.00
P003590	1997	QINBA MOUNTAINS POVERTY REDUCTION	30.00	150.00	0.00	0.00	76.31	76.40	0.00
P034081	1997	XIAOLANGDI MULTI. II	430.00	0.00	0.00	0.00	92.10	122.09	0.00
P036952	1997	CN-BASIC ED. IV	0.00	85.00	0.00	0.00	2.56	5.45	0.00
P036405	1997	WANJIAZHAI WATER TRA	400.00	0.00	0.00	75.00	54.52	100.69	37.19
P035693	1997	FUEL EFFICIENT IND.	0.00	0.00	32.80	0.00	8.87	32.81	0.00
P040513	1996	2nd Henan Prov Hwy	210.00	0.00	0.00	0.00	91.94	87.61	-16.39
P003594	1996	GANSU HEXI CORRIDOR	60.00	90.00	0.00	0.00	95.43	59.08	0.00
P003599	1996	CH-YUNNAN ENVIRONMENT PROJECT	125.00	25.00	0.00	0.00	105.70	90.63	39.11
P003638	1996	SEEDS SECTOR COMMERC.	80.00	20.00	0.00	9.40	19.89	26.18	0.00
P003602	1996	CH-HUBEI URBAN ENVIRONMENT	125.00	25.00	0.00	28.32	59.00	88.69	31.22
P034618	1996	CN-LABOR MARKET DEV.	10.00	20.00	0.00	0.00	10.68	12.99	0.00
P003652	1996	2nd Shaanxi Prov Hwy	210.00	0.00	0.00	0.00	47.58	47.58	0.00
P003649	1996	SHANXI POVERTY ALLEV	0.00	100.00	0.00	0.00	8.85	14.38	0.00
P003648	1996	CH-SHANGHAI SEWERAGE II	250.00	0.00	0.00	0.00	96.98	94.81	0.00
P003646	1996	CN-CHONGQING IND POL CT	170.00	0.00	0.00	164.82	3.00	165.74	2.74
P003589	1996	CN-DISEASE PREVENTION (HLTH7)	0.00	100.00	0.00	0.00	17.16	28.16	0.00
P003571	1995	RAILWAYS VII	400.00	0.00	0.00	29.00	165.96	180.46	130.21
P003585	1995	SHENYANG IND. REFORM	175.00	0.00	0.00	0.00	41.52	41.52	0.00
P003603	1995	CH-ENTERPRISE HOUSING & SOC SEC REF	275.00	75.00	0.00	20.00	102.11	120.69	23.59
P003598	1995	CH-LIAONING ENVIRONMENT	110.00	0.00	0.00	0.00	19.70	19.70	2.29
P003600	1995	CN-TECHNOLOGY DEVELOPMENT	200.00	0.00	0.00	3.02	32.12	35.14	0.00
P036947	1995	SICHUAN TRANSMISSION	270.00	0.00	0.00	95.00	15.35	110.35	13.33
P003639	1995	SOUTHWEST POV. REDUC	47.50	200.00	0.00	0.00	17.82	42.83	11.04
P003642	1995	ZHEJIANG POWER DEVT	400.00	0.00	0.00	0.00	63.60	65.02	0.00
P036041	1995	FISCAL & TAX REF. &	25.00	25.00	0.00	0.00	3.06	5.55	5.02
P003647	1995	ECONOMIC LAW REFORM	0.00	10.00	0.00	0.00	4.57	5.41	0.00
P003634	1995	CN-MATERNAL CHILD HEALT(HLTH6)	0.00	90.00	0.00	0.00	4.46	7.76	0.00
P003402	1995	NATURE RESERVE MGMT	0.00	0.00	0.00	0.00	0.94	2.41	0.00
P003593	1994	SONGLIAO PLAIN ADP	0.00	205.00	0.00	0.00	6.70	1.42	-5.15
P003626	1994	Fujian Prov Highway	140.00	0.00	0.00	0.00	35.02	35.02	35.00
P003644	1994	XIAOLANGDI RESETTLEMENT	0.00	110.00	0.00	0.00	6.15	4.43	0.00
P003540	1994	LOESS PLATEAU	0.00	150.00	0.00	0.00	2.79	-2.27	0.00
P003404	1994	SICHUAN GAS DEV. CON	0.00	0.00	10.00	0.00	0.02	0.78	0.00
P003595	1994	RED SOILS II DEVELOP	0.00	150.00	0.00	0.00	7.41	3.27	-3.43
P003641	1994	YANGZHOU THERMAL POW	350.00	0.00	0.00	11.50	3.37	14.57	-1.08
P003609	1994	SICHUAN GAS DEV & CONSERVATION	255.00	0.00	10.00	0.00	56.81	56.81	0.00
P003632	1993	CN-ENVIRONMENT TECH ASS	0.00	50.00	0.00	0.00	6.67	7.62	7.30
P003627	1993	GRAIN DISTRIBUTION P	325.00	165.00	0.00	0.00	45.20	46.03	34.37
P003623	1993	FINANCIAL SECTOR T.A	0.00	60.00	0.00	0.00	8.93	3.42	3.42
P003592	1993	REF. INST'L. & PREINV	0.00	50.00	0.00	0.00	4.24	4.87	0.62
P003616	1993	TIANHUANGPING HYDRO	300.00	0.00	0.00	17.00	21.87	38.87	0.00
P003624	1992	CN-INFECTIOUS DISEASES (HLTH5)	0.00	129.60	0.00	0.00	3.82	0.26	0.22
Total:			13611.90	2862.20	156.80	804.57	7279.45	4314.36	631.43

CHINA
STATEMENT OF IFC's
Held and Disbursed Portfolio
OCT-2001
In Millions US Dollars

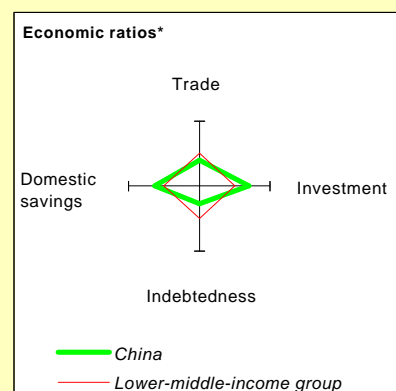
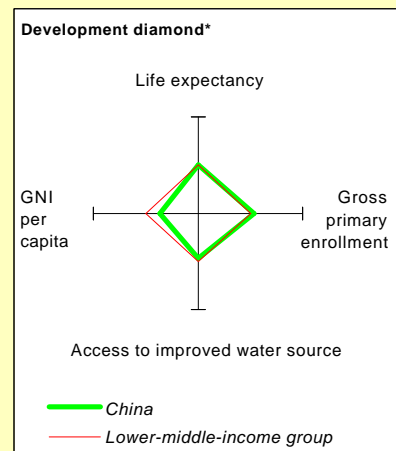
FY Approval	Company	Committed				Disbursed			
		IFC				IFC			
		Loan	Equity	Quasi	Partic	Loan	Equity	Quasi	Partic
1999/00	Bank of Shanghai	0.00	3.84	0.00	0.00	0.00	3.84	0.00	0.00
1996	Beijing Hormel	2.86	0.50	0.00	2.20	2.86	0.50	0.00	2.20
1998/00	CIG Holdings PLC	0.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00
1996	Caltex Ocean	21.00	0.00	0.00	36.82	21.00	0.00	0.00	36.82
1998	Chengdu Huarong	7.40	3.20	0.00	8.60	2.31	3.20	0.00	4.91
1998	Chengxin-IBCA	0.00	0.36	0.00	0.00	0.00	0.36	0.00	0.00
1987/92/94	China Bicycles	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1994	China Walden Mgt	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00
1994	China Walden Ven	0.00	0.77	0.00	0.00	0.00	0.77	0.00	0.00
1994	Dalian Glass	0.00	2.40	0.00	0.00	0.00	2.40	0.00	0.00
1999	Dujiangyan	25.59	0.00	0.00	30.00	11.51	0.00	0.00	13.49
1995	Dupont Suzhou	15.58	4.15	0.00	20.80	15.58	4.15	0.00	20.80
1994	Dynamic Fund	0.00	9.90	0.00	0.00	0.00	8.24	0.00	0.00
1999	Hansom	0.00	16.10	0.00	0.00	0.00	16.10	0.00	0.00
1996	Jingyang	35.00	0.00	0.00	76.92	35.00	0.00	0.00	76.92
1998	Leshan Scana	6.10	1.35	0.00	0.00	4.50	1.35	0.00	0.00
1996	Nanjing Kumho	7.79	3.81	0.00	22.14	7.79	3.81	0.00	22.14
2001	New China Life	0.00	30.70	0.00	0.00	0.00	23.32	0.00	0.00
1995	Newbridge Inv.	0.00	2.13	0.00	0.00	0.00	2.13	0.00	0.00
1997	Orient Finance	0.00	0.00	11.43	14.29	0.00	0.00	11.43	14.29
1997/00	PTP Holdings	0.00	0.03	0.00	0.00	0.00	0.03	0.00	0.00
1997	PTP Hubei	12.63	0.00	0.00	25.38	12.63	0.00	0.00	25.38
1996	Pacific Ports	0.00	2.54	0.00	0.00	0.00	2.54	0.00	0.00
2001	Peak Pacific	0.00	0.00	25.00	0.00	0.00	0.00	13.53	0.00
1998	Rabobank SHFC	1.35	0.00	0.00	1.35	1.35	0.00	0.00	1.35
2000	SSIF	0.00	6.00	0.00	0.00	0.00	0.45	0.00	0.00
1998	Shanghai Krupp	30.00	0.00	0.00	68.80	10.63	0.00	0.00	24.37
1999	Shanxi	19.00	0.00	0.00	0.00	16.45	0.00	0.00	0.00
1993	Shenzhen PCCP	3.76	0.99	0.00	0.00	3.76	0.99	0.00	0.00
2001	Sino-Forest	25.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00
1995	Suzhou PVC	14.67	2.48	0.00	14.80	14.67	2.48	0.00	14.80
1998	WIT	5.00	0.00	0.00	5.00	0.00	0.00	0.00	0.00
1996	Weihai Weidongri	2.20	0.00	0.00	0.00	2.20	0.00	0.00	0.00
1993	Yantai Cement	8.30	1.95	0.00	4.43	8.30	1.95	0.00	4.43
1998	Zhen Jing	0.00	2.00	0.00	0.00	0.00	2.00	0.00	0.00
	Total Portfolio:	243.23	98.21	36.43	331.53	180.54	80.62	24.96	261.90

FY Approval	Company	Approvals Pending Commitment			
		Loan	Equity	Quasi	Partic
2001	AACI	0.00	0.00	2.00	0.00
2000	CIG Zhapu	6.00	5.00	0.00	0.00
2000	CIMIC Tile	15.00	5.00	0.00	15.00
2001	Daning Coal	0.00	0.00	0.00	15.00
2002	Darong	10.00	0.00	1.50	8.00
2001	Maanshan Carbon	9.00	0.00	2.00	5.00
2000	Meijing	9.00	0.00	0.00	7.30
2001	Minsheng	0.00	23.50	0.00	0.00
2001	NCCB	0.00	0.00	26.58	0.00
1998	PTP Hubei BLINC	0.00	0.00	0.00	1.50
2000	Wan Jie Hospital	15.00	0.00	0.00	0.00
Total Pending Commitment:		64.00	33.50	32.08	51.80

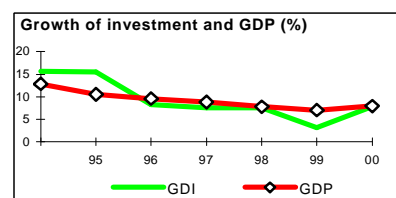
Annex 10: Country at a Glance

CHINA: Sustainable Forestry Development Project

POVERTY and SOCIAL	China	East Asia & Pacific	Lower-middle-income		
2000					
Population, mid-year (millions)	1,262.5	1,853	2,046		
GNI per capita (Atlas method, US\$)	840	1,060	1,140		
GNI (Atlas method, US\$ billions)	1,061.2	1,964	2,327		
Average annual growth, 1994-00					
Population (%)	1.0	1.1	1.0		
Labor force (%)	1.2	1.4	1.3		
Most recent estimate (latest year available, 1994-00)					
Poverty (% of population below national poverty line)	5		
Urban population (% of total population)	36	35	42		
Life expectancy at birth (years)	70	69	69		
Infant mortality (per 1,000 live births)	30	35	32		
Child malnutrition (% of children under 5)	9	13	11		
Access to an improved water source (% of population)	75	75	80		
Illiteracy (% of population age 15+)	16	14	15		
Gross primary enrollment (% of school-age population)	123	119	114		
Male	123	121	116		
Female	123	121	114		
KEY ECONOMIC RATIOS and LONG-TERM TRENDS					
	1980	1990	1999	2000	
GDP (US\$ billions)	216.2	363.0	997.5	1,076.9	
Gross domestic investment/GDP	35.2	34.7	37.2	37.3	
Exports of goods and services/GDP	7.6	17.5	22.0	25.9	
Gross domestic savings/GDP	34.9	37.9	40.1	39.9	
Gross national savings/GDP	34.9	38.3	38.7	39.2	
Current account balance/GDP	-0.4	3.8	1.6	1.9	
Interest payments/GDP	0.2	0.7	0.6	0.7	
Total debt/GDP	..	15.2	15.5	13.9	
Total debt service/exports	8.0	9.9	9.0	7.4	
Present value of debt/GDP	13.5	..	
Present value of debt/exports	58.7	..	
	1980-90	1990-00	1999	2000	2000-04
(average annual growth)					
GDP	10.1	10.3	7.1	7.9	7.4
GDP per capita	8.5	9.2	6.1	7.2	6.7
Exports of goods and services	11.0	16.5	13.9	32.0	11.1



STRUCTURE of the ECONOMY	1980	1990	1999	2000
<i>(% of GDP)</i>				
Agriculture	30.1	27.0	17.6	15.9
Industry	48.5	41.6	49.4	50.9
Manufacturing	40.5	32.9	33.6	34.5
Services	21.4	31.3	32.9	33.2
Private consumption	50.5	49.9	47.4	47.0
General government consumption	14.6	12.1	12.5	13.1
Imports of goods and services	7.9	14.3	19.1	23.2
	1980-90	1990-00	1999	2000
(average annual growth)				
Agriculture	5.9	4.1	2.8	2.4
Industry	11.1	13.7	8.1	9.6
Manufacturing	11.1	13.4	8.3	9.7
Services	13.5	9.0	7.5	7.8
Private consumption	9.4	8.8	2.6	6.0
General government consumption	9.8	9.4	8.4	12.0
Gross domestic investment	10.8	11.6	3.2	7.9
Imports of goods and services	9.1	16.1	22.3	24.8

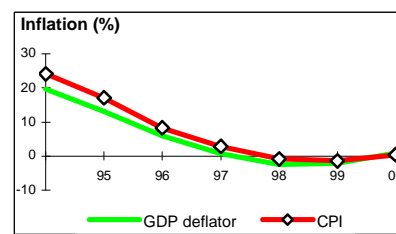


Note: 2000 data are preliminary estimates.

* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.

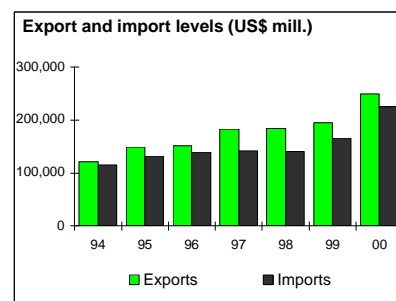
PRICES and GOVERNMENT FINANCE

	1980	1990	1999	2000
Domestic prices				
(% change)				
Consumer prices	6.0	3.1	-1.4	0.4
Implicit GDP deflator	5.6	5.5	-2.2	0.9
Government finance				
(% of GDP, includes current grants)				
Current revenue	25.7	19.7	15.0	15.3
Current budget balance	..	3.0	1.3	0.6
Overall surplus/deficit	-1.5	-0.8	-4.0	-3.6



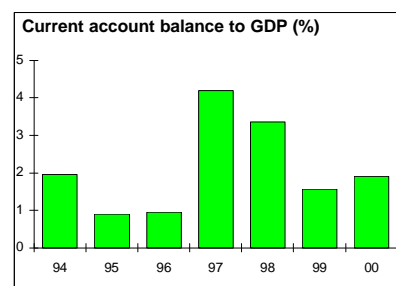
TRADE

	1980	1990	1999	2000
(US\$ millions)				
Total exports (fob)	18,270	62,091	194,931	249,210
Food	2,985	6,609	10,458	12,282
Fuel	4,280	5,237	4,659	7,851
Manufactures	9,005	46,205	174,990	223,752
Total imports (cif)	20,017	53,345	165,699	225,097
Food	2,927	3,335	3,619	4,758
Fuel and energy	203	1,272	8,912	26,037
Capital goods	5,119	16,845	69,469	91,934
Export price index (1995=100)	25	78	69	67
Import price index (1995=100)	22	80	71	75
Terms of trade (1995=100)	116	97	98	90



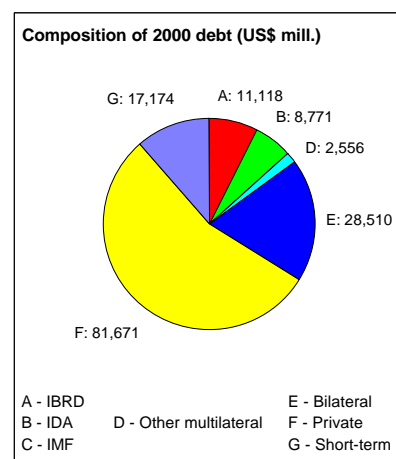
BALANCE of PAYMENTS

	1980	1990	1999	2000
(US\$ millions)				
Exports of goods and services	20,167	67,971	218,496	279,561
Imports of goods and services	20,859	55,537	189,799	250,688
Resource balance	-692	12,433	28,697	28,873
Net income	-100	1,055	-17,973	-14,666
Net current transfers	..	274	4,943	6,311
Current account balance	-792	13,762	15,668	20,519
Financing items (net)	..	-7,673	-7,163	-9,971
Changes in net reserves	..	-6,089	-8,505	-10,548
Memo:				
Reserves including gold (US\$ millions)	..	16,963	161,404	171,753
Conversion rate (DEC, local/US\$)	2.1	5.1	8.2	8.3



EXTERNAL DEBT and RESOURCE FLOWS

	1980	1990	1999	2000
(US\$ millions)				
Total debt outstanding and disbursed	..	55,301	154,223	149,800
IBRD	..	2,865	10,400	11,118
IDA	..	3,016	8,907	8,771
Total debt service	1,652	7,057	20,655	21,728
IBRD	..	416	1,142	1,291
IDA	..	19	117	131
Composition of net resource flows				
Official grants	7	143	201	147
Official creditors	..	1,727	1,706	1,928
Private creditors	-1,854	1,985
Foreign direct investment	57	3,487	41,015	42,096
Portfolio equity	0	0	1,808	7,814
World Bank program				
Commitments	..	953	2,097	1,536
Disbursements	..	1,098	1,756	1,907
Principal repayments	..	216	558	644
Net flows	..	882	1,198	1,263
Interest payments	..	219	701	778
Net transfers	..	663	497	485



Additional Annex 11

Incremental Cost Analysis China: Sustainable Forestry Development Project

Overview

The main objective of the Sustainable Forest Development Project (SFDP) is the development and adoption of innovative management approaches in selected natural forests, protected areas and plantations to relieve pressures on forest resources and protect the natural environment. The SFDP has three components: (a) Natural Forest Management; (b) Protected Areas Management (PAM); and (c) Plantation Establishment. The Protected Areas Management Component is expected to be co-financed by the Global Environment Facility (GEF).

The global environmental objective of the protected areas management component is to foster improved conservation and sustainable management of biodiversity by ensuring effective *in situ* protection of threatened and globally important forest habitats and rare and endemic species. This will be achieved by: (a) enhancing the management systems of 13 nature reserves which are of global significance for biodiversity conservation purposes; (b) collecting biodiversity information for the development of future management strategies in one of the key global eco-regions located in China and an important area for the Government's NFPP—Western Sichuan; (c) increasing opportunities for the participation of communities in nature conservation and the sustainable management of natural resources; (d) enhancing the capacity of institutions responsible for nature reserve management and biodiversity conservation in forest areas; (e) supporting key protected area-related policy studies; and (f) strengthen monitoring and evaluation.

Context and Broad Development Goals

Context

Much of China's biodiversity is under threat from a rapidly growing human population which has doubled in size since 1949 and is now estimated to comprise at least 1.2 billion people. The combination of a large population and limited arable land resources has led to extensive loss of natural habitats to agricultural production, logging, fuelwood collection and livestock grazing. Other associated factors which have had a negative impact on the status of China's biological resources include forest fires, hunting, harvesting and trade in particular species of wild animals and plants, water pollution, construction of dams and the use of pesticides. The introduction of exotic weeds such as *Lantana camara* and *Eupatorium odorata* which have become established in some areas, outcompeting native species and preventing natural regeneration of secondary vegetation is also a serious problem. In the context of these factors it is estimated that about 200 plant species have become extinct and 5,000 species have become endangered in China in recent years.

A significant proportion of China's remaining biodiversity is located in an extensive network of nature reserves. At the end of 1999 China had 1,118 national and provincial level nature reserves and these covered an area of approximately 864,100 km² or 8.62 percent of the country's total land area. However, the size and distribution of many of these reserves has not been determined in accordance with established biogeographical considerations or sound scientific principles. Many are either too small and of limited

value for biodiversity conservation purposes. Furthermore, few nature reserves are protected or managed efficiently. Most reserves lack long-term strategic plans for biodiversity conservation, and staffing levels and management budgets are generally inadequate. Many of the personnel responsible for managing China's protected areas are untrained and unqualified. In this context, the biodiversity in China's nature reserves faces increasing pressure from the human communities which either live within or in close proximity to their boundaries. Hunting and other illegal and unsustainable extractive activities are widespread. A major challenge is to develop ways of encouraging local people to either use nature reserve resources sustainably or to protect them if they must be conserved.

Development Goals

China has sustained an impressive growth performance since 1978. The principal factors which have contributed to the country's high growth rate include the relative stability of the economy, a high literacy rate, the industriousness of the labor force and the support of a wealthy Chinese Diaspora. However, these positive features of Chinese society are confronted by an array of challenges that could hinder overall progress. These challenges and a strategy to address them are articulated in China's Ninth Five Year Plan and the Fifteen Year Perspective Plan that were approved in 1996 by the National People's Congress. The five key areas of concern are: (a) Ensuring macro-economic stability and maintaining the momentum of structural reforms; (b) reducing infrastructure bottlenecks; (c) enhancing human development; (d) sustaining stable growth in agriculture and ensuring food security; (e) protecting the environment. Each of these concerns is actively being addressed by GOC with the support of multilateral and bilateral donor agencies. The Tenth Five Year Plan is under preparation and features environmentally sustainable development as its major theme.

The need to provide adequate protection for China's diminishing biodiversity in the context of these overall development goals is recognized in several important policy documents which include the *China Conservation Strategy 1991-2000* and a national *Biodiversity Conservation Action Plan*. China also became the first developing country to issue a national *Agenda 21* which is used to guide the reconciliation of environmental protection and economic development. Within the framework provided by these policy documents, specific GEF-supported biodiversity conservation initiatives include (a) the Nature Reserves Management Project and (b) the Wetland Biodiversity Conservation and Sustainable Use in China Project. Through the implementation of these projects GOC has demonstrated its commitment to preserving the country's rich biodiversity and natural resource base for future generations.

Baseline Scenario

Scope

Following the widespread damage which occurred following the floods of June-August 1998 GOC took far reaching action to strengthen environmental management and reduce levels of deforestation and soil erosion in sensitive upland watershed areas of 18 provinces which drain the middle and upper reaches of the Yangtze and Yellow Rivers, northeast Inner Mongolia and Hainan Island. Several important policy measures including a ban on logging in natural forests were introduced within the framework of a national Natural Forest Protection Program (NFPP).

The overall goal of the NFPP is to improve natural forest management over a total of about 95 million hectares of forests. Approximately 31 million hectares of these natural forests will be afforded legal protection as nature reserves, forest parks or watershed protection forests according to their biological and watershed protection values. Specifically, the NFPP recognizes that protected areas can be an important

building block in the country's overall development strategy when they (a) conserve water and soils in zones that are highly erodible if the original vegetation is removed, notably the steep slopes of upper catchments; (b) regulate and purify water flow, notably by protecting wetlands and forests; (c) shield people from natural disasters, such as floods and storm surges, by protecting watershed forests and riverine wetlands; (d) maintain natural vegetation on soils of inherently low productivity that would, if transformed, yield little of value to human communities; (e) protect species and populations that are highly sensitive to human disturbance; (f) provide habitat that is critical to migratory or threatened species for breeding or resting; and (g) provide income and employment, notably from tourism.

China's protected areas face significant challenges. Few areas are protected or managed effectively, and if current trends continue, the biological diversity in many critical reserves will diminish dramatically. However, given the policy orientation of the NFPP, it is reasonable to expect that GOC will pursue a relatively active program of protected areas management at the Project's target sites to meet domestic development objectives, even in the absence of GEF assistance. To ensure that a complete range of potential impacts and benefits has been captured, the Baseline has been defined to include a broad spectrum of activities that are either directly or indirectly intended to support these protected areas. Conceptually, the Baseline can be considered as four separate components. These are (a) Nature Reserves Planning and Management which includes management plan development and implementation, field level management systems (such as patrolling), investment (civil works, equipment, vehicles), and applied research and surveys; (b) Community-based Nature Conservation which includes co-management and community conservation education and public awareness, alternative livelihood skills development, and demonstration of wildlife management to reduce human/wildlife conflicts; (c) Training and Capacity Building, which involves general staff training and institutional capacity building; and (d) Project Management, Monitoring and Evaluation, which includes strengthening of management capacity, monitoring and evaluation, and policy studies.

Costs

Under the Baseline Scenario it is expected that GOC expenditures related to forest ecosystem conservation to be delivered through SFA and Provincial Forestry Departments in the project sites over the period (2001-2007) of the Project will be US \$38.98 million. In addition, a number of biodiversity conservation activities in the project sites will be financed by international NGOs, which are estimated to total \$0.67 million. These NGO inputs, plus the GOC contributions, are summarized in the table below. The total cost of the Baseline Scenario is \$39.65 million.

Project nature reserve	Anticipated GOC expenditure during project period (\$ million)	Anticipated donor expenditure during project period (\$ million)	Donor
Baishuijiang	7.46	Nil	Nil
Tangjiahe	5.00	0.030	WWF/GTZ
Baiyang	1.36	0.014	WWF
Si'er	1.30	0.014	WWF
Piankou	1.36	0.014	WWF
Xiaozhaizigou	1.45	0.014	WWF
Badagongshan	3.37	Nil	Nil
Hupingshan	3.76	Nil	Nil
Houhe	2.16	Nil	Nil
Fanjingshan	1.73	Nil	Nil
Jianfengling	2.23	Nil	Nil
Nujiang	4.04	0.50	TNC
Baimaxuesham	3.76	0.10	WWF
TOTAL	38.98	0.67	

Benefits

Under the Baseline Scenario approximately 80 percent of proposed GOC expenditure is related to capital-intensive infrastructure development. In addition, implementation of the Baseline Scenario will result in (a) development of basic planning tools for improved nature reserve management in the project area; (b) limited level of community work; and (c) limited short-term protection of biodiversity of global significance. The efforts of NGOs and other international donors will serve to (a) increase public awareness of the physical, biological and social values of the target nature reserves; (b) assist with the development of comprehensive management plans for some of these areas (e.g. Baimaxueshan); and (c) train nature reserve personnel in contemporary protected area management techniques. However, due to the extensive investments needed to stabilize the status of biodiversity in the project areas, existing government resources and international financing initiatives are not sufficient to guarantee long-term protection of globally significant biodiversity.

Global Environmental Objective

China's land area encompasses a huge range of natural ecosystems which range from the grasslands, deserts and coniferous forests of central Asia through the mountains of the Himalayan Plateau and Tibet to the temperate, sub-tropical and tropical lowlands in the east and south of the country. These ecosystems provide a great diversity of habitats for numerous forms of wildlife. Although incomplete, existing species inventories indicate that China probably contains over ten percent of all living species on Earth.

Taxa	Number of Species in China	Number of Species in the World	Global Percentage
Mammals	499	4,000	12.5
Birds	1,186	9,040	13.1
Amphibians	376	6,300	6.0
Fishes	279	4,184	7.0
Insects	40,000	751,000	5.3
Bryophytes	2,200	16,056	12.1
Pteridophytes	2,600	10,000	26.1
Gymnosperms	200	520	37.8
Angiosperms	25,000	220,000	11.4
Fungi	8,000	46,983	17.0
Bacteria	500	3,060	16.3
Algae	5,000	26,900	18.6

The global environmental objective of the GEF Alternative is to conserve biodiversity by strengthening the management of some of the most globally-significant nature reserves within the system of protected areas in China. The development of enhanced management systems at the proposed project sites will (a) conserve a significant proportion of the country's biodiversity and (b) maintain ecological and evolutionary processes of unique global importance. In the context of the convention on Biological Diversity (which China ratified in January 1993), the project design is consistent with guidance from the Conference of the Parties as it promotes conservation and sustainable use through adaptive management of forest ecosystems; capacity building; and integrating biodiversity conservation into improved management of the forestry sector.

GEF Alternative

Scope

With GEF assistance for addressing the global biodiversity objective identified above, GOC would be able

to undertake a more effective program of protected area management that would generate both national and global benefits. Under the Baseline Scenario outlined above, the principal GOC emphasis (80 percent of total expenditure) is on capital intensive infrastructure development. The major thrust of the incremental activities would be to emphasize the ecological and social aspects of protected area planning. The GEF Alternative would set the basis for a more integrated approach to management of the project sites which specifically addresses issues related to the impact which (a) local communities have on biodiversity and (b) wildlife has on local communities. Specific interventions will include:

Project sub-component	Interventions
Nature Reserve Planning and Management	(a) Participatory nature reserve management plan development and implementation; (b) preparation of ecological baseline maps, (c) improvement of field level management systems, (d) provision of equipment and a small amount of civil works, (e) applied research aimed at management problems, and (f) biodiversity surveys
Community-based Nature Conservation	(a) Preparation and implementation of co-management structures in 26 villages in 13 nature reserves; (b) increasing target community and local government stakeholders' understanding of biodiversity conservation and the threats it faces from their actions by assisting nature reserves to develop and implement a community conservation education strategy; (c) demonstrating wildlife management systems to reduce crop depredation; (d) decreasing the threats from overuse of forest resources for energy through targeted demonstrations of appropriate, practical, and cost-effective energy conservation approaches; and (e) providing training and technical assistance for the identification and demonstration of alternative income generating techniques as alternatives to the use of critical forest resources.
Training and Capacity Building	(a) Delivery of in-service training courses particularly at the reserve level; and (b) institutional capacity building particularly at the provincial-level to influence management of other biologically important areas in the provinces.
Project Management, Monitoring and Evaluation	(a) Program for the monitoring and evaluation of project process and impacts; (b) project management and administration; and (c) selected, key policy studies.

Costs

Total expenditures under the GEF Alternative Scenario are estimated at US \$ 62.15 million, detailed as follows:

Project sub-component	Cost
Nature Reserve Planning and Management	US \$ 38.84 million (GEF financing – US \$ 5.4 million)
Community-based Nature Conservation	US \$ 12.29 million (GEF financing – US \$ 5.1 million)
Training and Capacity Building	US \$ 3.53 million (GEF financing – US \$ 2.1 million)
Project Management, Monitoring and Evaluation	US \$ 7.89 million (GEF financing – US \$ 3.4 million)
TOTAL	US \$ 62.55 million (GEF financing – US \$ 16.0 million)

Benefits

The Project would (a) have a positive global benefit by conserving biodiversity in 13 nature reserve sites which are of acknowledged international significance for biodiversity conservation purposes; (b) provide models for improved nature reserve management, human resource development and resolution of land-use conflicts that could be replicated in other parts of China where local biodiversity is threatened; (c) strengthen the capacity of human resources and biodiversity conservation sector institutions; (d) benefit local communities living in and around the Project's nature reserves through the development of co-management conservation mechanisms.

Incremental Costs

The difference between the cost of the Baseline Scenario (US \$ 39.65 million) and the cost of the GEF Alternative (US \$62.55 million) is estimated at US\$ 22.9 million, of which US \$16.0 million would be supplied by GEF financing and US\$ 6.5 million from the Government of China. This represents the incremental cost for achieving sustainable global environmental benefits.

Incremental Cost Matrix for GEF Funding

Component	Cost Category	Cost (US\$ Million)	Domestic Benefit	Global Benefit
Nature Reserves Planning and Management	Baseline	31.54	Basic tools for management of nature reserve system; improved facilities and infrastructure	Limited protection of biodiversity of global significance
	GEF Alternative	38.84	Integrated approach to nature reserve planning and management which emphasizes ecological and social considerations	Enhanced conservation of biodiversity of global significance; increased collection and analysis of information important for preparation of future management strategies
	Incremental	7.3		
Community-based Nature Conservation	Baseline	6.49	Some level of community work	Limited protection of biodiversity of global significance
	GEF Alternative	12.29	Increased community participation in development of nature	Strengthened basis for sustainable management of wildlife resources of

			reserve management strategies; improved biodiversity conservation through education	global importance
	Incremental	5.8		
Training and Capacity Building	Baseline	0.73	Some understanding of protected area management techniques	Limited protection of biodiversity of global significance
	GEF Alternative	3.53	Increased public sector knowledge and capacity to manage protected areas	Increased public sector capacity to protect and manage biodiversity
	Incremental	2.8		
Management, Monitoring and Evaluation	Baseline	0.89	Limited routine monitoring and evaluation	Limited understanding of impacts of investments and changes
	GEF Alternative	7.89	Development and implementation of systematic monitoring and evaluation systems at the project level and nature reserves level	Increased knowledge of impacts of various interventions and better understanding of the biodiversity in the nature reserves
	Incremental	7.0		
<u>TOTALS</u>	Baseline	39.65		
	GEF Alternative	62.55		
	Incremental	22.9		

**Additional
Annex 12**

**Environmental and Social Impact Assessment Summary
China: Sustainable Forestry Development Project**

A. Background

1. The environmental and social assessment (ESIA) was prepared by a team from the Institute of Forest Ecology, Environment and Protection, Chinese Academy of Forestry (certified by the State Environmental Protection Agency to carry-out EIAs) and Sustainable Visions of Victoria B.C., which are independent institutions for the purposes of Operational Policy 4.01. The ESIA is based on: (a) three major field missions in which the EIA team traveled parallel to, but independent of, the project preparation team; and (b) a series of project design documents prepared for the three project components by the project preparation team during the period May to September 2000; and (c) for the Plantation Establishment Component, site visits were supplemented with photos documenting a sample of sites proposed to be converted in the first year of implementation. The social aspects of the ESIA are based on the results of an extensive Social Assessment process which was conducted separately during project preparation. The draft ESIA Report and Executive Summary were transmitted to the State Forestry Administration (SFA) for submission to the World Bank in November 2000.

2. The ESIA comprises a “sectoral” environmental and social review of SFDP which: (a) describes project design, undertakes an analysis of alternatives and identifies potential environmental and social risks; (b) assesses the effectiveness of proposed environmental and social impact management and monitoring strategies; and (c) identifies any residual, outstanding environmental and social issues and recommends measures to deal with these. It also prescribes more detailed assessment procedures for specific activities during implementation; proposing the application of environmental and social guidelines for simpler activities; and more detailed environmental and social assessment requirements for proposals of greater complexity.

3. Development of the ESIA has been guided both by laws and policies of the People's Republic of China, and by operational policies of the World Bank. Specific Chinese laws and policies consulted include: *The Law on Environmental Protection* (PRC 1989); *The Forestry Law* (PRC 1984, modified 1998); Circular on Strengthening Environmental Impact Assessment Management for Construction Projects Financed by International Financial Organizations (NEPA 1993); and Regulations on the Management of Environmental Protection in Construction Projects (NEPA 1998). World Bank Operational Policies consulted include: OP. 4.01 Environmental Assessment and Environmental Management Plan; OP. 4.04 Natural Habitats; OP. 4.09 Pest Management; OP. 4.11 Cultural Property; OP. 4.20 Indigenous Peoples; OD 4.30 Involuntary Resettlement; OP. 4.36 Forestry; and BP. 17.50 Disclosure of Operational Information.

4. During the past decade, serious questions have been raised in many countries about the application of “traditional” ESIA processes to broad-scale renewable natural resource planning. Most of these processes have been designed to deal with complex “construction” projects with relatively clearly defined geographical locations and some degree of certainty in impact prediction and quantification. The focus of these processes is on impact identification and analysis to influence operational project design, planning and implementation. Such processes have little practical application to broad-scale natural resource planning projects such as SFDP due to: (a) the complexity of natural systems across large geographical areas and the difficulties of impact prediction; (b) the extensive and long-term nature of most natural

resource management planning; and (c) the fact that many operational activities are small-scale and repetitive and thus more effectively dealt with by sectoral assessments and operational guidelines than by traditional ESIA techniques. On the basis of these considerations, and with the concurrence of the Bank task team, the ESIA focused on determining whether the design of SFDP: (a) establishes clear and appropriate goals, objectives and principles for management activities; (b) ensures that the management activities directed at natural ecosystems are as consistent as possible with the ecological processes that created and maintain those systems; (c) ensures that management activities directed at man-made ecosystems “mimic” natural ecological structures and processes to the extent possible so as to increase their stability and resilience; (d) limits site disturbance and soil degradation; (e) minimizes environmental contamination; (f) incorporates participatory community planning and development programs; (g) provides potential beneficiaries with the skills and information necessary to participate effectively in the Project; and (h) establishes well-conceived environmental and social monitoring programs.

B. Brief Project Description

5. The Project proposed for IBRD, GEF, and EU financing would contribute significantly to Government efforts within the broader framework and objectives of the Natural Forest Protection Program (NFPP). SFDP comprises three components: (a) a Natural Forest Management and Community Development (NFM) Component (the focus of proposed European Commission grant funding); (b) a Protected Areas Management (PAM) Component (proposed to be funded from the Global Environment Facility [GEF]); and (c) a Plantation Establishment (PE) Component (proposed to be funded by IBRD loan). NFM will focus on three key NFPP provinces - Sichuan, Hunan and Hainan; PAM will include these three provinces and the adjacent provinces of Gansu, Guizhou, Hubei and Yunnan; and PE will include the three key provinces plus Hebei, Liaoning, Anhui, Shandong, Henan, Hubei, Shanxi, and Gansu.

6. The NFM component has two sub-components, one focused on management of the natural forest and the other on community development. The purpose of the natural forest management sub-component is to test and demonstrate an increased range of options for sustainable management of forest resources for a variety of beneficiaries, and to develop multi-stakeholder resource planning and co-management mechanisms for broader application to natural forest areas throughout China. The objective of the community development sub-component is to improve and diversify the livelihood and welfare of local communities impacted by the logging ban and by NFPP resource use restrictions.

7. The PAM component supports conservation and improved management of 13 selected nature reserves containing natural biodiversity of global importance. PAM will comprise four key sub-components: (a) nature reserve planning and management (up-grading existing management plans with community participation, ecological baseline surveys and mapping, strengthening field management, and enhancement of reserve infrastructure); (b) community-based nature conservation programs (preparation and implementation of natural resource co-management demonstrations, community education and public awareness programs in nature conservation, energy (fuelwood) conservation demonstrations, wildlife crop-damage control demonstrations, and community training and extension on sustainable livelihood activities); (c) training and capacity building of government institutions; and (d) project management, monitoring and evaluation (training in support of project implementation, policy studies and development of a monitoring and evaluation plan).

8. The objectives of the PE component are to: (a) increase production of wood to meet the growing deficit between domestic supply and demand; (b) reduce harvest pressures on the natural forest; (c) enhance employment and income for forest farms and rural households affected by the logging ban and other use restrictions; and (d) improve environmental management. PE would comprise four sub-components spread

over 107 counties in 11 Provinces: (a) Timber plantations establishment of approximately 115,090 ha; (b) economic tree-crop establishment of approximately 57,940 ha of fruit, nut and medicinal trees; (c) pre-commercial thinning of 61,330 ha of existing timber plantations on a demonstration basis; and (d) technical support services including planting stock development and improved nursery management, training and extension services, storage and marketing facilities, small-scale rural infrastructure, and monitoring and evaluation). The size of individual plantations will vary site-to-site and from province to province but on average is 15 ha. Timber plantations tend to be larger (around 15 ha on average) while economic tree crop plantations are much smaller. The provincial averages range from 7 ha in Shanxi to 250 ha in Shandong reflecting the criteria to establish plantations on degraded agricultural land. These sites include poor quality and harvested plantation areas; agricultural lands suitable for plantations; barren hills and wastelands; weedy or shrubby land; and lightly stocked woods with a low canopy density (<20%). Guidelines have been developed to guide site selection and procedures have been put in place to ensure that sites are suitable for the intended purpose but also to avoid adverse environmental effects due, for example, to conversion of sites which might have significant ecological or other environmental value.

9. A major element of project design was a Social Assessment (SA) of affected and participating communities. The SA provided a method for integrating community participation and social analysis into project design and preparation. SA was conducted to ensure that project preparation and implementation considered the needs, wishes, concerns and capacities of people affected or influenced by project activities. SA collected information from communities with the objectives of ensuring that positive social impacts were enhanced and adverse impacts avoided or reduced, especially for potentially vulnerable groups, such as ethnic minorities, poorer socioeconomic groups and women. See annex 13 of PAD for a summary of the SA.

C. Environmental and Social Baseline Description

10. **Natural Environment.** The thirteen provinces that are proposed for inclusion in SFDP occupy five major physiographic regions of China: the Eastern Lowlands (Liaoning, Hebei, Shandong, Anhui and the eastern portions of Henan, Hubei and Shanxi); the Southern Mountains and Hills (Hunan and Guizhou); the Southwestern Mountains and Plateaus (Sichuan and Yunnan); the Loess Mountains and Ordos Plateau (eastern Gansu and the western portions of Shanxi, Henan and Hubei), and the South China Insular Mountains (Hainan). These five regions contain six of the seven major forest zones of China. A little over 40 percent of China was originally forested. The remainder, primarily in the west and north, consists of desert vegetation, grasslands, sub-alpine scrub and alpine tundra. Major forest communities occupied a roughly triangular area in eastern China about 1600 km along its base in the warm, moist tropical south and less than 400 km wide at its apex in the cooler, drier temperate north. The pattern of forest zonation that repeats with both increasing latitude and elevation is: (a) evergreen tropical hardwoods; (b) evergreen sub-tropical hardwoods mixed with tropical or sub-tropical conifers at higher elevations; (c) mixed temperate mesophytic hardwoods; (d) temperate dry deciduous hardwoods; (e) montane temperate deciduous hardwoods; (f) montane temperate conifers; and (g) sub-boreal conifers. Only the last zone is not included in the Project. Much of the coastal plain of eastern China and many interior river valleys and basins were converted from forest to agriculture centuries ago. Nevertheless, as recently as the early 1960's China still possessed, in its hill and mountain systems, one of the richest and most diverse natural forest estates in the world. This remarkable natural forest heritage has been significantly depleted in only four decades by inappropriate silvicultural practices and unsustainable harvesting quotas. One of the primary objectives of the Project is to demonstrate and disseminate methods for reversing this trend of natural forest degradation.

11. **Social Environment.** A particular concern in World Bank projects is protecting the rights, and improving the welfare of ethnic minority and poorer communities. Much of the Project's emphasis is on remaining areas of natural forest and areas suitable for plantation establishment. Since such areas will almost invariably be in steeper lands and upper watersheds, many of the affected and participating communities are likely to be ethnic minority or poor, or both. Project areas contain communities belonging to eighteen ethnic minorities. Five of the twenty-two participating counties in the NFM and PAM components are designated as provincial-level poor counties and twelve as national-level poor. There is a total of 17 national-level poor and 8 provincial-level poor counties in the 107 participating in the plantation component. These communities are amongst the most affected by the logging ban and NFPP restrictions in terms of loss of income, croplands and access to forest products such as fuelwood, non-timber forest products and local construction timber. For many of these peoples, the natural forest also holds significant cultural and religious values. Generally these communities have limited access to primary education, basic health care and safe drinking water. It has, therefore, been a major design principle of the Project that these communities are equitably represented in the beneficiaries of the Project and that project activities are adapted to their specific needs.

D. Environmental and Social Opportunities, Risks and Mitigation Measures

The Natural Forest Management (NFM) Component

12. The NFM Component, if well planned and carefully implemented, should lead to a very substantial improvement in the condition and extent of natural forests through enhanced forest protection, rehabilitation and sustainable management practices. Local communities will be given a significant incentive to protect and sustain forest resources through their involvement in co-management arrangements. Access to community development services, training and household credit could, over the longer term, reduce village dependence, and thus the pressures, on natural forest resources.

13. **Environmental Issues.** The NFM component is expected to be implemented by the European Commission (EC) which has a different processing procedure than the World Bank. Whereas the World Bank requires feasibility-level design information prior to project approval, the EC requires only a conceptual project design for funding approval and final project approval is based on a feasibility design at project inception. Thus the design information available to this point for the component is very general compared to that provided for the other two components. Therefore, the recommendations in the ESIA are meant to provide guidance to the inception phase. Current project documents for NFM place great stress on co-management agreements developed through "participatory, bottom-up planning processes". Such processes are extremely valuable tools in natural resource planning, however, they work best when placed in the context of broader management goals, objectives, and policies that set the bounds for what is possible and desirable within a given time frame. The present project design prescribes no such broader context. Major activities in this component include forest resource assessment and forest function zonation, sustained yield calculation for a range of forest products and co-management plan preparation and implementation. Operational activities emphasize focus primarily on aspects of harvesting such as yield determination, harvest control, low-impact logging, and access construction. Without a broader context for forest management, it is difficult to place these activities in perspective.

14. It is recommended that NFM, as further designed and implemented, places less emphasis over the short- to medium-term on immediate harvesting of forest products, and more on forest protection, regeneration, and rehabilitation. Stand management objectives should be developed for each major forest type reflecting a desired future state of stand composition and structure to guide forest regeneration and rehabilitation. Activities should focus on succession management to meet these objectives through

reduced-impact selection cutting, thinning, enrichment planting, enhanced natural regeneration, the gradual elimination of non-indigenous plantings, and the use of temporary “nurse crops” (plantations or early seral communities) to provide an optimum environment for regeneration and early growth of the predominant native hardwood types. In order to further reduce pressures on the natural forest, horticultural research and technical assistance should be provided to promote the farming, rather than the wild collection, of non-timber forest products. Management objectives would stress forest rehabilitation in moist tropical, sub-tropical and temperate forests where growth rates are likely to justify such silvicultural activities, and forest protection and low-intensity, low-impact harvesting in dry hardwood and subalpine forests where rotation periods may be measured in centuries.

15. **Social Issues.** This project component stresses multi-stakeholder participatory forest management planning and management, and community development proposals that have emerged through the social assessment process. Thus the risk of serious social impacts should be minimized, and probably more than compensated by potential project opportunities. Appeal and conflict resolution mechanisms are incorporated in the participatory planning process to deal with grievances that might arise in plan development. There is a remote possibility that community infrastructure development might result in individual loss of assets. A Policy Framework for Involuntary Loss of Assets, prepared to World Bank specifications, has been developed to establish principles and procedures for fair compensation (see Annex 14 for more details).

The Protected Areas Management (PAM) Component

16. If carefully implemented, the PAM component has the potential to greatly improve protection and management of thirteen nature reserves of global importance. Local communities will be encouraged to participate in reserve protection and management activities through co-management demonstrations.

17. **Environmental Issues.** The majority of environmental impacts associated with this component are expected to be positive. Technical assistance and training programs are expected to substantially improve levels of management of the protected areas themselves, and participatory planning with local communities provides a real opportunity to deal with many of the major environmental threats, i.e. unsustainable fuelwood and NTFP collection, wildlife poaching, fire, overgrazing and illegal logging. Minor negative environmental impacts associated with reserve infrastructure improvement and increased recreation/tourism will be dealt with through appropriate environmental prescriptions in reserve management plans.

18. **Social Issues.** The most significant potential social impacts relate to community use of forest resources within reserve areas where use restrictions may be deemed to be necessary in order to ensure environmental sustainability. These issues should be capable of resolution through natural resource co-management planning processes, with necessary mitigation measures implemented through community conservation funds and local livelihood programs. Grievance and appeal mechanisms have been built into PAM administrative arrangements to ensure fair treatment of local communities.

The Plantation Establishment (PE) Component

19. The PE Component has the potential to contribute to closing the gap between domestic demand and supply of wood products, and thus reduce pressures on the natural forest, and to lead to real improvements in the welfare of local communities affected by resource use restrictions associated with the logging ban and NFPP.

20. **Environmental Issues.** The most significant potential environmental impacts associated with the

PE component are related to three main issues: (a) site selection, in particular the possible conversion of important native ecosystems; (b) aspects of plantation establishment and management; and (c) pest management. As part of the environmental assessment, a plantation site screening process has been established to “flag” native ecosystems and to evaluate their ecological importance before a decision on conversion to plantation. During project preparation, SFA developed both draft Environmental Protection Guidelines for Plantation Management and a draft Plantation Pest Management Plan. The environmental protection guidelines prescribe acceptable practice in such areas as genetic, species and structural diversity in project design, soil and water conservation, watershed protection, and harvesting. The Pest Management Plan lists existing insect and disease pests of forestry and economic tree species in China and the main methods of pest control. The plan reviews problems with implementing pest management policy in the complex organizational structure of national, provincial, county, and township bureaucracies and independent research institutions. The plan concentrates its management recommendations on pesticide safety training and prescribes the content and budget for courses to train about 8,500 people. All chemicals to be used under the project fall within the WHO's hazard categories II (moderately hazardous) and III (slightly hazardous) or Class U which means that the relevant chemical is listed in Table 5 of the WHO guidelines (chemicals unlikely to present acute hazard in normal use).

21. **Social Issues.** Early in project design the following principles were established to minimize social impacts in the PE component: (a) participation must be voluntary; (b) all relevant households must have equal opportunity to participate; (c) there must be no changes to land tenure or resource access that will disadvantage local communities; and (d) production arrangements must be fair and equitable. The SA process carried out during the design of the PE component has had success in ensuring compliance with the first three principles and subsequent follow up investigations by the SA specialist have determined that the risk of unfair production arrangements in PE has been minimized. As an additional safeguard, however, mechanisms have been established in the implementation procedures to allow systematic monitoring by SFA and World Bank supervision missions. A second area of social concern relates to the potential sustainability and financial viability of new orchard areas (particularly in the fruit sector), which will depend on new high-producing varieties, a high product quality, low environmental impact and low production costs. Achieving these will require an effective quality technical extension program in areas such as appropriate varieties, tree shape and canopy management, crop loading, fertilizer and irrigation requirements, pest and disease control (IPM), proper harvesting, post harvest handling and marketing. The PE component contains provision for technical extension services to ensure that participating farmers receive the training and information necessary to make technically and financially appropriate decisions.

G. Environmental Management and Monitoring

22. **Environmental Management.** The major environmental management issues arise in connection with the PE component. As previously discussed, the three main environmental issues relate to site selection, adoption of environmental best practice in plantation establishment and management, and pest management. Separate procedures have been developed to deal with each issue.

- Regarding *site selection*, the SFA already had site selection criteria which had been developed as a result of experience on previously Bank-funded plantation establishment projects. The ESIA team reviewed these guidelines and developed additional screening procedures to ensure that sites of high ecological significance were excluded from the program. The screening process was applied to a sample of sites provisionally proposed for inclusion in the first year of the program and the experience gained has been used to adapt the process for application during subsequent years in the program. It was agreed that the screening procedure would follow a flow chart of a series of questions designed to elicit pertinent information on site characteristics as they relate to natural

habitat and cultural heritage values, and to document what decisions were made in light of those characteristics. This screening chart, as well as any photos called for by the screening process, would be attached to the 'sub-compartment' cards which Forestry Bureau staff fill out for all sites being considered for inclusion under the Project. The chart is included as part of the Environmental Protection Guidelines.

- Regarding *plantation establishment*, technical as well as environmental protection guidelines have also been developed by the SFA. These were reviewed by the ESIA team and have been updated to reflect latest thinking on plantation management procedures. Revisions made covered areas such as plantation design (stream protection prescriptions, and increased structural and genetic diversity to enhance plantation health), plantation establishment (site preparation), tending (weeding and thinning), soil and watershed protection, integrated pest control, fire prevention/control, harvesting, and monitoring and evaluation (both compliance and effectiveness monitoring programs). These guidelines will provide a basis for preparation of individual plantation design plans, plan approval and compliance monitoring by PMOs and county forestry bureaus.
- Regarding *pest* management, a draft pest management plan has been prepared which outlines an integrated pest management strategy involving application of a variety of non-chemical approaches to pest control (quarantine, physical and mechanical methods, agronomic techniques, biological control), application of pest monitoring procedures, and use of approved agrochemicals (principally pesticides) only when other methods have failed (i.e. pest monitoring data suggest that pest levels may exceed economic threshold levels). The draft identifies chemicals which would be applied to control the main pests which are risks for the various economic tree crops to be supported under the Project and these all fall within the FAO's Hazard Categories II or III. The pest management plan also includes a comprehensive training plan which provides for training of approximately 8,500 technicians who will be responsible for project implementation. The general training plan for participating households includes instructions on pest management, pesticide application and storage procedures, and other related matters.

23. **Monitoring.** The fundamental objectives of the Project are: (a) to improve the quality and extent of natural forests through enhanced management, rehabilitation and protection; (b) to assist in the economic transition of forest dependent communities impacted by the logging ban and NFPP use restrictions; and (c) improve environmental quality in project areas. Within this broad intent of the Project, three general types of monitoring are relevant: (a) implementation monitoring determines the progress in program implementation against established "benchmarks" (i.e. number of activities undertaken, number of plans completed, areas treated, number of clients served, cost of delivery, number of people trained, etc. (b) compliance monitoring measures performance against environmental standards, regulations, permit conditions or plan commitments; and (c) condition monitoring measures environmental or social condition in relation to long-term management goals/objectives. Implementation monitoring prescriptions are currently the most fully developed in project design, and the need to develop compliance monitoring programs during project implementation has been acknowledged by all three project components. Condition monitoring programs are presently described only in conceptual terms in the NFM and PAM components and will be more fully developed during project implementation. Condition monitoring programs are likely to include the following parameters by project component and sub-component: (a) SA aspects of all components - project participation and measures of beneficiary satisfaction; (b) the natural resource management aspects of the NFM and PAM components - indicators of forest ecosystem condition and diversity, and GIS-based land use/land condition mapping; and (c) the PE component - fertilizer and pesticide use, indicators of plantation diversity, and simple indicators of ecosystem health.

F. Institutional Arrangements and Training

24. The Project is a very complex and its implementation will involve many different government agencies at many different levels (central, province, county, township, communities, nature reserves), independent institutions, and large numbers of individual project participants and beneficiaries. An emphasis of the Project is on strengthening of existing institutional arrangements and the Project contains provision for major training, on-the-job, and extension programs for relevant government agencies, institutions and participating communities.

H. Alternatives

25. The Project was conceived and designed within the context of the Government's overall objectives under the NFPP and took into account lessons learned from relevant project work in China and elsewhere in the world and the findings and recommendations of; independent analytical studies of the Bank's previous forest projects in China; analyses of the strengths and weaknesses of the Bank's natural resources management programs in the East Asia and Pacific region; and, a Bank-wide review of implementation of the Bank's forest policy. As part of this process, a wide variety of project alternatives were considered, many of which are outlined in Section D of the PAD. From an environmental point of view, the key alternatives available relate to the PE component and include: (a) whether to include this component at all (i.e. the "no development" option); (b) whether to restrict support for timber species only or to widen the scope to include "economic" tree crops (i.e. horticultural species); (c) whether to finance pesticides as part of the Project; and, if so, (d) whether to procure these pesticides on a centralized or decentralized basis. Factors taken into account in each case are outlined below:

(a) **Should the PE component be included at all?** If there is no PE component, there would be no IBRD participation in the Project. This would restrict the Bank's capacity to support the government's social and environmental objectives for forestry and natural resources management sectors which were high priorities under the Government's 9th Five Year Plan and will continue to be so under the forthcoming 10th Five Year Plan. A recent review of the Bank's environmental portfolio in China identified natural resources management as a significant gap in the overall program and recommended, amongst other things, that its participation should be strengthened and that consideration should be given to more diversified approaches to achieve this objective including diversifying funding sources to provide a better match between development needs and financial terms and conditions. The multi-component approach and diversified funding structure inherent in SFDP is consistent with this recommendation. In addition, previous Bank-financed plantation projects in China have performed extremely well and have introduced more scientific, technical, financial, and environmental management of plantations.

(b) **Timber species or timber plus "economic" tree crops.** The problems of land degradation in China are closely associated with the problems of rural poverty and many local and international experts are of the view that the key to promoting sustainable natural resources management is to address the underlying problem of poverty; strategies intended to promote sustainable natural resources management need to take account of the income creation potentials and to structure economic returns in ways which meet the needs of the participant communities. Timber species offer potentially significant returns in the long term and farmer groups in China have a very good track record of managing timber plantations. However, many poor farmers lack the financial capacity to cope with the medium to long term nature of timber production and they need access to alternative or supplementary forms of production which generate cash flows more closely attuned to their needs while still satisfying environmental objectives. Economic tree crops offer a good option in terms of financial returns, cash flow, and land rehabilitation benefits. The environmental downside is that horticultural crops are more susceptible than timber plantations to insect

and microbiological attack and support for horticultural trees could increase the propensity of project participants to apply biocides including pesticides, fungicides, and so on. Overall, and taking account of the factors discussed further in (c) and (d) below, it was concluded that the balance favored supporting development of horticultural tree species provided that a diversity of species would be offered, that species selection would take account of farmer preferences, site conditions and market prospects, and that particular efforts would be made to design a pest management plan which supported integrated pest management approaches already being promoted by the SFA (all these criteria are satisfied by the project design);

(c) Should Bank funds be used to finance pesticide procurement? The need for procurement of pesticides under the Project is uncertain although project design includes provision for such procurement if the need arises. The need is determined on the basis of a pest monitoring and forecasting system which is maintained by the forestry agencies; where pest numbers exceed pre-determined Economic Threshold Levels (ETLs) prescribed pesticides are procured by the local forestry bureaus and applied by trained technicians and farmers. If the Bank does not finance pesticides, the forestry bureau and possibly even the farmers themselves will purchase them when an outbreak occurs. Even if no IBRD funds are used, a pest management plan acceptable to the Bank is required. Given this, there are basically two considerations in favor of IBRD financing: (a) it would provide an element of assurance that pesticides procured through the Project would fall within FAO Hazard Categories II or III, as is required by the Bank's pesticide policy hence contributing to minimizing adverse impacts on farmer health. It should be noted however, that there is no way that the Project can prevent individual farmers from procuring prescribed chemicals using their own funds nor is there any practicable way of monitoring such purchases; and, (b) it would represent a form of short-term production credit that may not otherwise be available and, under some circumstances, could make a major contribution to the long term viability of the farmers investment in orchard development (e.g. if there was a particularly heavy pest attack during the initial establishment years of the orchard).

(d) If pesticides are to be financed by IBRD, should procurement be centralized or decentralized? As previously mentioned, pesticide procurement would be undertaken on a needs basis as determined by pest monitoring and pest forecasting systems which are already operated by the Forestry Administration. There are two options available for carrying out procurement: (i) centralized procurement, under which all pesticide demand schedules prepared by the Forestry Bureaus in each of the 107 counties participating in the Project would be collated by the Project Management Center (PMC) in Beijing, advertised internationally following International Competitive Bidding (ICB) procedures, procured, and then distributed back down to the relevant county Project Management Offices for distribution to the infested areas. The advantage of this option is that it provides the Bank and PMC with a very effective method of monitoring the types of pesticides actually procured to ensure compliance with Bank pesticide procurement policies. The disadvantage is that the process would be so slow as to be of no practical value; a period of 6 to 12 months could elapse between the pesticide needs assessment and delivery, by which time, the pest outbreak generally would have already occurred. Pesticides would then have to be stored for possible use in a subsequent season (creating hazards associated with leakage, etc.) and it is possible that some procured chemicals might never be used, creating an additional disposal problem; and, (ii) decentralized procurement, under which the individual counties procure their own supplies. The advantage of this approach is that it would expedite delivery of pesticides. The disadvantage is that it would make compliance (and fiduciary) monitoring much more difficult, probably requiring reliance on random audits during supervision missions. On balance, and assuming that pesticides would be financed by IBRD, option (ii) would be preferable from an environmental point of view but random spot checks would be required as a normal part of Bank supervision.

I. Public Consultation and Information Disclosure

26. **Public Consultation.** Both the NFM and PAM project components place considerable emphasis on the development of a “bottom-up” community driven resource planning processes involving substantive community consultation and participation. The PE component is based on voluntary participation elicited through community consultation during project preparation. The public consultation mechanisms and procedures developed through the Social Assessment process for all three components established a solid basis for ongoing public consultation activities during project implementation, and occurred as follows:

27. During the pilot phase of the SA from January 3, 2000 to February 15, 2000, the *first round* of formal consultations with potential project beneficiaries was conducted. A *second round* of consultations occurred during the wider SA process in areas proposed for the Project from March to September 2000. Project information leaflets were distributed at two periods, first on December 16, 1999 and again on March 6, 2000 in each of the proposed project sites prior to the SA consultations. The project leaflets describe (a) the objectives and activities of the overall project and for each of the Project's three components, (b) the principles and criteria used to select project areas, including the application process for participation in the PE component of the Project, (c) the potential environmental impacts of the Project and the approach used to mitigate these impacts, (d) the source of the funds and the terms and conditions of the loan, and (e) the unit and contact address of persons in charge of receiving inquiries.

28. During the pilot SA work in Hainan province, the issue of no written language for the Li people was addressed by discussing the material in the local spoken language and providing the materials for the consultations in pictorial form. Sichuan provincial SA teams also used drawings in order to communicate with village communities (many whom are illiterate) during the SA process. Similarly, for other ethnic minority areas or in areas with a relatively low level of literacy, care was taken to ensure that the materials for the consultations were provided in a form and a language that are accessible to the groups being consulted. The general rule for the Project has been that if standard Chinese is not widely understood by the groups being consulted, the materials for the consultations would be provided in a language suitable to the locality and/or in pictorial form.

29. The *third round* of formal consultations was held in January 2001 to coincide with the release of the Project's draft Environmental and Social Impact Assessment (EA). As part of this consultation, all project affected peoples were informed of the ESIA findings and more than one hundred villages were randomly selected for village meetings to discuss the EA findings (which have been summarized on a leaflet and posted in each natural village normally 10 days prior to the meeting). The village representative assigned a responsible person to keep minutes and summarize the discussion of the EA findings. Particularly, (i) the number of men and women who attend the meeting will be disclosed, (ii) who they are (villager, village leader, township/county officials, PMO staff, etc., and (iii) a summary of the questions, comments, and concerns raised at the meeting. The amount of formal written feedback differed by project component.

30. In the Plantation Establishment component, a random selection of two villages each in two randomly selected townships in at least 10% of the 107 project counties were initially consulted. This means that feedback had been solicited from 56 randomly selected villages participating in this component. In the Protected Areas Management component, formal feedback was elicited from 2 potential project villages located adjacent to each of the 13 nature reserves. This amounts to formal feedback from 26 villages. In the Natural Forest Management component, formal feedback was elicited from a random selection of 2 potential project villages in 11 project townships totally 22 villages. In addition, a village in

a township adjacent to the forest management area in Hunan was consulted since it is likely that this township will be included under the Project. Lastly, one consultation meeting was held in a forestry enterprise.

31. **Information Disclosure.** World Bank directives on disclosure of the environmental and social impact assessment require that the borrower provide a summary of the draft ESIA report for public review and comment in a form and language that are understandable by affected peoples and in appropriate public places accessible to affected groups. During the third round of consultation, a very simple summary of the ESIA findings and recommendations was made public locally in the project areas and its availability widely publicized. Where appropriate, the summary was translated into local languages. In villages where illiteracy was found to be prevalent or where there was no written language for a given ethnic minority (e.g., Li in Hainan, Dulong in Yunnan), project information was disclosed orally.

32. The disclosure package includes (i) a three page leaflet summarizing the key conclusions of the draft ESIA and specifying the location of the full ESIA report and other important project documentation, and the name and contact details of the responsible project manager; (b) 10-page Executive Summary of the ESIA; (c) draft Environment Protection Guidelines for Plantations Establishment; (d) draft Pest Management Plan for Plantations Establishment; (e) draft Resettlement Policy Framework; (f) draft Process Framework for Mitigating Adverse Livelihood Impacts; and (g) draft summary Ethnic Minorities Development Plan. All documents were distributed under each component and are available for public viewing at the following location:

Components	Documents for Distribution	Accessible via
PE	ALL	<u>County level</u> --PMO and/or other recognized public places, such as library
PAM	ALL	<u>Nature Reserve level</u> --PMO and/or other recognized public places, such as library
NFM	ALL	<u>Township level</u> --PMO and/or other recognized public places, such as library

33. The media for informing the public where documents are available included radio, local newspapers, and/or other public media. Announcements were made in Chinese and local languages and contain information regarding the location of the disclosure package and all relevant contact information.

Public Consultation and Information Disclosure

NFM Public Consultation

Policy Reference	Required Actions		Evidence of Compliance with Policy			
	Borrower	Bank Task Team	With Whom	How	When	Where
<i>Good practice</i>	Initial consultation to introduce project concept		Local farmers; Enterprise units;	Group meetings; Household interviews;	07-08/99 09-10/99	Pilot communities in Baoxing and Pingwu counties, Sichuan; Yanling county in Hunan;
<i>OP 4.01 para 15</i>	During EA process for Category A project, consult with project affected groups at least twice:					
	(a) shortly after environmental screening and before the TOR for the EA are finalized; and		Local farmers; Enterprise units; Township and county authorities; Line agencies;	PRA: focus groups, semi-structured interviews, village conferences, Sample surveys;	01-04/00	Rural communities in the project areas in Sichuan, Hunan, and Hainan; Local forestry corporations; Township/county offices;
	(b) once a draft EA report is prepared		Local farmers,	Village meetings	01/07-18/01	23 villages and one enterprise unit randomly selected from 12 townships (basically two from each) of the six project counties in Sichuan, Hunan, and Hainan Provinces;
<i>Good practice</i>	Social Assessment – Participatory Rural Appraisal		Local farmers; Enterprise units; Township and county authorities; Line agencies;	PRA: focus groups, semi-structured interviews, village conferences, Sample surveys;	01-04/00	Rural communities in the project areas in Sichuan, Hunan, and Hainan; Local forestry corporations; Township/county offices;
<i>Good practice</i>		Consultation with NGOs or other organizations	WWF, CI, TNC WWF, UNDP, GTZ, TNC & AUSAID	To discuss the specifics of the project including project areas; Dissemination of project info. that is followed by extensive discussion	04/02/00 05/18/00	Washington DC. Beijing (PMC/SFA)

NFM Information Disclosure

Policy Reference	Required Actions		Evidence of Compliance with Policy			
	Borrower	Bank Task Team	To Whom	Document	When	Where
<i>Good practice</i>	Provide summary of project objectives and general description of project for initial consultations.		Local farmers, enterprise units, township/county authorities;	Information leaflets in Chinese; posters in pictorial form;	12/99	The project areas in Sichuan, Hunan, and Hainan Prov.
<i>BP 17.50 para 3</i>		Send PID, EDS to Infoshop	General Public	PID, EDS	02/03/00	Infoshop
<i>OP 4.01 para 16-17</i>	Provides relevant materials in a timely manner prior to consultations for environmental assessment, and in a form and language that are accessible to the groups being consulted:					
	For first consultation for environmental assessment: (a) summary of proposed project's objectives; (b) description of the project; (c) potential impacts.		Local farmers, enterprise units, township/county authorities;	Information leaflets in Chinese; posters in pictorial form, radio propaganda in mandarin and local ethnic languages, oral information in village meetings,	03-4/00	The project areas in Sichuan, Hunan, and Hainan Provinces;
	For second consultation for environmental assessment: summary of draft EA.		Local farmers, enterprise units, township/county authorities	10-page EA summary, 3-page leaflet, Resettlement Policy Framework, EMDP summary, In Chinese, Tibetan, and Lisu	01/05-08/01	Township level PMOs, and/or township/county libraries in all the project areas in the 3 prov. (The leaflet went to the village/ household level as well.)
	Draft EA report available in public place accessible to project affected groups.		Local farmers, enterprise units, township/county authorities	Draft EA report and EMDP document in Chinese	01/15-18/01 on the county level, 02/15-18/01 on the township level	County/Township level PMOs, and township/county libraries in all the project areas in the 3 prov.
<i>OP 4.01, para 19</i>		Distribute English summary of draft EA report to EDs	Executive Directors of the Bank's Board	Summary of draft EA in English	01/24/01	Delivered to ED Offices
<i>BP 17.50, para 4</i>		Send updated PID to Infoshop before appraisal	General Public	Updated PID	12/28/00	Infoshop
<i>BP 4.01 para 13 for EA (good practice for others)</i>		Send EA report, Resettlement Framework, Process Framework and Ethnic Minorities Development Plan to Infoshop	General Public	EA report	01/23/01	Infoshop
<i>BP 17.50 para 7</i>		Send final PAD to Infoshop	General Public	Final PAD	Date to be decided	Infoshop

Exemplification of the NFM Consultation and Disclosure Process

NFM Public Consultation & Information Disclosure—Hainan (Changjiang County)

When	Where	What	Who
11/29/99	Changjiang County Government Office Building	Project Consultation Meeting	Deputy County Magistrate, Officials from Poverty Reduction Office, Forest Bureau and Township government.; Bawangling Forest Bureau
1/29/00	County Wide	Project information disclosure meeting	
Jan.-Mar. 2000	County Wide	Project leaflet distribution and information survey.	County, Township, village, household; Bawangling Forest Bureau
Jan-Mar. 2000	Wangxia Township, Bawangling	PRA: leaflet distribution, focus group, semi-structured interview, village conference, group interview, drawing, sample interview	
End Mar. 2000	County Wide	Second Consultation meeting with county leaders; villagers conference	
3/11-16/2000	Hongshui and Dayan Villages of Wangxia Xiang	PRA	

PAM Public Consultation

Policy Reference	Required Actions		Evidence of Compliance with Policy			
	Borrower	Bank Task Team	With Whom	How	When	Where
<i>Good practice</i>	Initial consultation to introduce project concept		County/township authorities, local farmers	Project info. dissemination through village visiting and communication with villagers as well as local officials	08-09/99 11-12/99	Jianfengling and Jiangbian communities of Ledong and Dongfang counties, Hainan Prov.
<i>OP 4.01 para 15</i>	During EA process for Category A project, consult with project affected groups at least twice:					
	(a) shortly after environmental screening and before the TOR for the EA are finalized; and		Local farmers, enterprise unit workers; township and county authorities, line agencies;	PRA training and pilot practice: community conference, focus groups, household interviews;	01-02/00	Pilot villages and units in the areas of PA in six project provinces Sichuan, Hainan, Hunan, Hubei, Guizhou, Gansu.
	(b) once a draft EA report is prepared		Local farmers,	Village meetings,	01/05-17/01	26 villages randomly selected from 13 natural reserve zones (two from each) in 6 project provinces;
<i>Good practice</i>	Social Assessment – Participatory Rural Appraisal		Local farmers, enterprise unit workers; local authorities, and line agencies;	PRA: focus groups, semi-structured meetings and interviews, institutional stakeholder meetings; sample surveys;	02-03/00 06/00	Sample/typical villages/communities in close interaction with PA in six project provinces as above mentioned; and in Yunnan Province later.
<i>Good practice</i>		Consultation with NGOs or other organizations	International NGOs and other international organizations	Dissemination of project info. that is followed by extensive discussion	06-09/99 05/00	World Bank headquarters, Washington, DC. Beijing, China

PAM Information Disclosure

Policy Reference	Required Actions		Evidence of Compliance with Policy			
	Borrower	Bank Task Team	To Whom	Document	When	Where
<i>Good practice</i>	Provide summary of project objectives and general description of project for initial consultations.		Local farmers, enterprise units, township/county authorities;	Information leaflets in Chinese; posters in pictorial form;	12/99	The project areas in Sichuan, Hunan, and Hainan Prov.
<i>BP 17.50 para 3</i>		Send PID, EDS to Infoshop	General Public	PID, EDS	02/03/00	Infoshop
<i>OP 4.01 para 16-17</i>	Provides relevant materials in a <u>timely manner</u> prior to consultations for environmental assessment, and in a <u>form</u> and <u>language</u> that are accessible to the groups being consulted:					
	For first consultation for environmental assessment: (a) summary of proposed project's objectives; (b) description of the project; (c) potential impacts.		Local farmers, enterprise units, township/county authorities;	Information leaflets in Chinese; posters in pictorial form, radio propaganda in mandarin and local ethnic languages, oral information in village meetings,	03-4/00	The project areas in Sichuan, Hunan, Hubei, Hainan, Guizhou provinces;
	For second consultation for environmental assessment: summary of draft EA.		Local farmers, enterprise units, township/county authorities	10-page EA summary, 3-page leaflet, Process Framework, EMDP summary; In Chinese, Tibetan, and Lisu	01/05-08/01	The Natural Reserve level PMOs, and township/ county libraries in the project areas (in most cases these documents were also brought to villages and the key households)
	Draft EA report available in public place accessible to project affected groups.		Local farmers, enterprise units, Township/county authorities;	Draft EA report and EMDP documents in Chinese	01/15-18/01 at the county level and 02/15-18/01 at the Natural Reserve Level	The Natural Reserve level PMOs, and/or township/ county libraries in the project areas
<i>OP 4.01, para 19</i>		Distribute English summary of draft EA report to EDs	Executive Directors of the Bank's Board	Summary of draft EA in English	01/24/01	Delivered to ED Offices
<i>BP 17.50, para 4</i>		Send updated PID to Infoshop before appraisal	General Public	Updated PID	12/28/00	Infoshop
<i>BP 4.01 para 13 for EA (good practice for others)</i>		Send EA report, Resettlement Framework, Process Framework and Ethnic Minorities Development Plan to Infoshop	General Public	EA report	01/23/01	Infoshop
<i>BP 17.50 para 7</i>		Send final PAD to Infoshop	General Public	Final PAD	Date to be decided	Infoshop

Exemplification of PAM Consultation and Disclosure Process

Place: Nujiang Nature Reserves, Yunnan Province; Time: June 16 to 26, 2000

Substance: Distribution of GEF Project Information Brochure

Where	Distribution Method	Consultation Method	Distribution Quantity	To Whom (Nationality)	By Whom
Gongshan County	Poster	Propaganda	60	Dulong, Han, Lisu, Nu,	He Zhengjun
Bingzhongluo Township and its villages	Poster (in Lisu and Madarine); presentation	Villagers conference, seminar, lecture	70	Lisu, Nu	He Zhengjun, Ye Jun
Shuangla Agency, Zhuda Village	Poster	Villagers conference, seminar	66	Dulong, Lisu, Nu	An Di
Zhuda Village	Poster, presentation	Seminar	45	Ditto	Ye Jun
Bangda Township and its villages	Poster	Church meeting, market	68	Ditto	Li Xiuying
Pihe Township, Wawa Village	Casual distribution	Villagers conference, seminar	67	Nu	Lu Mingrong, Yu Zhongwen, Jiao Weidong
Jiakedi Township, Qiada Village	Casual distribution	Villagers conference, seminar	80	Lisu	Lu Mingrong, Yu Zhongwen, Li Sibao
Luobenzhuo Village	Household by household	Villagers conference	100	Lisu, Bai	Shi Boguang
Villagers Feedback	1. Villagers came to realize the importance of nature resources protection; 2. They look forward to the project implementation in Nujiang Nature Reserve; 3. Issues like building material substitute and energy substitute should be addressed ASAP since logging will be forbidden after the project; 4. Boarders should be clearly marked; 5. Technology training and promotion are needed; 6. Since the project is supposed to be good for the locality, they hope it won't be another "empty talk" and should be implemented asap; 7. It is suggested to information brochure be in old Lisu language.				

PE Public Consultation

Policy Reference	Required Actions		Evidence of Compliance with Policy			
	Borrower	Bank Task Team	With Whom	How	When	Where
<i>Good practice</i>	Initial consultation to introduce project concept		Local farmers; Afforestation entities;	Group meetings; Household interviews; Leaflet publication	07-08/99 12/99-01/00	Pilot communities in Yanlin County, Hunan; Wenxian County in Henan and Qian County in Gansu.
<i>OP 4.01 para 15</i>	During EA process for Category A project, consult with project affected groups at least twice:					
	(a) shortly after environmental screening and before the TOR for the EA are finalized; and		Local farmers; afforestation entities; Township and county authorities; Line agencies;	CFA: semi-structured households and village leader inter-views, village meeting, Leaflet publication	01-04/00	Rural communities, afforestation entities, township/county offices in the project areas in Sichuan, Hunan, Hainan, Shandong, Hebei, Henan, Shanxi, Gansu, Anhui, Hubei and Liaoning provinces.
	(b) once a draft EA report is prepared		Local farmers	Village meetings	01/06/01-02/05/01	At least 56 villages randomly selected from 14 counties (4 from each) which are also randomly selected as 10% of the total 107 project counties in 11 provinces (at least 1 county from each province);
<i>Good practice</i>	Social Assessment – Participatory Rural Appraisal		Local farmers; township and county authorities; Line agencies;	CFA: semi-structured households and village leader inter-views; county, township, village (households) meeting; leaflet publication	01-04/00	Rural communities, afforestation entities, township/county offices in the project areas in Sichuan, Hunan, Hainan, Shandong, Hebei, Henan, Shanxi, Gansu, Anhui, Hubei and Liaoning provinces.
<i>Good practice</i>		Consultation with NGOs or other organizations	International NGOs WWF, UNDP, GTZ, TNC and AusAID	Dissemination of project info. and followed by extensive discussion	06-09/99 05/18/99	World Bank headquarters, Washington, DC. State Forestry Administration Beijing

PE Information Disclosure

Policy Reference	Required Actions		Evidence of Compliance with Policy			
	Borrower	Bank Task Team	To Whom	Document	When	Where
<i>Good practice</i>	Provide summary of project objectives and general description of project for initial consultations.		Local farmers; afforestation entities; township and county authorities; Line agencies	Information leaflets in Chinese, posters in pictorial form,	12/99	Rural communities, afforestation entities, township/county offices in the project areas in Sichuan, Hunan, Hainan, Shandong, Hebei, Henan, Shanxi, Gansu, Anhui, Hubei and Liaoning provinces.
<i>BP 17.5 para 3</i>		Send PID, EDS to Infoshop	General Public	PID, EDS	02/03/00	Infoshop
<i>OP 4.01 para 16-17</i>	Provides relevant materials in a <u>timely manner</u> prior to consultations for environmental assessment, and in a <u>form</u> and <u>language</u> that are accessible to the groups being consulted:					
	For first consultation for environmental assessment: (a) summary of proposed project's objectives; (b) description of the project; (c) potential impacts.		Local farmers; afforestation entities; township and county authorities; line agencies	Information leaflets in Chinese, posters in pictorial form, radio propaganda in mandarin and local ethnic languages, oral information in village meeting,	03/00	Rural communities, afforestation entities; township/county offices in the project areas in Sichuan, Hunan, Hainan, Shandong, Hebei, Henan, Shanxi, Gansu, Anhui, Hubei and Liaoning provinces
	For second consultation for environmental assessment: summary of draft EA.		Local farmers; afforestation entities; Township and county authorities; Line agencies	10-page EA summary, 3-page leaflet, Environment Protection Guideline, Pest Management Plan, Resettlement Policy Framework, EMDP summary; In Chinese, Tibetan, and Lisu	01/05-08/01	County level PMOs, and/or other recognized public places, such as county libraries (The leaflets were sent to all the villages in the project areas;)
	Draft EA report available in public place accessible to project affected groups.		Local farmers, afforestation entities, townships and county authorities in the project areas;	Draft EA report and EMDP documents in Chinese	01/15-18/01	County level PMOs, and/or other recognized public places, such as county libraries;
OP 4.01, para 19		Distribute English summary of draft EA report to EDs	Executive Directors of the Bank's Board	Summary of draft EA in English	01/24/01	Delivered to EDs Offices
BP 17.50, para 4		Send updated PID to Infoshop before appraisal	General Public	Updated PID	12/28/00	Infoshop
BP 4.01 para 13 for EA (good practice for others)		Send EA report, Resettlement Framework, Process Framework and Ethnic Minorities Development Plan to Infoshop	General Public	EA report	01/23/01	Infoshop
BP 17.50 para 7		Send final PAD to Infoshop	General Public	Final PAD	Date to be decided	Infoshop

Third Round Consultation & Information Disclosure

Table 1
Statistical Breakdown of Sample Village Consultation
(PAM Component)

Components	Places				Dates	People Attending the Village Consultation Conferences				
	Provinces	Counties	Townships	Villages		Total	Ethnic minorities	Han	Male	Female
PAM	Sichuan	Pingwu (Sier PA)	Sier Tibetan	Chafang	01/05/01	28	Tibetan 3 Qiang 1	24	24	4
			Huya Tibetan	Hufeng	01/08/01	37	Tibetan 4	33	30	7
		Beichuan (Piankou and Xiaozhaizikou PAs)	Piankou Qiang	Shaijin	01/05/01	48	Tibetan 3 Qiang 43	2	32	16
			Xiaoba Qiang	Xiaogou	01/06/01	68	Qiang 59	9	56	12
			Qingjing	Shangwu	01/08/01	76	Qiang 76	-	49	27
		Songpan (Baiyang PA)	Baiyang	Banbianjie	01/06/01	61	Qiang 61	-	45	16
			Dazhai	Shannami	01/10/01	19	Tibetan 19	-	16	3
		Qingshan (Tangjiahe PA)	Qingxi	Lianmeng	01/10/01	28	-	28	24	4
				Sanlong	01/09/01	27	-	27	19	8
		Hunan	Shimen (Hupingshan PA)	Hupingshan	Shenjingdong	01/08/01	92	Tujia 87	5	55
	Yingzijian			01/08/01	53	Tujian 45	8	38	15	
	Sangzhi (Badagongshan PA)		Tianpingshan	Xiaozhuangping	01/05/01	21	Tujian 19	2	14	7
	Hainan (Jianfengling PA)	Ledong	Jiangbian	Tumei (Miao)	01/13/01	18	Miao 18	-	12	6
		Dongfang	Jianfengling	Jianfeng-Dingsi	01/14/01	180	Li 180	-	126	54
	Yunnan	Dechin (Baimaxueshan PA)	Benzilan	Tongduishui	01/05/01	29	Tibetan 29	-	21	8
Xianue			Shirong	01/08/01	45	Tibetan 38 Lisu 7	-	32	13	
Gongshan (Nuijiang PA)		Bengzhongluo	Nanyidong	01/16/01	68	Lisu 60 Nu 8	-	30	38	
Hubei	Wufeng (Houhe PA)	Wufengling	Houhe	01/13/01	108	Tujia 79	29	82	26	
			Shuitantou	01/15/01	61	Tujia 41	20	44	17	
Guizhou	Jiangkou	Taiping	Kuaichang	01/16/01	32	Tujia 32	-	30	2	
		Dewang	Baxi	01/16/01	41	Tujia 41	-	40	1	
Gansu	Wenxian	Tielou	Cunzhaikiao	01/10/01	65	Baima Tibetan 11	54	49	16	
		Fanba	Zhuyuan	01/12/01	64	-	64	49	15	
Total	7	15	23	26	01/05-17/01	1435	1128	307	1021	414

Table 3: Statistical Breakdown of Sample Village Consultation

Components	Places				Dates	People Attending the Village Consultation Conferences				
	Provinces	Counties	Townships	Villages		Total	Ethnic minorities	Han	Male	Female
PE	Sichuan	1 Maoxian	Feihong	Qiangou	01/16/01	87	Qiang 87	-	61	26
				Shengou	01/15/01	185	Qiang 185	-	163	22
			Fushuen	Tuanjie	01/17/01	329	Qiang 328	1	218	111
				Yongcheng	01/18/01	217	Qiang 217	-	163	54
	Hunan	Miluo		Huangshi	01/18/01	33	-	33	28	5
				Tianjing	01/15/01	110	-	110	98	12
				Taolinsi	02/05/01	128	-	128	96	32
				Shaxi	01/18/01	120	-	120	90	30
	Hainan	Tongzha	Nansheng	Tongjia	01/11/01	197	Li 197	-	160	37
				Maoxiang	01/12/01	213	Li 173 Mao 40	-	180	33
			Maoyang	Yali	01/14/01	136	Li 136	-	73	63
				Shiyi	01/15/01	147	Li 147	-	83	64
	Anhui	Qingyan g	Shaji	Shati	01/14/01	23	-	23	13	10
				Yangmei	01/14/01	22	-	22	12	10
			Xihua	Leyuan	01/18/01	20	-	20	12	8
				Dongshan	01/15/01	20	-	20	12	8
		Ningguo	Shanmen	Zhumudian	01/19/01	134	-	134	107	27
				Shanmen	01/20/01	128	-	128	102	26
			Pingxing	Shafu	01/18/01	56	-	56	44	12
				Pingxing	01/18/01	45	-	45	37	8
	Henan	Shangsh ui	Huangzai	Gouxing	01/06/01	1520	-	1520	801	719
				Chengwang	01/07/01	1327	-	1327	683	644
			Lifukou	Dayanglou	01/06/01	1300	-	1300	800	500
				Ganzhuang	01/07/01	1000	-	1000	600	400
		Luyi	Magua	Huanglou	01/15/01	1100	-	1100	700	400
				Liuzai	01/14/01	1312	-	1312	825	487
			Zaoji	Xuanlou	01/09/01	1219	-	1219	628	591
				Liuqiao	01/11/01	1231	-	1231	732	499
	Gansu	Beiao	Shetang	Xiaqu	01/18/01	211	-	211	132	79
				Banshan	01/20/01	230	-	230	120	110
			Baiyang	Xiaping	01/23/01	316	-	316	200	116
				Baoan	01/25/01	231	-	231	195	36
	Hubei	Xiaocha ng	Guogang	Qingsong	01/12/01	67	-	67	46	21
				Yangchen	01/13/01	123	-	123	78	45
			Doushan	Jingfeng	01/14/01	118	-	118	98	20
				Guihua	01/15/01	105	-	105	90	15
	Liaoning	Xinmin	Liuhegou	Jiefang	01/17/01	240	-	240	160	80
				Xiaozhutun	01/16/01	220	-	220	150	70
			Liangshan	Huangjiagang	01/15/01	360	-	360	200	160
				Gudun	01/15/01	150	-	150	100	50
	Shandong	Qufu	Wucun	Gaolou	01/09/01	68	-	68	52	16
				Zhongxin	01/12/01	81	-	81	61	20
			Wangzhuang	Qianmeng	01/08/01	98	-	98	76	22
				Liuzhuang	01/06/01	76	-	76	65	11
		Sishui	Gaoyu	Yaoshan	01/08/01	184	-	184	162	22
				Changqingzhu ang	01/08/01	92	-	92	81	11
			Sizhang	Xingjiazhuang	01/09/01	72	-	72	66	6
				Qianyuan	01/09/01	86	-	86	82	4
	Shanxi	Yingxia n	Hezhong	Wagu	01/15/01	89	-	89	62	27
				Beihe	01/19/01	103	-	103	84	19
Xiashe			Zhaobu	01/14/01	157	-	157	131	26	
			Xingbu	01/14/01	132	-	132	98	34	
Hebei	Anci	Dongguguang	Niujiao	01/16/01	180	-	180	160	20	
			Nanmi	01/16/01	430	-	430	350	80	
		Chouzhuang	Dongchu	01/17/01	700	-	700	500	200	
			Songwangwu	01/17/01	140	-	140	110	30	
Total	11	14	28	56	01/06/- 02/05/01	17418	1510	15908	11230	6188

Additional Annex 13

Social Assessment Summary China: Sustainable Forestry Development Project

Introduction & Background

1. The Social Assessment (SA) is an on-going process being undertaken by provincial teams guided by provincial, national, and international consultants to assess the existing social conditions, to determine potential negative impacts of the Project, if any, to assist in improving the social design of the Project, to serve as a baseline for future monitoring, and to serve as a mechanism for community consultations on the Project as required by the World Bank consultation and disclosure procedures. The SA work carried out between June 1999 and March 2000 includes semi-structured interviews of over *1,500 households* in approximately 242 project villages across thirteen project provinces and over *70 focus group discussions* involving some 8,000 community residents. In addition, dozens of institutional stakeholder meetings (with administrative village leaders, township, county and provincial government officials) were held. The process to date has generated over 70 different individual site specific SA reports which have been consolidated into the *Social Assessment Report*, available in the SFDP Project Files.

2. Due to the relative complexity of the Project, with each of the three components covering different geographic areas and project implementation for each component proposed to be carried out by separate entities, three different SA teams were set-up at the provincial level and linked to each of the components. The Natural Forest Management (NFM) SA team, Protected Areas Management (PAM) SA team, and Plantation Establishment (PE) Community Forestry Assessment (CFA) team have been responsible for conducting the social assessment process in villages falling within the jurisdiction of their respective component. An estimated 400 individuals (local project staff who would be involved in the community development sub-components during project implementation, provincial social forestry experts, national and international social assessment experts) have participated in SA training and/or as a member of one of the three SA field work teams set up to carry out a representative sample of participatory rural appraisals, individual household interviews, and focus group discussions across the approximately 687,500 beneficiary households of the Project.

Methodology

3. The following steps were taken to set up each SA team, to ensure they had appropriate training in SA methods, and to generally strengthen the quality of the social assessment process and output: (a) a provincial social science expert with knowledge of participatory rural appraisal methods and sensitivity of ethnic minority issues was hired in each of the three key provinces, Hainan, Hunan and Sichuan; (b) following a Bank-approved TOR, two social science experts were hired at the national level to support the work of the provinces; (c) all experts received orientation and initial training in donor project preparation from specialists from Sichuan, a province which has had experience from involvement in several donor-funded projects; (d) social assessment teams were identified at the provincial level for each of the three components; (e) the team leader for each component and corresponding provincial expert were trained at a national workshop after which each trained team leader along with the provincial expert trained the staff of each provincial team; (f) SA pilots were undertaken by provincial teams and reviewed by a team of national and international experts during the Bank's February 2000 mission; and (g) Social Assessments were then extended to other sites, and SA Reports were completed for each of the proposed sites for the NFM and PAM components, and for one county per province considered under the PE component of the Project.

4. The SA results to date have provided necessary insights into (a) the existing socio-economic conditions and livelihoods of rural peoples living adjacent to areas proposed for either natural forest management, protected areas management or plantation establishment; (b) the laws and policies (i.e. 1998 logging ban, closure of steep slopes/conversion policy) governing these communities' access to and use of the natural resource base; (c) relationships between stakeholders; (d) the negative and positive impacts of the proposed Project with recommendations to mitigate any negative impacts; (e) any additional restriction to existing access to the natural resource base as a result of the Project; and (f) ethnic minority nationalities living in the project area. The results of the SA work conducted across each of the three components continues to be fed back into the project's design in order to better meet the objectives of each component, especially opportunities for community development activities.

5. During the pilot phase of the SA from January 3, 2000 to February 15, 2000, a first round of consultations with potential project beneficiaries was conducted. A second round of consultations occurred during the wider SA process in areas proposed for the Project. Project information leaflets were distributed at two periods, first on December 16, 1999 and again on March 6, 2000 in each of the proposed project sites prior to the SA consultations. The project leaflets describe (a) the objectives and activities of the overall Project and for each of the Project's three components, (b) the principles and criteria used to select project areas, including the application process for participation in the PE component of the Project, (c) the potential environmental impacts of the Project and the approach used to mitigate these impacts, (d) the source of the funds and the terms and conditions of the loan, and (e) the unit and contact address of persons in charge of receiving inquiries.

6. During the pilot SA work in Hainan province, the issue of no written language for the Li people was addressed by discussing the material in the local spoken language and providing the materials for the consultations in pictorial form. Sichuan provincial SA teams also used drawings in order to communicate with village communities (many whom are illiterate) during the SA process. Similarly, for other ethnic minority areas or in areas with a relatively low level of literacy, care was taken to ensure that the materials for the consultations were provided in a form and a language that are accessible to the groups being consulted. The general rule for the Project has been that if standard Chinese is not widely understood by the groups being consulted, the materials for the consultations would be provided in a language suitable to the locality and/or in pictorial form.

Socio-Economic Conditions

7. *Rural Livelihoods.* Rural communities living in NFM and PAM project areas have varied land use systems but they all cultivate staple grains (upland corn, rice and barley) and raise livestock. Despite the logging ban, the forest remains a critical livelihood resource. Forest areas are used for grazing, fuel-wood collection (as high as 10 tons/household for those living in Western Sichuan), and collection of non-timber forest products (NTFP). Moreover, illegal poaching continues to occur in certain project sites. Damage to crops and domestic animals caused by wildlife also adversely affects household income, as losses can be substantial. One village reported an annual loss of 30 kg of grain per household as a result of wildlife of which they were compensated less than 1 kg of rice per person by the local government.

8. The SA has revealed that the *logging ban* of 1998 has affected village communities living in different project component areas differently. Before the logging ban, income derived from the forest (wage labor from logging and hauling, and imputed income from collection of non-timber forest products) consisted of approximately 30-80% of household income in NFM project areas. With the logging ban, household incomes in the NFM component project area have been found to have declined by 59% on average. As a result, household incomes are becoming more diversified, as people are being forced away from past income generating opportunities based on higher levels of income from logging. Off-farm

incomes were found to be a major income source in predominantly Han and Tujia project areas. In communities falling under the PAM component and living in the experimental zones of nature reserves, subsistence income generating opportunities (fuelwood collection, felling for housing construction, land for grazing, NTFP collection, and swiddening) while technically restricted activities in the Nature Reserve are tolerated by reserve staff. In communities located in areas under the PE component of the Project, both the sale and subsistence use of timber extracted from natural and secondary forests has been banned. As a result, incomes have dropped and unemployment has risen sharply.

9. *Gender.* The SA problem ranking surveys revealed men and women have different development priorities. The activities identified by women that would yield higher benefits for them, particularly women of poorer households, include access to drinking water facilities, education and health facilities, village roads, small animal raising and sustainable NTFP uses. Unemployed women in State Forest Enterprises requested specific vocational training courses and basic education retraining. The SA conducted in many nature reserves identified the need for project activities that support training in literacy, accounting and farm management. Moreover, women of the Li ethnic minority tend to be in a more vulnerable position as compared to women of other ethnic groups. As a result, greater attention would be placed on incorporating their needs into specific activities planned under the Project.

10. *Poor vs. Less Poor Households.* Poor households indicated that the activities that they would like to have under the Project include pig, goat, and sheep production, bee keeping, drinking water improvements, education and health and small infrastructure such as village paths and bridges. Poorer households also requested training in cultivating fuelwood tree species and NTFPs. Conversely, richer households in the sample suggested yak raising, tourist guest-houses and irrigation infrastructure as possible project activities.

11. *Ethnic Minority Nationalities.* Of the 55 recognized *minzu* (“nationalities” or ethnic minority groups) in China, a total of 18 of them, *Li, Tibetan, Qiang, Tujia, Miao, She, Dong, Dulong, Hui, Mongols, Manchus, Yao, Bai, Lisu, Nu, Yi, Pumi* and *Naxi* reside in SFDP project counties and sites. Specific ethnic minority profiles have been prepared for four main ethnic groups living in SFDP project areas (Li, Tibetan, Qiang and Tujia). Shorter briefs were prepared for those ethnic minority groups that are less populous in the project area. Each profile is based on information collected during the social assessment process (i.e. household interviews and village wide focus group discussions) and highlights (i) the location and population of the minority nationality; (ii) different sub-groups, specific language type and levels of literacy; (iii) their use of land and means of livelihood; and, (iv) key measures being taken under the Project to ensure cultural and location specific appropriateness. In total, over 900 ethnic minority households were interviewed and over 50 focus group discussions held in ethnic minority areas. The self-standing *Ethnic Minorities Development Plan (EMDP)* can be found in the project files. For a summary of the EMDP, refer to Annex 16.

Project Social Impact, Risks & Opportunities

12. The SA teams identified the potential risks and opportunities of the Project by component, and as perceived by beneficiaries during focus group discussions. In the NFM component, possible *negative* social risks arise from conflicting land use between forestry regeneration and livestock grazing/pasture; conflicts over unclear land use rights; lack of coordination with new forest policies; possible loss of assets from small scale infrastructure development to be identified during implementation through a community driven planning process. The potential *positive* impacts arise from community participation in decision-making, capacity building of village and township institutions, development of skills in sustainable forestry and agriculture, improved land use planning, secure access to fuel-wood supplies, NTFP, and pasture, diversified income generation opportunities, participation of women and poorer households, improved village infrastructure, improvements in health and education services.

13. In the Protected Areas Management component, possible *negative* social risks to communities arise from recent extensions of nature reserve boundaries with possible additional restrictions to natural resource uses; conflicts between communities, local government and NR staff with respect to resource use; and conflicts between participating villages and non-participating villages. *Positive* social impacts envisaged include equal participation of all households in participating villages; local capacity building in resource management and rural development, pilots developed to reduce crop damage from wildlife, the introduction and support of sustainable livelihood opportunities, fostering partnerships between NR staff, communities and local government, and the development of a mutually agreed conflict resolution mechanism.

14. In the Plantations Establishment component of the Project, possible *negative* social risks that could arise include limited participation of communities in plantation planning, unclear production arrangements, and conflicting land use between plantation establishment, pasture land for grazing and fuelwood for heating and cooking. Moreover, the SA revealed that the government's land conversion program is also of concern to local populations in SFDP project sites. These concerns have been taken into consideration in the re-designing of this component. The opportunities for *positive* social impacts of this component as identified by communities surveyed include the voluntary nature of this component, and the Project's perceived ability to deliver quality inputs and services such as training, technical support, and financial services.

Conclusions & Recommendations

15. The SA carried out under SFDP is perhaps one of the most comprehensive of its kind for a Bank assisted project in China. While consultations with communities revealed that the Project would provide some relief to recent government policies that have banned logging and restricted agriculture activity on sloped land, it also identified potential negative social impacts of the Project itself. As a result, each of the potential negative social impacts raised by communities and SA experts through the SA process have been acknowledged and steps have been taken to improve the Project's design, thereby significantly reducing, if not eliminating, these concerns.

16. Through the SA process, it has been recommended that (a) the Natural Forest Management component's co-management process would (i) address tourism development concerns and opportunities in Songpan county, Sichuan province, (ii) resolve conflicts over land use, and (iii) ensure coordination with respect to the implementation of new forestry policies; (b) the development of a Process Framework for Mitigating Potential Adverse Livelihood Impacts would provide a means to provide a way to mitigate any sub-optimal effects as a result of restricting access to protected areas; (c) the development of a Policy Framework for Resettlement and Land Acquisition that protects village inhabitants from the unlikely event that project activities would involve the taking of some portion of their land; and, (d) adjustments to the formal Plantation Establishment component's application process.

**Additional
Annex 14**

**Policy Framework for Resettlement and Land Acquisition
China: Sustainable Forestry Development Project**

A. Introduction

1. The proposed Sustainable Forestry Development Project promotes innovative approaches to improve management of forest resources and to protect the natural environment. A key aspect in project design is provision of incentives so as to enlist the voluntary participation in resource management. Neither project agencies nor other governmental units are expected to undertake civil works or otherwise identify or undertake activities requiring taking of land. Accordingly, neither land acquisition nor involuntary relocation is expected to occur in any of the three project components:

The Protected Area Management component supports conservation and improved forest management. Because this component involves existing forest reserve areas, land acquisition will not occur. Effective management, however, may require additional restrictions on forest use. The Project views community co-management of forest reserves as essential to sustainable management. This means that communities now relying on access to forest resources will participate in allocation of resource use and in design of remedial measures for lost resource access, if any. (Potential impacts resulting from restriction of access to nature reserves are covered in a separate Process Framework as described in OP 4.12 (See Annex 15).

The Plantation Establishment component promotes increased production of wood to meet growing consumer demand and to provide sources of employment and income for persons already affected by logging bans and other restrictions on use. Participants receive various forms of support to develop wood or tree-crop production. Most recipients are likely to be individual or collective plantation owners, selected from among voluntary applicants meeting specified eligibility criteria. This may involve voluntary conversion of participants' existing land to plantation purposes, but no involuntary land acquisition or other resettlement-related issues are likely to arise. It is possible that township governments may be among recipients, but eligibility criteria require that any government recipients utilize existing government land for eligible activities, or obtain additional land through voluntary negotiations with present land owners or users.

The Natural Forest Management component supports development and testing of new management techniques of potential use in the government's Natural Forest Protection Program. Among various activities in this component, the European Union would provide small grants or credits in rural villages already affected by the logging ban. Villages meeting counterpart funding requirements would be eligible for small village improvement grants. These small-scale activities would be identified through community planning processes. Some may involve physical improvements (e.g., road widening or construction of sheds or other facilities), but it is expected that all such improvements would be sited within the village itself. Because land is collectively owned within villages, there is very little likelihood of land acquisition or resettlement-related impacts. Use of unallocated collective land for community improvements identified by the community itself is not considered land acquisition. Use of land allotted to individual households on a lease basis by the collective would be covered by this framework unless obtained through voluntary negotiations with the leaseholder.

2. As part of project agreements, the Borrower will attest that no activities requiring involuntary

taking of land will be undertaken in this Project without prior acceptance by the Bank of appropriate planning remedies. The European Union, as the source of grant support, also will attest that it will not provide support for any activities requiring involuntary taking of land, or activities imposed by government agencies on villages receiving grant support.

3. At the time of project preparation and appraisal, no land acquisition or other resettlement-related impacts could be identified. However, since the site of small-scale infrastructure that may be undertaken in the Plantation Establishment and the Natural Forest Management components is not yet known, resettlement-related impacts cannot be ruled out completely. This Policy Framework has been prepared for the purpose of establishing principles and procedures to be applied in the event that involuntary loss of land or other fixed assets would arise as a result of project implementation. The policy framework has been developed based on World Bank Operational Directive 4.30 on involuntary resettlement and relevant Chinese laws and regulations, and will form the basis for resettlement planning.

B. General Principles

4. Basic principles guiding any necessary actions related to involuntary loss of land or other assets are as follows:

- (a) Taking of land or other assets, as well as other resettlement-related impacts, should be avoided or minimized;
- (b) Project activities causing any such losses will not be approved for financing until remedial measures have been prepared and found by the Bank to be consistent with this framework;
- (c) As relevant, remedial measures should provide project-affected persons with: (i) compensation for land or other lost assets at full replacement cost without depreciation, (ii) compensation for damaged crops at full market value, (iii) provision of an alternative house plot (as necessary), and (iv) land redistribution, alternative employment or other measures necessary to improve, or at least restore, incomes following loss of land or other productive assets;
- (d) Absence of legal title to, or formal ownership of, affected assets is not a barrier to compensation or other forms of assistance;
- (e) Adequate supervision and monitoring should be in place to identify any issues associated with involuntary losses in a timely manner;
- (f) Institutional responsibilities to implement the rehabilitation measures need to be clearly delineated;
- (g) For the purposes of this framework, “affected persons” are defined as persons who, as a result of works carried out or to be carried out under the Project, would incur involuntary loss, temporarily or permanently, of land, shelter, productive assets or access to productive assets, or of income or means of livelihood and, as a consequence, have their living standards or production levels adversely affected; and
- (h) No grant assistance will be provided for any activities requiring involuntary relocation of residence.

C. Identification of Impacts and Planning Procedures

5. As stated above, project design emphasizes voluntary participation, including selection of activities by villagers themselves. If involuntary taking of land or other assets (including involuntary taking by collectives of land leased to collective members) arises during project implementation, remedial plans are to be prepared in keeping with the general principles listed above. As regarding compensation for lost assets, and conversion of agricultural land for other purposes, remedial plans also will be consistent with the Law of the PRC on Land Management (1999), the Implementation Regulations of the Law of the PRC on Land Management, and related provincial laws and regulations.

6. Given the nature of the proposed project components, any activity that may cause taking of land or other assets is likely to affect relatively few people (e.g., less than 200 people), and impacts are likely to be relatively minor (e.g., not requiring changes in occupation or relocation of residence). Under such circumstances, a relatively brief remedial plan can be prepared. Even under these circumstances, however, the remedial plan should briefly review: (i) description of the project activity necessitating land acquisition; (ii) basic legal or regulatory provisions regarding land acquisition and compensation; (iii) basic data enumerating and identifying impacts and the persons to be affected by them; (iv) compensation rates; (v) timetable; (vi) organizational and financial arrangements; and (vii) consultative arrangements (including grievance procedures).

7. In the unlikely event that any project activity is to affect more than 200 persons, more detailed presentation of planning elements is required. In the event that any project activity would result in the necessity for arrangements to promote the economic rehabilitation of any affected persons, detailed review of arrangements (e.g., land redistribution, provision of employment, or other alternative measures to restore incomes) must be provided prior to Bank acceptance.

D. Management Organizations and Responsibilities

8. At the time that the necessity of land acquisition (or taking of other assets) is recognized, the provincial Project Management Office should assign responsibility for consultations with project-affected persons, preparation of remedial plans, and resettlement implementation. Specific responsibilities to be assigned include, at a minimum:

- (a) identification of impacts and project-affected persons;
- (b) establishment of remedial measures consistent with the general principles stated above;
- (c) consultations with project-affected persons, and dissemination of relevant information to them in a timely manner;
- (d) prior consultations with the Bank (or other donor agencies, as relevant) in selection of activities necessitating land acquisition or resettlement, and in formulation of remedial plans;
- (e) coordination with any local government units sharing responsibility for any aspects of resettlement preparation or implementation;
- (f) timely payment of compensation, and provision for delivery of any other forms of assistance;
- (g) monitoring of effectiveness of resettlement implementation; and
- (h) responding to grievances presented by project-affected persons.

E. Consultation and Grievance Procedures

9. The taking of land or other assets, and the preparation of remedial plans require consultation with

project-affected persons. Prior to taking of land or other assets, the responsible governmental unit will visit affected villages or households to discuss the location and quantity of assets to be acquired, and compensation rates and any other rehabilitation measures to be provided. Following consultations, any remedial plans will be disseminated to the project-affected persons in a manner accessible to them. Information disseminated to the project-affected persons will include: (i) compensation rates for all categories of affected assets; (ii) eligibility criteria for all other forms of assistance that may be provided; and (iii) grievance procedures (including specific contact information for initiating, or following up on, grievances).

10. If project-affected persons are not satisfied with proposed resettlement arrangements, or if they are dissatisfied with actual resettlement implementation, they can first seek satisfaction through village councils (or other local leaders). If this does not result in resolution of issues, project-affected persons can also make grievance verbally or in written form to authorities as specified in the remedial plan. Specified authorities should record receipt of grievances and reply to the project-affected person or persons within ten days after receiving the grievances. If the grievances or disputes cannot be resolved through administrative action, the project-affected person can initiate legal proceedings, in accordance with provincial and national law.

**Additional
Annex 15**

**Process Framework for Mitigating Potential Adverse Livelihood Impacts
China: Sustainable Forestry Development Project**

1. **Project Description.** The Sustainable Forest Development Project (SFDP) proposes the development and implementation of innovative management approaches in selected natural forests, nature reserves and forest plantations to relieve pressures on China's remaining natural forest resources, as well as to protect selected important forest ecosystems and associated biodiversity. The SFDP has three components: (a) Natural Forest Management (NFM); (b) Protected Areas Management (PAM); and (c) Plantation Establishment (PE).

2. **PAM Component Description.** The SFDP's PAM Component would support more effective *in situ* protection of threatened and globally important forest ecosystems and habitats, and associated rare and endemic species in selected Nature Reserves (NR) in China. China's NRs face increasing pressure from the human communities inside or in close proximity to them. These local communities, many of which are impoverished, are typically forest-dependent in that they derive substantial portions of their income from the use of non-timber forest products (NTFPs), rely on firewood as a major energy source (annual fuelwood consumption can be as high as 10 tons/household in the Western Sichuan mountains), and use forest areas for other subsistence and economic activities such as farming staple grains, grazing livestock, and medicinal herb production. In some areas these activities increasingly exceed sustainable levels, undermining already meager livelihoods. Moreover, coupled with widespread wildlife hunting and illegal extraction of timber products, excessive levels of forest-resource use adversely affect the biological integrity and sustainability of the NRs.

3. The significant forest dependence of the local communities presents a three-fold challenge to protecting the China's NRs from overuse and other threats. The first facet of the challenge is how to engage local people in NR management, during the Project and over the long-term. The second is what are appropriate encouragement and incentives for local people to use nature reserve resources sustainably. And, the third is what types of alternatives could be developed to forest-resource-dependent activities which would both support more sustainable livelihoods and maintain the integrity of the nature reserves. The PAM component takes a multi-pronged approach to addressing these challenges through three sub-components and key activities: (a) Nature Reserves Planning and Management including (i) revision of initial management plans, (ii) preparation of ecological baseline maps, (iii) implementation of wildlife damage control demonstration, (iv) strengthen field management, research, and monitoring, and (v) improvement of reserve infrastructure; (b) Community-Based Nature Conservation including (i) preparation and implementation of co-management demonstration activities, (ii) community conservation education/public awareness, (iii) energy conservation demonstrations, and (iv) technical extension and community training on sustainable livelihood activities; (c) Training and Capacity Building with emphasis on provincial and nature reserve levels; and (d) Monitoring and Evaluation.

4. **Policy Trigger.** This Process Framework will be implemented in accordance with World Bank policy on involuntary resettlement. It covers restrictions of access to legally designated parks and protected areas which result in adverse impacts on livelihoods of the affected persons. Good practice has demonstrated that the objectives of the policy can be better achieved through a participatory process and rehabilitation interventions along the lines outlined in this Process Framework. To determine the appropriate coverage of the Process Framework, a review was undertaken of the PAM component design and the results of the Social Assessment (SA) to confirm if any involuntary restrictions of resource access

are anticipated, as well as to evaluate the potential impacts on peoples' livelihoods of any restriction of access likely to be imposed as a result of the PAM component.

5. In general logging, grazing, hunting, fishing, herbal plant collection, mining, burning of grasses or other vegetation, and farming of crops are all forbidden by law within NRs in China, with some exceptions for limited subsistence uses. China's NRs are typically sub-divided in to a core zone, where no use for any purpose other than approved research is allowed, and an experimental zone, where subsistence and income generating uses are allowed on a limited level as long as the uses do not conflict with the operation of the nature reserve. The imposition of China's "logging ban" in 1998, effectively extended the prohibition of logging, collection of forest products and other extractive uses of forest resources to all natural forests.

6. In order to enhance the management systems of NRs, the PAM component would support, *inter alia*, development and implementation of management plans for selected NR, which would focus on key management activities to enhance conservation, such as habitat restoration, increased monitoring and working with forest-dependent households and communities to develop and implement regulations and other measures to ensure sustainable utilization of natural resources. The PAM component design would not require involuntary physical displacement or relocation of people. Furthermore, to the extent feasible, the NR management plans would avoid including new restrictions or stricter enforcement of current restrictions of use of NR resources by local communities which would adversely affect their livelihoods, beyond those needed to ensure the sustainability of the NRs.

7. Nonetheless, new or increased restrictions of access to natural resources in the NRs, such as changes in zoning between experimental and core zone, or introduction of a new, buffer zone with increased restrictions from the experimental zone, may be needed to ensure sustainability of the NRs. In some cases, changes in zoning may adversely impact livelihoods. In other cases, zoning changes may actually increase opportunities for communities, as in the case of some of the NR in Hunan Province, where re-zoning of the core zone may actually open up more collective forests for sustainable use of fuelwood and selective collection of NTFPs. However, increased restriction of access cannot be ruled out until the management plans for the NR are developed during implementation, at which time the nature of any proposed restrictions, as well as the type of measures necessary to mitigate adverse impacts of those restrictions, would be determined in consultation with the project-affected groups.

8. **Process Framework.** This Process Framework outlines the criteria and procedures as described in OP 4.12, which will be followed as part of the Project, in cases where project-induced involuntary restriction of access to NR resources results in adverse livelihood impacts, to ensure that eligible, affected persons are assisted in their efforts to restore or improve their livelihoods in a manner which maintains the environmental sustainability of the nature reserve in question. More specifically, it describes the participatory process by which: (a) specific components of the Project were prepared and will be implemented; (b) the criteria for eligibility of affected persons will be determined; (c) measures to assist the affected persons in their efforts to improve or restore, in real terms, to pre-displacement levels, their livelihoods (e.g., as appropriate, alternative grazing areas, cultivation of unique non-timber forest products such as mushrooms, or of other crops, or investments in community infrastructure) while maintaining the sustainability of the park or protected area will be identified; and (d) potential conflicts involving affected persons will be resolved. It also provides a description of the arrangements for implementing and monitoring the process.

9. Process Followed During Preparation. A full SA process was conducted during component preparation by provincial teams guided by provincial, national and international experts. A representative sample of rural village households in selected "critical" communities in and adjacent to the 13 nature

reserves included under the Project were interviewed. The objective of the SA was to: (a) assess the existing social conditions; (b) determine the potential negative impacts of the component, if any; (c) serve as a vehicle for community consultations on the component; and (d) inform the ongoing component design.

10. The SA found that the likely overall impact of the proposed PAM component would be positive since participation of local communities in preparation and management of nature reserves would be increased, alternative methods for reducing crop damage from wildlife would be introduced, awareness of potential nature reserve benefits on local economies would be enhanced, and alternative livelihood and energy efficiency activities would be supported. The results of the SA were used to refine the design of the PAM component, enhancing positive impacts and mitigating likely adverse effects. Nonetheless, it is possible that some component activities could inadvertently affect adversely the livelihoods of persons living in or adjacent to the NRs.

11. Preparation or revision of management plans (MPs) for the NRs would follow a participatory approach, in which the roles of local communities in the management of NRs would be strengthened, and appropriate measures would be identified with local communities to enhance the sustainability of NR resource-based livelihood activities and manage pressures on the NRs. In addition, a community-based nature conservation sub-component would assist the 13 NRs participating in the Project develop their community-based approach to conservation through support to: (a) the establishment of county-level organizational structures, as well as strengthening of village institutions, for the development and implementation of co-management activities in the NRs; (b) decreasing the threats from overuse of forest resources for energy through targeted demonstrations of appropriate, practical, and cost-effective energy conservation approaches; and (c) providing training and technical assistance for the identification and demonstration of alternative income generating techniques as alternatives to the use of critical forest resources.

12. Process to be Followed During Implementation. The process to be followed during project implementation would consist of the following seven key steps: (a) conduct participatory rural assessment (PRA) surveys to determine community use of natural resources and critical threats, conflicts and community issues; (b) establish and train leading groups; (c) select co-management demonstration sites; (d) establish Management Forum in communities; (e) prepare Community Resource Management Plans; (f) establish and implement Community Conservation Fund; and (g) monitor and evaluate implementation.

13. *Participatory Rural Assessments.* Following-up on the SAs conducted during preparation, additional work on social assessment through Participatory Rural Assessment (PRA) surveys would lead off the implementation of the component. The PRAs would focus on developing a more in-depth understand of: (a) the social and geographic setting of the communities in the component areas, including their economic and social problems; (b) the types and extent of community use of natural resources, and the existing *de jure* and *de facto* rules and institutions for the use and management of natural resources; (c) the communities' threats to and impacts on the NRs; (d) the potential livelihood impacts of new or more strictly enforced restrictions on use of resources in the NRs; (e) communities' suggestions and/or view on possible mitigation measures; and (f) potential conflicts over the use of natural resources, and methods for solving potential conflicts. The results of the PRAs will be an input to the development or revision of the MPs under the nature reserves planning and management sub-component, as well as to the development of the Community Resource Management Plans (CRMPs) under the community based conservation sub-component.

14. *Leading Groups.* Leading groups for each of the NRs, comprised of officials from local county government, staff from the nature reserves, and representatives of the local communities participating in the

co-management activities will be formed under the component. The leading groups will be charged with overseeing the co-management process, with key tasks and responsibilities including: (a) preparing selection criteria for the co-management demonstration sites; (b) coordinating technical advice, programs and cooperation among various local government departments; (c) reviewing and approving CRMPs and community contracts; and (d) resolving conflicts arising out of the co-management process.

15. *Determination of criteria for eligibility of affected persons, and identification of measures to assist affected persons.* Selection of the villages to participate in the Community-Based Conservation sub-component would not be made until the first year of project implementation, and would be based on the results of the participatory rural assessments (PRAs) as well as the threats analysis, to identify the sources of the major threats to the nature reserves, conducted as part of the nature reserve management planning process. Participating villages would be identified based on their level of dependency on the forest resources inside the nature reserve, the degree of threat that these uses pose to the NR, and the anticipated severity of adverse impact to livelihoods from imposition of any proposed use restrictions. The results of the PRA and the threats analysis will be used to ensure that the Project provides benefits to eligible forest-dependent household in the project areas adversely affected by the Project, and to help define project activities that will assist them in improving their livelihoods, both by enhancing and improving the sustainability of the natural resource base and by identifying alternative sources of income (e.g., skills training, small grants, technical extension, etc.).

16. Based on the results of the PRA surveys and the threats analysis, the Leading Groups will determine the eligibility of villages as well as confirm the eligibility of households in the eligible villages, and select co-management sites in or around each of the NRs on the basis of severity of impacts. Critical communities (i.e., those which are dependent on the nature reserve, pose a threat to the nature reserve, and would be adversely affected by proposed use restriction), as identified in the management planning process, will get priority for project activities under the Community Resource Management Plans (see paras 18 - 20). Other communities, either less impacted or exerting less pressure on nature reserve natural resources, may not be able to participate. A minimum of twenty-six villages (two per NR) will be selected to participate in co-management activities, including alternative livelihood measures. For NRs in which project activities would adversely affect the livelihoods of local people in more than two villages, the other villages would be deemed eligible and would be included, and an increased level of local government counterpart funding would be in place to cover the costs of the additional villages. Another 39 villages will be selected to participate in fuelwood management and/or technical training activities. In addition, 7 villages will be supported in community-based wildlife management demonstrations.

17. *Management Forum.* A Management Forum (MF) for the co-management process would be comprised of representatives are the various stakeholders groups, including the village committee, village groups, special groups, and nature reserve staff. The exact composition of the MF would be determined by the results of the PRA, which would clarify the traditional power structures and their relationship to the official power structures. Where appropriate, the MF would include religious and/or traditional leaders (e.g., monks, ethnic minority leaders). The MFs would lead the preparation of Community Resource Management Plans (CRMPs) as well as manage the Community Conservation Fund (CCF). In addition, the MF would approve community conservation and development project supported by the CCF, enforce rules and regulations of the CRMP, and adjudicate potential conflicts.

18. *Community Resource Management Plans and Community Conservation Funds.* As an incentive for local communities to participate in the development and implementation of the MPs for the NRs, the Project will help the communities to prepare CRMPs, outlining the priority management actions that communities would need to undertake, as well as meeting priority needs of communities. Thus, the

CRMPs would provide management programs, or plans and rules agreed to by the community, the nature reserve and local government, that provide for more sustainable use of critical community resources, such as firewood and wild medicinal plants. In ethnic minority communities these plans would be culturally appropriate.

19. The CRMPs would be developed by the village-level MF, a village stakeholder committee built on the village committee, through participatory mapping exercises and detailed consultations with stakeholders. All people affected by MPs for the NRs would be given the opportunity to participate in planning and implementation of CRMPs. The MFs would be provided technical assistance to outline their respective natural resources management issues, and to develop a plan for solving the most important conflict or threat facing the nature reserve and the community. Each of the CRMPs would comprise a community-based NR resource use and protection program, proposals for economic activities that reduce the overuse of critical NR resources or provide alternative livelihoods for resources lost, and outline the organizational structure and approach for managing the implementation of the CRMPs. As village capacity to develop and manage projects is generally low, village leaders and other members of the MF would receive project management training under the Project.

20. Eligible activities in the CRMPs would be financed through the Community Conservation Funds (CCFs), with appropriate counterpart funding from local governments and beneficiaries. Eligible activities for financial assistance include small-scale enterprises, alternative livelihood activities or small-scale conservation and rural development activities, such as installing energy conserving technologies in village households. The CRMPs will also contain negotiated conservation agreements related to the MPs for the NRs, which will outline in detail the conservation activities to be undertaken by the community as part of implementation of the management plan. Funding for the CRMPs will be conditioned on commitment by the community to undertake the agreed conservation measures, as well as on making counterpart contributions and ensuring maintenance of investments, as appropriate.

21. The SFDP would provide funds for the establishment of CCFs. Villages can use the CCF to finance projects identified within the community that solve problems and/or take advantage of opportunities identified in the CRMPs. The Project would provide technical assistance and training to MFs regarding the management of the CCFs.

22. *Monitoring and Evaluation Arrangements.* Baseline information on socio-economic conditions of the villages and household, in particular the potential livelihood impacts of new or more strictly enforced restrictions on use of resources in the NRs, will be collected through the PRAs conducted at the initial stage of implementation. These data will be used as the basis for determining the eligibility of villages and households for assistance under the process framework, as well as designing measures to assist the affected persons in their efforts to improve or restore their livelihoods to comprise the CRMPs. Follow-up PRAs, conducted at the mid-term review and the close of Project, will update these data for the purpose of monitoring and evaluation of the implementation and impacts of the CRMPs. The specific monitoring indicators will be outlined in the Plan of Action. Possible indicators include: numbers of eligible villages and households; the potential livelihood impacts to these villages and households of new or more strictly enforced restrictions on use of resources in the NRs; livelihood benefits of measures to assist the affected persons; numbers of villages and households participating in CCFs; and funds provided by CCFs to eligible villages and households.

23. Plan of Action. The CRMPs for each of the 13 NRs would together serve as the Plan of Action required by the Bank's policy on involuntary resettlement to be developed and submitted to the Bank during project implementation and prior to enforcement of new restrictions of access to resources in the NR,

describing the specific measures to assist persons to be adversely affected by the proposed restrictions.

24. Conflict Resolution Mechanism. The risk of conflicts arising between communities or among NRs, villages and households during implementation of this process framework are real and must be addressed. A two-fold mechanism, with both proactive and reactive elements for resolution of conflicts, disputes and grievances that might arise, would be put in place

25. *Proactive Approach*. Recognizing that many conflicts arise due to difference in understanding and perceptions, a proactive approach would be adopted to avoid conflicts before they start. This approach would promote a common understanding through a four-pronged approach, including: (a) wide-spread disclosure of project background information; (b) clarification of the criteria of eligibility for assistance under the process framework; (c) clarification of the duties and responsibilities of all stakeholders in the process, and in particular the composition and roles of the leading groups and management forums; and (d) community conservation education and public awareness regarding values of the NRs, threats to the NRs, and options for mitigating these threats.

26. *Reactive Approach*. Conflict that do arise would be dealt with through the appropriate leading groups and MFs. The MFs would adjudicate potential conflicts at the village level. If resolution is not possible at the village level, the MF can seek advice from the county-level Leading Group, who are charged with overseeing the co-management process.

Additional Annex 16

Ethnic Minorities Development Plan China: Sustainable Forestry Development Project

Overview

1. The objective of the Ethnic Minorities Development Plan (EMDP) is to ensure that the process of development generated by the Sustainable Forestry Development Project (SFDP) fully respects the dignity of ethnic minorities, their cultural rights and their cultural identity. The terms "minority nationalities" and "ethnic minorities" are both officially recognized by the Government of China and are used interchangeably throughout the EMDP and this summary. In particular, the objective of this strategy is to ensure that the ethnic minority populations do not suffer negative effects of the Project and that they receive social and economic benefits compatible with their culture. This is accomplished by a participatory and consultative process engaging ethnic minority stakeholders to ensure that the concerns of ethnic minorities have been taken into account in project design. Moreover, specific areas for further investigation flagged by the Social Assessment (SA) process, the provincial, national, and international social assessment experts, and raised in the full EMDP would serve to hone the Project more toward meeting the development objectives of peoples classified as ethnic minority nationalities in SFDP project areas. The full Ethnic Minorities Development Plan is available in the SFDP Project files.

2. The EMDP presents important demographic and socio-economic information for all SFDP project counties, townships and villages where ethnic minorities live. Moreover, the SFDP social assessment has (a) documented the approximate number and type of ethnic minority nationality in each of the project counties, townships and villages; (b) described their livelihood opportunities; (c) described the potential threats to their livelihood as a result of the Project; and (d) summarized possible opportunities the people themselves saw to generate higher incomes through project activities, including more sustainable livelihood options. This specific investigation has been undertaken to ensure that ethnic minority groups receive equitable access to project activities and services.

3. The EMDP provides programmatic recommendations to mitigate possible negative impacts identified through the SA process. In particular, it has been recommended that (a) the Natural Forest Management component's co-management process would (i) address tourism development concerns and opportunities in Songpan county, Sichuan province which were raised by ethnic Tibetans, (ii) resolve conflicts over land use in all areas, and (iii) ensure coordination with respect to the implementation of new forestry policies; (b) the development of a *Process Framework* would provide a means to mitigate any sub-optimal effects as a result of restricting access to natural resource areas; (c) the development of a *Resettlement Policy Framework* that protects village inhabitants from the unlikely event that project activities would involve the taking of some portion of their land; and, (d) adjustments to the formal Plantation Establishment component's application process.

Ethnic Minorities in Project Area

4. Of the 55 recognized ethnic minority groups in China, a total of 18 of them, *Li, Tibetan, Qiang, Tujia, Miao, She, Dong, Dulong, Hui, Mongols, Manchus, Yao, Bai, Lisu, Nu, Yi, Pumi* and *Naxi* reside in SFDP project counties and sites. The largest number of ethnic minority nationalities that inhabit SFDP project areas include the Tibetan, Bai, Qiang, Tujia, Li, and Lisu. By far, the Tibetan ethnic minority are most prevalent overall. There are approximately 25,000 Tibetans (50% of all potential ethnic minority

project beneficiaries and 28% of the total beneficiaries in two of the three components). The Yao, She, Yi, Nu, Lisu, Pumi, Bai, Dulong and Naxi are found in a very small number of project areas and in small numbers. Mongols and Manchus are only found in only 3 project counties in Liaoning province. The Hui people inhabit only a few SFDP project areas in Sichuan and Gansu provinces and tend to be the least marginal of the ethnic groups in this area. They are mostly traders and live in township and county centers and are not found in specific project villages. Generally, ethnic minority beneficiaries of SFDP are located in remote areas where the remaining natural forests are located or adjacent to protected areas such as nature reserves. As a result, the Project seeks to work with mostly ethnic minority communities in its attempt to achieve its sustainable development and biodiversity conservation objectives.

5. Ethnic minority profiles have been prepared for all ethnic groups identified as living in SFDP project areas. More detailed briefs have been prepared for more represented groups (Tibetan, Bai, Qiang, Li, Tujia and Lisu). Shorter briefs were prepared for less represented groups (Miao, Yao, Yi, She, Dulong, Dong, Nu, Naxi, Pumi, Mongols, Manchus and Hui). Each profile is based on information collected during the social assessment process (i.e. household interviews and village wide focus group discussions). In total, *over 900 ethnic minority households* were interviewed and *over 50 focus group discussions* held in ethnic minority areas. In addition, an independent expert investigation of Tibetan and Qiang ethnic groups in Songpan County, Sichuan Province was undertaken as part of the project preparation process. Each ethnic minority nationality profile highlights (i) the location and population of the minority nationality; (ii) different sub-groups, specific language type and levels of literacy; (iii) their use of land and means of livelihood; and, (iv) key measures being taken under the project to ensure cultural and location specific appropriateness.

6. Project site profiles were also prepared to illustrate the specific conditions under which ethnic minorities live in SFDP project sites. These site specific profiles include (i) an overview of the typical livelihood patterns of ethnic minorities living in the project site area; (ii) a description of the extent to which each ethnic minority inhabits the project area; (iii) an overview of how each ethnic minority group use natural resources, particularly the forests, for subsistence, commercial and other cultural purposes; (iv) a summary of the problems faced by these populations; and (v) an overview of risks and opportunities that exist for them under the Project. The table below presents the location (province) of each of these minority groups and within which component of SFDP each group falls.

Distribution of Ethnic Minority Nationalities by SFDP Component

Ethnic Minority	By Location (Province)	By SFDP Component		
		NFM	PAM	PE
Li	Hainan	*	*	*
Tibetan	Sichuan Yunnan Gansu	*	*	
Qiang	Sichuan	*	*	*
Tujia	Hunan Hubei Guizhou	*	*	*
Miao	Hunan Hubei Guizhou	*	*	*
Dong	Guizhou		*	
Yao	Hunan	*		*
Hui	Sichuan Gansu	*		*
Mongol, Manchu	Liaoning			*
Yi, Bai, Lisu, Naxi, Nu, Pumi, Yi	Yunnan		*	
She	Hunan	*		

Note: NFM refers to the Natural Forest Management component, PAM refers to the Protected Areas Management component, PE refers to the Plantation Establishment component of the project.

7. The Social Assessment indicates that there would be approximately 687,500 household beneficiaries (2.75 million individuals) of the Project, of which at least 3% (or 87,800 individuals) belong to one of the ethnic minority nationalities. The approximate number of ethnic minority beneficiaries are found to be uneven across each of the three project components as reflected in the table below. This is a result of the fact that two project components, PAM and NFM, are located in remote natural forest areas where ethnic minorities reside, while the PE component is located only in areas suitable for commercial plantation establishment and participants have to be willing to borrow funds at commercial rates.

Ethnic Minority Project Beneficiaries

Component	NFM	PAM	PE	Total
Total Beneficiaries	29,000	57,200	2,667,700	2,753,900
Ethnic Minority Beneficiaries	13,100	40,600	34,100	87,800
% Ethnic Minorities	45%	71%	1%	3%

- *Natural Forest Management (NFM)*. An approximate total of 13,100 ethnic people inhabit SFDP NFM component villages of which 29% are Li (living in Hainan province), 34% are Tibetans (living in Sichuan province), 7% are Qiang (also living in Sichuan province), and 29% are Tujia (living in Hunan province). There are also She, Yao, and Miao people in very small numbers living in project areas in

Hunan province. The ethnic population account for 54% to 100% of the beneficiary population in 9 out of the 13 NFM project townships, and only 5% in the remaining four sites (two in Sichuan province and two in Hunan province).

- *Protected Area Management (PAM)*. Approximately 191,000 people belonging to one of the officially recognized ethnic minority/nationality groups reside in one of 78 project townships where thirteen project Nature Reserves (NR) are located. More than 50 percent of the ethnic minorities live within and around the two Yunnan province nature reserves, where they account for 81%-100% of the project township population. Most of the remaining ethnic minorities live in and around eight nature reserves and account on average for approximately 93% of population in 56 townships. A total of 230 administrative villages in these townships, mostly inhabited by ethnic minorities are located within nature reserve boundaries. However, twenty-six villages will participate in community based conservation activities, and another 39 villages will join fuelwood management or technical training activities. An additional 7 villages would be supported in community-based wildlife management projects. The exact numbers of ethnic minority beneficiaries will become more accurate once each of the project villages has been selected for this component. This would occur during the first year of implementation.
- *Plantation Establishment (PE)*. Only 14 of the 107 PE counties or 13% of them contain ethnic minority populations (one county in Hainan, Sichuan, and Gansu provinces; two counties in Henan province; four counties in Hunan province; and, five counties in Liaoning province). In each of these counties, the overall ethnic minority population in those counties ranges between 5%-97% of the total county population. A process of formal application to join the Project would continue to be carried out in each of the 107 project counties to ensure wide participation. A total estimate of 2,667,600 households would take part in the component, of which less than 34,000 (or 1%) would belong to one of the recognized ethnic minority nationalities.

8. SFDP would involve the participation of ethnic communities in nature conservation and the management of natural resources with the objective of enhancing local levels of sustainable and economically viable development. The principal activities of the Protected Areas Management component that would specifically benefit ethnic minorities include (a) the preparation and implementation of community-based economic development activities with a conservation focus in 26 villages in and adjacent to 13 project nature reserves; (b) increasing target community and local government stakeholders' understanding of biodiversity conservation and the threats it faces from their actions by assisting nature reserves to develop and implement a community conservation education strategy; (c) decreasing the threats from overuse of forest resources for energy through targeted demonstrations of appropriate, practical, culturally appropriate and cost-effective energy conservation approaches; and (d) providing training and technical assistance for the identification and demonstration of alternative income generating techniques as alternatives to the use of critical forest resources.

9. The Natural Forest Management component activities would be available to all people living in the project townships and villages (40 % of which are individuals belonging to one of the recognized ethnic minority groups) to improve their livelihood and to develop land use practices that are environmentally sustainable. The Community Development sub-component is intended to assist villagers in the project areas whom are generally exposed to poverty according to poverty standards and have been economically disadvantaged as a result of the logging ban. Project activities consist of (i) assisting ethnic minorities to develop economic opportunities that are environmentally sustainable; (ii) developing rural public infrastructure to facilitate economic activity; and (iii) encouraging the active participation of ethnic minorities in planning and implementing specific project activities such as a micro-credit program. A

second set of activities designed to retrain unemployed forestry workers would benefit members of ethnic minority nationalities. Approximately 4% of all forestry enterprise workers belong to one of the recognized ethnic minority groups and would directly benefit under retraining activities. The specific training programs would be developed during implementation of the Project.

10. In order to effectively meet the development objectives of SFDP, ethnic minority nationalities would be engaged in all aspects of the Project. By providing these communities with an enabling environment in which to participate in the Project, they would have a better chance at ensuring that project activities are culturally appropriate and effective.

**Additional
Annex 17**

**Financial Management
China: Sustainable Forestry Development Project**

A. Background

1. This report is the result of a financial management review and analysis of the Project as conducted by Junxue Chu, Disbursement Specialist, EACCF in October 2000, to determine whether the Project has in place an adequate financial management system as required by the Bank OP/BP 10.02. The review was performed in accordance with the following:

- Guide for Review and Design of Accounting and Reporting System for World Bank Projects (Prepared by Central Operational Services Unit, East Asia and Pacific Region, December 1997);
- Review of Financial Management System as stipulated in Annex II of LACI Implementation Handbook; and
- Project Financial Management Manual issued by the Loan Department, February 1999.

2. The review consequently included procedures as were considered necessary and appropriate to Project's circumstances, including site visit, discussion and observation. Given that the Project covers 13 provinces, it is not possible to visit all project sites; instead, the task team has discussed and reviewed with Project Management Center (PMC) of State Forestry Administration (SFA), Provincial Finance Bureaus (FBs) and PMOs of Provincial Forestry Bureaus in Hainan and Hunan province, and Changjiang county PMO of Hainan province about plans, procedures and guidelines for establishing a sound project financial management system, *inter alia*, accounting system, staffing and training, internal controls, project reporting, auditing and budgeting.

B. Project Objective, Component, and Costs

3. The project objective is to ensure that innovative management approaches are widely adopted in selected natural forests, protected areas and plantation established to relieve pressures on forest resources and to protect the natural environment. These new approaches developed and applied for the protection and sustainable management of natural forest resources in pilot areas in China would provide models for wider replication under the government Natural Forest Protection Program.

4. The financing of the Project will be supported by IBRD (US\$93.9 million) and Government (US\$93.8 million) for a total estimated project cost of (US\$187.7 million) under Plantation Establishment Component; by GEF (US\$16 million) and Government (US\$6.85 million) for a total estimated cost (US\$22.85 million) under Protected Areas Management Component.

5. According to Project Appraisal Document, the Project is comprised of the following components:

The Plantation Establishment Component (PE) includes: (a) establishment of commercial wood plantations for fiber, pulp, plywood, and construction timber; (b) establishment of economic forest crops, including fruit, nut and medicinal trees, bamboo, and rattan; (c) pre-commercial thinning of existing plantations to demonstrate increase productivity and financial gains from proper thinning and tending; and (d) provision of related technical support services such as planting stock development and nursery management, training and extension, small-scale rural infrastructure required for afforestation and post-harvest treatment and

marketing of horticultural crops, and monitoring and evaluation including environmental and social parameters. The Protected Areas Management Component (PAM) includes: (i) participatory nature reserves planning and management including management plan development and implementation, strengthening of field-level management and targeted applied research; (ii) community-based nature conservation including co-management activities that link biodiversity conservation with sustainable income generation, energy conservation demonstration, wildlife management to reduce damage to local community livelihoods, community conservation education and awareness, and delivery of sustainable alternatives and enhancement of community skills; (iii) training and capacity building to strengthen institutions responsible for biodiversity conservation and management at the provincial and nature reserve levels; and (iv) project management, monitoring and evaluation including key policy studies. The Natural Forest Management Component will be financed by the European Union under its own guidelines. The Project is comprised of the following disbursement categories. For PE--(a) plantation; (b) works; (c) goods and vehicles, (d) consultant services, training, and study tours; and (e) market infrastructure subloans. For PAM--(a) works, (b) goods and vehicles, (c) community conservation fund, (d) incremental operating costs, (e) consultant services, and (f) research, training, plans and surveys.

C. Organization of Project Financial Management

6. State Forestry Administration (SFA) will assume overall responsibility for implementing and monitoring the Project. The existing Project Management Center (PMC) under the SFA will oversee project implementation for PE component and newly-established Project Office (PO) will oversee implementation of the PAM component and both would be responsible for coordination between related departments of SFA and participating provinces. Project implementation will be undertaken by 13 provinces: Hebei, Shanxi, Liaoning, Anhui, Shandong, Henan, Hubei, Hunan, Hainan, Sichuan, Gansu, Guizhou, and Yunnan. For the PE component, Project Management Offices (PMOs) of Forestry Bureaus (FB) at Provincial and County/Township levels will be responsible for overall project management in their respective jurisdiction. For PAM component, the provincial Office of Wildlife and Plant Protection (OWPP) and Nature Reserves would be responsible for overall project management under its own jurisdiction.

7. At the central level and provincial level, financial management and withdrawal processing for PAM component will be handled by Central PO and provincial OWPPs. Qualified financial/accounting staff for the PO and OWPPs are in place and have already received training. In addition, annual training will be provided throughout life of the Project.

8. Except for Gansu, provincial FB/PMOs have had prior experience with World Bank-financed forestry projects and are familiar with both the Bank and MOF's requirements in preparation and processing of withdrawal application and financial management of Bank-financed projects. However, additional training will need to be provided to project staff at all levels, particularly the OWPPs and Nature Reserves to enable the staff understand the financial arrangement of this Project.

D. Loan/ GEF Grant Disbursement Arrangements

9. The Project will be disbursing on the traditional disbursement techniques and will not be using PMR-based disbursements, in accordance with the agreement between the Bank and Ministry of Finance (MOF).

10. It has been agreed that for the PE component to be financed using IBRD that one Special Accounts will be set up with Ministry of Finance (MOF) to manage, monitor and maintain Special Account. The MOF will reconcile the Special Account, check and monitor withdrawal applications and verify payment requests in accordance with Bank requirements. PMC will review and consolidate reimbursement applications from participating provinces before sending to MOF. Applications for withdrawal of loan proceeds and replenishment of Special Account will be prepared and submitted to the Bank by MOF. IBRD funds will flow from MOF to Provincial Finance Bureau, then to County Finance Bureau through Prefecture Finance Bureau, and then to County PMO or Township Finance Station. The County PMO will verify the accuracy and validity of expenses submitted, progress reported and prepare requests for payment. The application will be further reviewed and approved by the County/Township FB before submitting to a higher PMO for approval. Eventually the requests for payment will be submitted by MOF to the Bank.

11. For the PAM component to be financed by GEF Grant, one Special Account will be set up, managed, monitored and maintained by the PO. PO will reconcile the Special Account, check withdrawal applications and verify payment requests in line with Bank requirements. Applications for withdrawal of Grant proceeds and replenishment of Special Account will be prepared and submitted to the Bank by PO. The GEF funds will flow from PO to local project units--either provincial OWPPs or participating Nature Reserves. The Nature Reserves will prepare requests for payment, and the requests will be reviewed by provincial OWPP before submitting to the PO.

12. Original invoices and supporting documents will be retained at point of initiation. PMC and PO, and Provincial PMOs and OWPPs will retain copies of withdrawal applications and copies of key supporting documents.

E. Financial and Accounting System

13. In line with other Bank-financed projects in the People's Republic of China, the Project will follow the Construction Accounting Standards issued by MOF as a basis for bookkeeping and preparation of financial statements and project reports. These standards dictate the format of financial statements, Chart of Accounts and related instructions which would therefore affect project accounting and reporting requirements. For detailed reporting and accounting methods, MOF issued Document No. 13 in January 2000. This document was prepared by MOF with input by EACCF and in accordance with the agreement on financial reporting reached between the Bank and MOF on 1998. Accrual accounting and double entry basis will be adopted.

14. Separate project accounts for PE and PAM components will be maintained by the County PMOs and the participating Nature Reserves respectively, consolidated by provincial PMOs and OWPPs to arrive at provincial project accounts. PMC/PO then further consolidate respective provincial project accounts to form final project accounts. The consolidated financial report will be submitted by PMC/PO on a semi-annual basis to the Bank, by September 30 and March 31, covering the first and second half of the year, respectively.

F. Internal Controls

15. A well designed internal control system is one of the key elements critical to the success of a project. A Financial Management Manual (the Manual) will be prepared by the PMC. It was agreed that each province will prepare, based on the instructions of PMC, its own manual with detailed financial

management procedures that are tailored to the specific circumstances of the province. The objective of the Manuals developed by PMC and provinces are to provide operational procedures and guidelines for project financial management, encompassing all levels of project management, such as:

- Project financial management structure and staffing;
- Job description of financial positions in PMO;
- Identification of the accounting standards to be used by the Project and all the participating agencies (e.g. tailored Chart of Accounts to project specifics and sample accounting treatments);
- Key internal control features such as a system of authorization, verification, reconciliation and project reporting to provide adequate control over project costs, cash and asset management and segregation of incompatible duties;
- Reporting formats tailored to project specifics;
- Procedures for disbursement and counterpart fund management;
- Budgetary procedures; and
- Auditing arrangements

The draft Manuals prepared by PMC was reviewed by the Bank at appraisal and found satisfactory.

G. Staffing and Training

16. The financial division with 5 staff is one of the 6 function divisions under PMC. All 5 staff have strong financial management background and experience in previous and ongoing Bank-financed forestry projects. The PMOs at provincial level except for Gansu have been in place for many years and the financial and accounting staff have been working on existing projects and preparation of this Project. Currently, Gansu provincial PMO has been established with financial staff appointed. In order to have a sound financial management for the Project, it was agreed that each PMO at Provincial and County levels and OWPP and Nature Reserve new to Bank project will be staffed with at least one project accountant responsible for maintaining the project accounts and preparing financial statements, and one cashier responsible for cash receipts and expenditures. Based on CVs provided prior to appraisal, adequate and qualified financial/accounting staff have been properly recruited for the new PMO in Gansu, the provincial OWPPs, the new county PMOs, and the Nature Reserves.

17. The task team recommended that a well designed and focused training should be provided by PMC before project effectiveness to ensure that staff understand financial management requirements. It is suggested that this training should include such features as:

- Bank procedures and the project financial management requirements on the withdrawal of Bank funds;
- Overview of the project financial statement formats;
- Review of project Financial Management Systems Manual;
- Procurement procedures;
- Project audit requirements.; and
- Accounting software and its applications

A comprehensive training program covering the above-mentioned areas has been developed by the PMC by appraisal and found satisfactory. In addition, a financial management training session was held in December 2000 for the PAM component. This provided opportunity for the Bank to evaluate the qualification of the selected financial/accounting staff. Further training will take place at Project Launch Workshop or prior to project effectiveness.

H. Project Reporting Requirements

18 The format and content of the following project financial statements represent the standard project reporting package agreed to between the Bank and MOF, and have been discussed and agreed with all parties concerned. The project financial statements for PE and PAM components respectively will be submitted to the Bank on a semi-annual basis and include the following 4 statements:

- Balance Sheet;
- Summary of Sources and Uses of Funds by Project Component;
- Statement of Implementation of Loan and Grant Agreements; and
- Statement of Special Account

I. Audit Arrangements

19. The Bank requires the Project financial statements audited in accordance with standards acceptable to the Bank. In line with other Bank financed projects in China, the Project will be audited in accordance with Government Auditing Standards of the People's Republic of China (1997 edition). The State Audit Office has been identified as the auditors for the Project. Audit reports on annual project financial statements of both PE and PAM components will be submitted to the Bank within 6 months after the end of each calendar year, with a separate opinion on Statement of Expenditures and Special Account.

J. Budgeting

20. Project budget will be prepared annually by the PMC and PO based on submissions prepared by the Provincial PMOs and OWPPs. The budget prepared at each PMO will be submitted to the Finance Bureau for approval at the same level. PMC and PO will consolidate budgets approved and submit for the Bank review and approval by December 31 of each year.

K. Conclusion

21. Pending addressing the issues outlined in the action plan in Attachment 1, the task team has determined that the Project will satisfy the Bank's financial management requirements as required by OP/BP 10.02. In the team's opinion, the Project will have in place an adequate project financial management system that can provide, with reasonable assurance, accurate and timely information on the status of the Project in the reporting format agreed with the project management office and as required by the Bank.

Attachment I

PROPOSED ACTION PLAN

Description	Responsibility	Target Date
A. Project Financial Management Manual		
Manuals already prepared by PMC and the provinces to be finalized and distributed to the related staff.	PMC/PO	Before project effectiveness
B. Staffing and Training		
Training on financial management and disbursement	PMC/PO	Project Launch workshop or prior to effectiveness
C. Special Account		
Obtain domestic clearances for SA set-up and management for both IBRD and GEF components.	MOF/PO	Before withdrawal of initial deposit
D. Finalize the on-lending terms and conditions and disbursement channel	MOF/Finance Bureaus; PMC/PO/PMOs	Agreement signing date

