

INTERNATIONAL TROPICAL TIMBER ORGANIZATION (ITTO)

Reducing Deforestation and Forest Degradation and Enhancing Environmental Services in Tropical Forests (REDDES)

PROJECT DOCUMENT

TITLE	DEVELOPMENT AND DEMONSTRATION ON SCHEME OF PAYMENT FOR ENVIRONMENTAL SERVICES (PES) DERIVED FROM DEGRADED AND SECONDARY TROPICAL PRODUCTION FORESTS IN HAINAN PROVINCE, CHINA
SERIAL NUMBER	RED-SPD 020/09 Rev.1 (F)
SUBMITTED BY	GOVERNMENT OF THE PEOPLE'S REPUBLIC OF CHINA
ORIGINAL LANGUAGE	ENGLISH

SUMMARY

The degraded and secondary tropical production forests in China are in status of gradually converting to crop-trees and degrading in most forest-dependent communities mainly because of lack of scheme of Payment for Environmental Services (PES), while the degraded and secondary tropical protection forests (non-commercial forests) are in well protection and restoration because of implementing the Scheme of Forest Ecological Benefit Compensation Fund (SFEBCF) for Non-commercial Forests. In order to reduce deforestation and forest degradation, enhance environmental services and help improve forest dependent livelihoods in tropics of China, Lingshui Li Autonomous County of Hainan Province is selected as project area and one typical forest-dependent community (village) will be chosen as demonstrative area. Assessment report on environmental services derived from degraded and secondary tropical production forests in demonstrative area will be developed. Scheme of PES derived from degraded and secondary tropical production forests in demonstrative area based on community and other stakeholders' participation will be discussed, consulted, optimized, identified and implemented. Policy suggestions on the scheme of PES will be developed and submitted to local governments. This project originates from the ITTO Thematic Programme on Reducing Deforestation and Forest Degradation and Enhancing Environmental Services in Tropical Forests (REDDES).

EXECUTING AGENCY INSTITUTE OF FOREST RESOURCE INFORMATION TECHNIQUES, CHINESE ACADEMY OF FORESTRY (CAF)

COOPERATING GOVERNMENTS -

DURATION 18 MONTHS

APPROXIMATE STARTING DATE TO BE DETERMINED

BUDGET AND PROPOSED SOURCES OF FINANCE	Source	Contribution in US\$	Local Currency Equivalent
	ITTO	149,040	
	Gov't of China	54,000	
	TOTAL	203,040	

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LIST OF ABBREVIATIONS AND ACRONYMS

ITTO	International Tropical Timber Organization
ITTA	International Tropical Timber Agreement
REDDES	Reducing Deforestation and Forest Degradation and Enhancing Environmental Services
PES	Payment for Environmental Services
SFEBCF	Scheme of Forest Ecological Benefit Compensation Fund
SFM	Sustainable Forest Management
REDD	Reduced Emissions from Deforestation and Degradation
EA	Executing Agency
CAF	Chinese Academy of Forestry
SAF	State Forestry Administration
NFPP	Natural Forest Protection Program
CCFP	Conversion of Cropland to Forest Program
NFPCP	Non-commercial Forest Protection and Construction Program
CSPCP	Coastal Shelterbelt Protection and Construction Program
FIBDP	Fast-growing and High-yield Timber Plantations

PART I: PROJECT CONTEXT

1.1 Origin

This project originates from the ITTO Thematic Programme on Reducing Deforestation and Forest Degradation and Enhancing Environmental Services in Tropical Forests (REDDES). The general objective of the REDDES is to reduce deforestation and forest degradation, enhance environmental services and help improve forest dependent livelihoods through sustainable management of tropical forests, forest restoration and other related activities.

1.2 Relevance

1.2.1 Conformity with ITTO's objectives and priorities

Compliance with Objectives of ITTA 2006

This project complies with ITTO objectives (c), (f), (j), (m), (q) and (r) established in Article 1 Objectives of the International Tropical Timber Agreement (ITTA 2006):

(c) Contributing to sustainable development and to poverty alleviation;

(f) Promoting and supporting research and development with a view to improving forest management and efficiency of wood utilization as well as increasing the capacity to conserve and enhance other forest values in timber producing tropical forests.

(j) Encouraging members to support and develop tropical timber reforestation, as well as rehabilitation and restoration of degraded forest land, with due regard for the interests of local communities dependent on forest resources.

(m) Encouraging members to develop national policies aimed at sustainable utilization and conservation of timber producing forests and maintaining ecological balance, in the context of tropical timber trade;

(q) Promoting better understanding of contribution of non-timber forest products and environmental services to the sustainable management of tropical forests with the aim of enhancing the capacity of members to develop strategies to strengthen such contributions in the context of sustainable forest management, and cooperating with relevant institutions and processes to this end;

(r) Encouraging members to recognize the role of forest-dependent indigenous and local communities in achieving sustainable forest management and develop strategies to enhance the capacity of these communities to sustainably manage tropical timber producing forests.

Compliance with ITTO Action Plan

This project complies with the priorities and operational activities of Reforestation and Forest Management in *ITTO Action Plan 2008-2011 (2008)*:

Expected outcome 5: Tropical forest resource better secured

(D) In cooperation with relevant organizations, support studies and activities related to reducing deforestation and degradation and enhancing carbon sinks

(E) Assess opportunities for, and promote the development of, non-timber forest products and forest environmental services that can improve the economic attractiveness of maintaining the tropical timber resource base under SFM

(F) Support studies and other activities for the effective role of forest-dependent indigenous and local communities in securing the PFE as the tropical timber resource base and contributing to poverty alleviation

(G) Support an understanding of the impact of emerging issues such as carbon sequestration and reduced emissions from deforestation and forest degradation (REDD) on tropical forest development

Expected outcome 6: Tropical forest resource sustainably managed

(C) Review progress on and new opportunities (e.g. REDD) for the management of secondary tropical forests, the restoration of degraded tropical forests and the rehabilitation of degraded tropical forest land;

(D) Monitor and assess the social, economic and environmental costs and benefits of the sustainable management of natural and planted forests

(F) Provide guidance on improving the sustainable yield of timber and non-timber products and services by intensifying the silvicultural management of natural tropical production forests and by restoring degraded forests

Compliance with scope and objectives of REDDES

This project complies with the general objectives of REDDES:

To reduce deforestation and forest degradation, enhance environmental services and help improve forest dependant livelihoods through sustainable management of tropical forests, forest restoration and other related activities.

This project complies with the scope of REDDES:

(vi) Combination of various environmental services and other outputs within the SFM implementation.

The Project complies with most of the activities of REDDES, especially complies with in Demonstration Activities of REDDES:

(e) Design and implementation of pilot projects to develop successful cases of payments for environmental services including market-based and other financing mechanisms.

1.2.2 Relevance to the submitting country's policies

This project accords with item 9, item 10, item 14, item 20 and item 26 of the *Constitution of the People's Republic of China* respectively on "reasonable utilization of natural resources and protection of precious animals and vegetation", on "reasonable utilization of land resources", on "extent of advanced technology, raising of labor productivity and economic benefit and improvement of people's living level", on "popularization of scientific and technical knowledge", and on "amelioration of ecological environment and protection of forest". This project also conforms to the *Law of Forest*, the *Law of Land Administration*, the *Law of Environment Protection*, and the *Law of Wild Animal Protection*.

This project conforms to *Forestry action plan of China 21 Century Agenda* and the *Action Plan for the protection of Biodiversity of China*, especially tallies with the *Decisions on Protection of Natural Resources* of the State Council. This project also conforms to the Natural Forest Protection Program (NFPP), the Conversion of Cropland to Forest Program (CCFP), the Wildlife Conservation and Nature Reserves Development Program, the Non-commercial Forest Protection and Construction Program (NFPCP), the Coastal Shelterbelt Protection and Construction Program (CSPCP) and the Forest Industrial Base Development Program with a Focus on Fast-growing and High-yield Timber Plantations (FIBDP) etc.

1.3 Target area

Geographic location of project area



Social, cultural, economic and environmental aspects of project area

Hainan Province is situated within 18°9' ~ 20°11'N, 108°36' ~ 111°3'E, surrounded by sea at all sides, with an area of 33,920 square kilometers. The topography is high in the middle and low in four sides, with above sea elevation from 0-1867.4 meter. The top point is Wuzhi (five fingers) mountain. 70% of the lands are plain, tableland and hills, with 200 ~ 500m low hills accounting for 20.2%, and mountains of above 500 m accounting for 9.8%.

The annual average sunshine time amounts to 2,000 hours, and the annual average temperature is 23 ~ 28 °C. The accumulated annual temperature above 10 °C is 8,300 °C. The extremely lowest temperature is 1.4 ~ 7°C. The season with monthly average temperature above 20 °C lasts for 9 months. Hainan Province is rich in rainfall, yet not even either in space or in time. The rainfall concentrates in summer and autumn, rich in eastern part, yet less in western part, with a precipitation of 1,500 ~ 2,000mm. The soil types in the Island include yellow earth, crimson earth, laterite, fluviogenic soil, alluvial soil and sand around bench. Different topography is distributed and related with their different soil types, and therefore the temperature, moisture, sun illumination etc.

There are 3,500 species of vegetation with vascular bundle, which belong to 259 families and 1,347 genres. There are 1400 species of conifers and broadleaves, among which 800 species are of arbors, and 458 species are listed for commercially valuable timber. There are 85 tree species of high quality timber value, and 45 precious and rare tree species, among which 32 species are listed as precious and rare species that are in danger and need to protection. There are 600 species of mammal and amphibians, birds and fishes.

The total population of Hainan Province is 8,540,000, comprised mainly of nations Han, Li, Miao, Zhuang and Hui. In 2008, the GDP was 21.4 billion US\$, the average GDP per person is 2,522 US\$, the average income per habitant in town is 1,851 US\$, and the average annual income per farmer is 645 US\$. The highway in Hainan Province is well developed. The round-Island expressway and the first, second, third level highways form a highway network on the Island. All these provide a convenient and good condition for the successful implementation of the project.

The project area is located in Lingshui Li Autonomous County that lies in the southeast of Hainan Island. The county located at 18° 22' ~ 18° 47' N and 109° 45' ~ 110° 08' E, connecting Sanya city in the south, adjoining with Qiongzong county in the north, and its east border is Wanning county, west border is Baoting county. The county has long history of more than 1,390 years.

The total cover area of the county is 1,128 km², of which 59% is collectively owned. It is high in the northwest and low in the southeast of the terrain. The west is the mountain area, the middle part is the hills area, and the southeast is the plain area. The climate of the county is classified as "tropical monsoon", whose annual average temperature is 24 °C and annual rainfall is about 1,500 ~ 2,500 mm.

The county consists of 17 towns, with 114 administrative villages, 611 natural villages. The site has three state-owned institutions: Nanping farm under the province, Lingmen farm and Diaoluoshan bureau of forestry. There are 16 minorities in the whole county, such as Li, Miao, Zhuang etc. The total population is 320,000, the Han accounts for 45% while other minority accounts for 55%. In 2008, the GDP of the county is 448.8 million US\$, the average GDP per person is 1,379 US\$, the average income per habitant in town is 1,327 US\$ and the average annual income per farmer is 503 US\$.

The present forest cover of the whole county is 66 600 hectares, among which cultivated land covers 28,100 ha, and garden land 11,600 ha. Of the total forest areas, 44% is natural forest while 56% is planted forest. Forest coverage rate is 58%. There are nature reserve and national forest parks in the county. Typical original tropical forests, large area of secondary tropical forests and degraded forest lands can also be found in the county.

1.4 Outcomes at project completion

The degraded and secondary tropical production forests in China are in status of gradually converting to crop-trees and degrading in most forest-dependent communities mainly because of lack of scheme of PES, while the degraded and secondary tropical protection forests (non-commercial forests) are in well protection and restoration because of implementing the Scheme of Forest Ecological Benefit Compensation Fund (SFEBCF) for non-commercial forests.

So, intended situation (including environmental, social and economic effects) after project completion will be as follows:

- (1) Raise the understanding and awareness to degraded and secondary tropical production forests and their environmental services;
- (2) Reduce forest degradation of degraded and secondary tropical production forests, and reduce converting degraded and secondary tropical production forests to crop-trees (forest deforestation) directly;
- (3) Improve the quality and sustainability of degraded and secondary tropical production forests;
- (4) Improve livelihoods, increased employment and income in forest communities from payments for environmental services for forest communities, indigenous groups and other forest dependent people;
- (5) Improve capacities to develop and implement policies and incentive mechanisms to promote environmental services;
- (6) Improve capacity to participate in policy development and strengthen capability to support forest communities in improving their livelihoods and ecosystem services for civil society organizations;
- (7) Improve information and approaches supporting for policy decisions concerning various mechanisms and in the maintenance and enhancement of environmental services from tropical forests.

Forestry Bureau of Lingshui Li Autonomous County made commitment to set up special project management organization and related mechanism, cooperate with project team actively, coordinate all stakeholders, and take charge the protection and management of demonstration area after project completion on condition that the project is approved and granted by ITTO. (Commitment is showed in ANNEX 3).

The project outcome will be maintained by submitting the relative policy suggestions on the scheme of PES derived from degraded and secondary tropical production forests to the local government, publishing relative documents and extending the relative techniques on the scheme of PES in Hainan Province. Forestry Bureau of Lingshui Li Autonomous County will continue to implement the scheme of PES in demonstration area and guarantee the long-term project sustainability after project completion.

PART II: PROJECT RATIONALE AND OBJECTIVES

2.1 Stakeholder analysis

Local villagers, indigenous groups, forest communities, local forestry agency, project staff, government agencies at different levels, civil society organizations, education and research institutions, and donors will be stakeholders in the project.

As forest-dependent people, local villagers, indigenous groups and forest communities in project area will be concerned about and benefit from the project. The project will help them to reduce poverty, improve livelihoods through increased income in forest communities from payments for environmental services and implementation of increased restoration and rehabilitation activities. Especially for indigenous groups who own degraded and secondary tropical production forests, they will get fund to compensate loss of income from activities related to unsustainable logging and land-use conversion.

Local forestry agency that is responsible for management and protection of degraded and secondary production forest will be directly employed to conduct the fieldwork of the project. They will get experience on how to reduce deforestation and forest degradation.

Government agencies are lack of information for policy decisions concerning scheme of PES derived from degraded and secondary production forest and approaches to reduce deforestation and degradation. The project will provide them relevant information on PES scheme and help them to reduce needs for subsidies and other public funding thanks to revenue created by a new source of income from PES, improve institutional implementation capacity for restoration and rehabilitation of secondary forests and degraded forest areas, avoid of unplanned deforestation and all types of forest degradation, as well as improve capacity for adaptation of tropical forests to negative effects brought about by climate change and human-induced impacts.

Civil society organizations involved in implementing rural development activities will benefit from improved capacity to participate in policy development and strengthen capability to support forest communities in improving their livelihoods and ecosystem services.

For the private sectors who plan to convert degraded and secondary forest to high-yield production plantation will get information on newly developed policies for degraded and secondary production forest and improve capacity to implement sustainable forest management (SFM).

Donors and the international community will get valuable lessons and new knowledge on how to develop and implement financing mechanisms such as PES schemes and how existing support strategies can be enhanced to deliver the targeted global, national and local objectives.

Stakeholder analysis table

Stakeholder group	Characteristics	Problems, needs, interests	Potentials	Involvement in project
Primary stakeholders				
Local villagers, indigenous groups	Owners, derive income from forests, active group	Under poverty, lack of economic incentives and alternative economic source	Desire to receive Assistance, local knowledge, belief in institutions	Directly involved in Project implementation, Primary project Beneficiary
Forest communities	Owners, depend on degraded and secondary production forest, active group	Base for community Development threatened, lack of economic incentives	Desire to receive assistance; local knowledge, belief in institutions	Directly involved in project implementation, Primary project Beneficiary
Local forestry agency	Responsible for sustainable forest management	Insufficient capacity for reducing deforestation and degradation	Experienced in forest inventory and working with villagers	Directly involved in project implementation
Local government agencies	Responsible for making and implementing community development plans	Lack of information on forest environment service, Insufficient PES schemes	Authority and influence in community, can make PES schemes	Directly involved in project implementation
Secondary stakeholders				
Civil-society organizations	Actively involved in implementing and provide advice to rural development activities	Lack skills for advice on village development micro-planning	Experienced in working with villages	Can assist the project to implement relevant activities
Private sector	Owners of high-yield production plantation	Lack of information on forest environment service, needs to seek investment opportunities	Experienced in logging, investment capacity	Can assist the project to implement relevant activities
Tertiary stakeholders				
Education and research institutions	Have education and research missions	Lack means to finance collaboration	Competence in research, studies and surveys	Might collaborate in implementing relevant activities
Donors and finance institutions	Finance local development activities	Lack means to finance collaboration	Experience in providing development funds	Might collaborate in development of PES scheme

2.2 Problem analysis

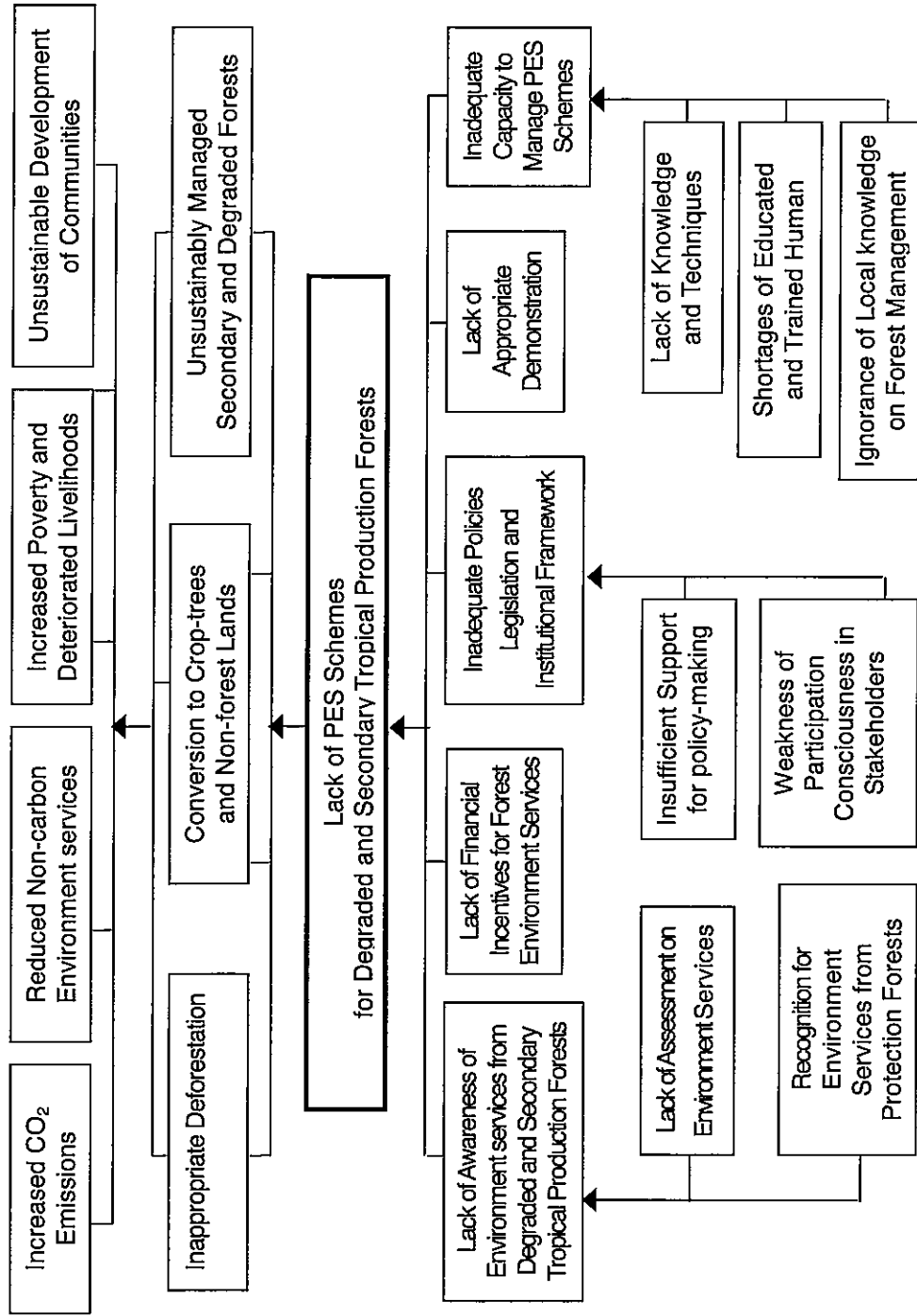
The degraded and secondary tropical production forests in China cover large area in tropics and play an important role in forest-dependent community development for its access priority. For example, the area of such forests is estimated at 1/3 of area of natural forest in Lingshui Li Autonomous County of Hainan Province. Although Chinese Central Government as well as local governments in tropics has exerted great efforts on tropical forest management, and new tropical forest cover has increased, tropical production forest deforestation and degradation are so severe that the quality of environmental services derived from them has been reducing in most forest-dependent communities.

The effects of deforestation and forest degradation of tropical production forests include reduced supply of forest products and services, increased CO₂ emissions, loss of biodiversity and reduction of habitat quality, reduced water quality and supply, increased soil erosion, increased vulnerability to climate change and disasters as well as loss of economic development opportunities for local populations and indigenous peoples living in and around forest areas. These effects aggravate poverty, deteriorate livelihoods of indigenous peoples and other groups depending on forests, thereby lead to unsustainable economic development.

A number of common underlying causes can be identified which lead to deforestation and degradation of production forest. The most important causes are lack of scheme of PES and Persistent poverty among forest-dependent communities. While the degraded and secondary tropical protection forests (non-commercial forests) are in well protection and restoration because of implementing the Scheme of Forest Ecological Benefit Compensation Fund (SFEBCF) for Non-commercial Forests, the degraded and secondary tropical production forests are in status of gradually converting to crop-trees and degrading in most forest-dependent communities mainly because of lack of scheme of PES. Lack of assessment on forest environment services and governance weaknesses have led to inappropriate legislation, perverse economic incentives, incoherent policies and institutional inefficiencies which can drive lack of scheme of PES derived from degraded and secondary tropical production forests. The forest environmental services produced are not compensated to forest communities, owners and managers who maintain them because of insufficient forest funds. Persistent poverty among forest-dependent communities, coupled with lack of alternative sources of livelihoods, leads to excessive utilization of forest resources causing gradual degradation and deforestation eventually. All these factors deteriorate the reduction of forest environment service.

The key problems for the scheme of PES derived from degraded and secondary tropical production forests in Hainan Province are as follows: (1) Lack of assessment on forest environmental services derived from degraded and secondary tropical production forests; (2) Lack of financial incentives to forest environment services; (3) Weakness of participation consciousness in local communities, individuals and other stakeholders; (4) Inadequate policies legislation and institutional framework to degraded and secondary tropical production forests; (5) Lack of desirable approaches and demonstrations; (6) Inadequate capacity to manage PES schemes while local knowledge on forest management is not considered important.

It is hopeful to solve these problems through the implementation of this project.



Problem Tree

2.3 Objectives

2.3.1 Development objective and impact indicators

To reduce deforestation and forest degradation, enhance environmental services and help improve forest dependent livelihoods in tropics of China

The long-term impact indicators are:

- (1) Forest degradation and deforestation of degraded and secondary tropical production forests have significantly reduced by 2020.
- (2) Environmental services derived from degraded and secondary tropical production forests have visibly enhanced by 2020.
- (3) Forest dependent livelihoods derived from degraded and secondary tropical production forests have obviously improved by 2020.

2.3.2 Specific objective and outcome indicators

To strengthen stakeholders capacity to reduce forest degradation and deforestation of degraded and secondary tropical production forests in Hainan Province through implementation of the scheme of PES derived from degraded and secondary tropical production forests.

The outcome indicators are:

- (1) Reduce forest degradation of degraded and secondary tropical production forests by 80~90% in demonstrative area;
- (2) Reduce converting degraded and secondary tropical production forests to crop-trees (forest deforestation) by 80~90% in demonstrative area;
- (3) Improve 10~20% livelihoods for forest dwellers and other stakeholders directly involved in the supply of environmental services through implementation of the scheme of PES derived from degraded and secondary tropical production forests in demonstrative area;
- (4) Improve capacities to develop and implement policies and incentive mechanisms to promote environmental services through scheme of PES derived from degraded and secondary tropical production forests.

PART III: DESCRIPTION OF PROJECT INTERVENTIONS

3.1 Outputs

Output 1: Assessment report on environmental services derived from degraded and secondary tropical production forests in demonstrative area based on community and other stakeholders participatory

Output 2: Development and implementation on scheme of Payment for Environmental Services (PES) derived from degraded and secondary tropical production forests in demonstrative area

Output 3: Project general report

3.2 Activities and inputs

Output/Activities
<p>Output 1: Assessment report on environmental services derived from degraded and secondary tropical production forests in demonstrative area based on community and other stakeholders participatory</p> <p>Activity 1.1: Choose one typical forest community (village) as demonstrative area in project area</p> <p>Activity 1.2: Investigate and analyze the biophysical, socioeconomic and ecological factors in demonstrative area based on community participatory</p> <p>Activity 1.3: Make an inventory on degraded and secondary tropical forests in demonstrative area based on community participatory</p> <p>Activity 1.4: Assess the environmental services derived from degraded and secondary tropical production forests in demonstrative area based on community and other stakeholders participatory</p>
<p>Output 2: Development and implementation on scheme of Payment for Environmental Services (PES) derived from degraded and secondary tropical production forests in demonstrative area</p> <p>Activity 2.1: Collect and analyze the relevant international literature and cases on scheme of PES derived from production and protection forests</p> <p>Activity 2.2: Collect and analyze the relevant national literature and cases on Scheme of Forest Ecological Benefit Compensation Fund (SFEBCF) for non-commercial forests provided by central and local government</p> <p>Activity 2.3: Hold one workshop on scheme of PES derived from degraded and secondary tropical production forests in project area</p> <p>Activity 2.4: Develop draft scheme of PES derived from degraded and secondary tropical production forests in demonstrative area based on community and other stakeholders participatory</p> <p>Activity 2.5: Discuss, consult, optimize and identify scheme of PES derived from degraded and secondary tropical production forests in demonstrative area based on community and other stakeholders participatory</p> <p>Activity 2.6: Implement scheme of PES derived from degraded and secondary tropical production forests in demonstrative area based on community participatory and ITTO FLR Manual and Guidelines on tropical production forests</p> <p>Activity 2.7: Develop policy suggestions on scheme of PES derived from degraded and secondary tropical production forests to local governments</p>
<p>Output 3: Project general report</p> <p>Activity 3.1: Develop project completion and technical report</p> <p>Activity 3.2: Check and accept the reports</p>

3.3 Strategic approach and methods

The project will work collaboratively with all stakeholders directly or indirectly interested in the scheme of PES derived from degraded and secondary tropical production forests in Lingshui Li Autonomous County of Hainan Province. Using a participatory approach it will help interested groups to participate equally in the development and implementation on scheme of PES derived from degraded and secondary tropical production forests in demonstrative area. The development of PES scheme will take into account the need to advance one step at a time, helping to raise awareness,

change perceptions, analyze problems, and identify appropriate PES scheme. The following steps will be taken to implement this participatory development approach.

Assessment report: Participatory investigation on biophysical, socioeconomic and ecological factors and inventory on degraded and secondary tropical forests in demonstrative area will be undertaken after one typical forest community (village) is chosen as demonstrative area. Based on community and other stakeholders participatory, environmental services derived from degraded and secondary tropical production forests in demonstrative area will be assessed to get the assessment report. Meanwhile, the investigation and inventory will help different stakeholders to improve the awareness and knowledge of forest environmental services.

Draft PES scheme: relevant international literature and cases on PES schemes derived from production and protection forests and on Scheme of Forest Ecological Benefit Compensation Fund (SFEBCF) for non-commercial forests will be collected and analyzed. Participatory workshop will be held among villagers, community and other stakeholders to develop draft PES scheme for degraded and secondary tropical production forests in demonstrative area.

Special attention will be given to possible conflicting interests among different stakeholders.

In order to balance the conflict, the community will be divided into subgroups on the basis of how they might be affected by the PES scheme.

PES scheme: participatory discussion and consultation will be undertaken to optimize and identify the PES scheme for degraded and secondary tropical production forests in demonstrative area.

Implement the PES scheme: PES scheme will be implemented by all stakeholders, especially local villagers, under the guidance of TFO FLR Manual and Guidelines on tropical production forests. The participation implementation will improve the capacity of foresters and local villagers to reduce deforestation and to restore degraded forest, helping to sustainable forest management in demonstrative area.

3.4 Work plan

Outputs/Activities	Schedules (in months)												
	1	2	3	4	5	6	7	8	9	10	11	12	
Output 1: Assessment report on environmental services derived from degraded and secondary tropical production forests in demonstrative area based on community and other stakeholders participatory													
Activity 1.1: Choose one typical forest community (village) as demonstrative area in project area													
Activity 1.2: Investigate and analyze the biophysical, socioeconomic and ecological factors in demonstrative area													
Activity 1.3: Make an inventory on degraded and secondary tropical forests in demonstrative area													
Activity 1.4: Assess the environmental services derived from degraded and secondary tropical production forests in demonstrative area													
Output 2: Development and implementation on scheme of PES derived from degraded and secondary tropical production forests in demonstrative area													
Activity 2.1: Collect and analyze the relevant international literature and cases on scheme of PES derived from production and protection forests													
Activity 2.2: Collect and analyze the relevant national literature and cases on SFEBFCF for non-commercial forests provided by central and local government													
Activity 2.3: Hold one workshop on scheme of PES derived from degraded and secondary tropical production forests in project area													
Activity 2.4: Develop draft scheme of PES derived from degraded and secondary tropical production forests in demonstrative area													
Activity 2.5: Discuss, consult, optimize and identify scheme of PES derived from degraded and secondary tropical production forests in demonstrative area													
Activity 2.6: Implement scheme of PES derived from degraded and secondary tropical production forests in demonstrative area													
Activity 2.7: Develop policy suggestions on scheme of PES derived from degraded and secondary tropical production forests to local governments													
Output 3: Project general report													
Activity 3.1: Develop project completion and technical report													
Activity 3.2: Check and accept the reports													

3.5 Budget

Consolidated Yearly Project Budget

Budget Components		Input	Unit Costs	TOTAL	YEAR1	YEAR2
10.	Project Personal					
	11.National Experts					
	1.1.1.Project Coordinator	6PM	1,000	6,000	4,000	2,000
	1.1.2.Forester 1	5PM	8,00	4,000	3,200	800
	1.1.3 Forester 2, etc.	0	0	0	0	0
	1.1.4.Administrator	0	0	0	0	0
	1.2.Other Labor					
	1.2.1.Assistant 1	7PM	1,000	7,000	4,000	3,000
	1.2.2.Assistant 2	6PM	1,000	6,000	4,000	2,000
	1.2.3.Other labour	15PM	800	12,000	6,400	5,600
	1.3.National Consultants (Short term)	0	0	0	0	0
	1.4.International Consultants	0	0	0	0	0
	15.Fellowship and Training	0	0	0	0	0
	19.Component Total			35,000	21,600	13,400
20.	Sub-contracts					
	21.Sub-contracts (Implementing scheme of PES)			30,000	0	30,000
	22.Sub-contracts (Mapping and Publishing)			10,000	10,000	0
	29.Component Total			40,000	10,000	30,000
30.	Duty Travel					
	31.Daily Subsistence Allowance					
	31.1.National Experts/ Consultants	90+30PD	100+200	15,000	9,000	6,000
	31.2.International Consultants	0	0	0	0	0
	31.3.Others	80PD	100	8,000	5,000	3,000
	32.International Travel					
	32.1.National Experts/ Consultants	3P	2,000	6,000	6,000	0
	32.2.International Consultants	0	0	0	0	0
	32.3.Others	0	0	0	0	0
	33.Local Transport Costs					
	33.1. National Experts/ Consultants	15P	600	9,000	6,000	3,000
	33.2.International Consultants	0	0	0	0	0
	33.3.Others	10P	200	2,000	2,000	0
	39.Component Total			40,000	28,000	12,000
40.	Capital Items					
	41.premises	0	0	0	0	0
	42.Land	0	0	0	0	0
	43.Vehicle	0	0	0	0	0
	44.Capital Equipment					
	44.1.Computer Equipments	4.5Set	2,000	9,000	9,000	0
	44.2.Forestry Equipments	3Set	2,000	6,000	6,000	0
	49.Component Total			15,000	15,000	0
50.	Consumable Items					
	51.Raw materials			5,000	3,000	2,000
	52.Spare			5,000	3,000	2,000
	53.Utilities			5,000	3,000	2,000
	54.Office Supplies			5,000	3,000	2,000
	59.Component Total			20,000	12,000	8,000
60.	Miscellaneous					
	61.Sundry			7,000	4,000	3,000
	62.Auditing			1,000	500	500
	63.Contingencies			0	0	0
	69.Component Total			8,000	4,500	3,500
70.	National Management Cost					
	71.Executing Agency Management Cost			24,000	16,000	8,000
	72.Focal Point Monitoring			0	0	0
	79.Component Total			24,000	16,000	8,000
	SUBTOTAL			-	-	-
80.	Project Monitoring and Administration					
	81.ITTO Monitoring and Review			10,000		
	82.ITTO midterm, final, ex-post Evaluation Costs			0		
	83.ITTO Programme Support Cost (8% on items 10 to 82 above)			11,040		
	84. Donor Monitoring Costs			0		
	89.Component Total			21,040		
100.	GRAND TOTAL			203,040		

Consolidated Yearly Project Budget by Source - ITTO

Budget Components		Input	Unit Costs	TOTAL	YEAR1	YEAR2
10.	Project Personal					
	11.National Experts					
	1.1.1.Project Coordinator	0	0	0	0	0
	1.1.2.Forester 1	0	0	0	0	0
	1.1.3 Forester 2, etc.	0	0	0	0	0
	1.1.4.Administrator	0	0	0	0	0
	1.2.Other Labor					
	1.2.1.Assistant 1	7PM	1,000	7,000	4,000	3,000
	1.2.2.Assistant 2	6PM	1,000	6,000	4,000	2,000
	1.2.3.Other labour	15PM	800	12,000	6,400	5,600
	1.3.National Consultants (Short term)	0	0	0	0	0
	1.4.International Consultants	0	0	0	0	0
	15.Fellowship and Training	0	0	0	0	0
	19.Component Total			25,000	14,400	10,600
20.	Sub-contracts					
	21.Sub-contracts (Implementing scheme of PES)			30,000	0	30,000
	22.Sub-contracts (Mapping and Publishing)			10,000	10,000	0
	29.Component Total			40,000	10,000	30,000
30.	Duty Travel					
	31.Daily Subsistence Allowance					
	31.1.National Experts/ Consultants	90+30PD	100+200	15,000	9,000	6,000
	31.2.International Consultants	0	0	0	0	0
	31.3.Others	80PD	100	8,000	5,000	3,000
	32.International Travel					
	32.1.National Experts/ Consultants	3PT	2,000	6,000	6,000	0
	32.2.International Consultants	0	0	0	0	0
	32.3.Others	0	0	0	0	0
	33.Local Transport Costs					
	33.1. National Experts/ Consultants	15PT	600	9,000	6,000	3,000
	33.2.International Consultants	0	0	0	0	0
	33.3.Others	10PT	200	2,000	2,000	0
	39.Component Total			40,000	28,000	12,000
40.	Capital Items					
	41.premises	0	0	0	0	0
	42.Land	0	0	0	0	0
	43.Vehicle	0	0	0	0	0
	44.Capital Equipment					
	44.1.Computer Equipments	4.5Set	2,000	9,000	9,000	0
	44.2.Forestry Equipments	3Set	2,000	6,000	6,000	0
	49.Component Total			15,000	15,000	0
50.	Consumable Items					
	51.Raw materials			0	0	0
	52.Spare			0	0	0
	53.Utilities			0	0	0
	54.Office Supplies			0	0	0
	59.Component Total			0	0	0
60.	Miscellaneous					
	61.Sundry			7,000	4,000	3,000
	62.Auditing			1,000	500	500
	63.Contingencies			0	0	0
	69.Component Total			8,000	4,500	3,500
70.	National Management Cost					
	71.Executing Agency Management Cost					
	72.Focal Point Monitoring					
	79.Component Total			-	-	-
	SUBTOTAL			128,000	71,400	56,600
80.	Project Monitoring and Administration					
	81.ITTO Monitoring and Review			10,000		
	82.ITTO midterm, final, ex-post Evaluation Costs			0		
	83.ITTO Programme Support Cost (8% on items 10 to 82 above)			11,040		
	84. Donor Monitoring Costs			0		
	89.Component Total			21,040		
100.	GRAND TOTAL			149,040		

Consolidated Yearly Project Budget by Source - E. Agency (Chinese Government)

Budget Components		Input	Unit Costs	TOTAL	YEAR1	YEAR2
10.	Project Personal					
	11.National Experts					
	1.1.1.Project Coordinator	6PM	1,000	6,000	4,000	2,000
	1.1.2.Forester 1	5PM	8,000	4,000	3,200	800
	1.1.3 Forester 2, etc.	0	0	0	0	0
	1.1.4.Administrator	0	0	0	0	0
	1.2.Other Labor					
	1.2.1.Assistant 1	0	0	0	0	0
	1.2.2.Assistant 2	0	0	0	0	0
	1.2.3.Other labour	0	0	0	0	0
	1.3.National Consultants (Short term)	0	0	0	0	0
	1.4.International Consultants	0	0	0	0	0
	15.Fellowship and Training	0	0	0	0	0
	19.Component Total			10,000	7,200	2,800
20.	Sub-contracts					
	21.Sub-contracts (Implementing scheme of PES)			0	0	0
	22.Sub-contracts (Mapping and Publishing)			0	0	0
	29.Component Total			0	0	0
30.	Duty Travel					
	31.Daily Subsistence Allowance					
	31.1.National Experts/ Consultants	0	0	0	0	0
	31.2.International Consultants	0	0	0	0	0
	31.3.Others	0	0	0	0	0
	32.International Travel					
	32.1.National Experts/ Consultants	0	0	0	0	0
	32.2.International Consultants	0	0	0	0	0
	32.3.Others	0	0	0	0	0
	33.Local Transport Costs					
	33.1. National Experts/ Consultants	0	0	0	0	0
	33.2.International Consultants	0	0	0	0	0
	33.3.Others	0	0	0	0	0
	39.Component Total			0	0	0
40.	Capital Items					
	41.premises	0	0	0	0	0
	42.Land	0	0	0	0	0
	43.Vehicle	0	0	0	0	0
	44.Capital Equipment					
	44.1.Computer Equipments	0	0	0	0	0
	44.2.Forestry Equipments	0	0	0	0	0
	49.Component Total			0	0	0
50.	Consumable Items					
	51.Raw materials			5,000	3,000	2,000
	52.Spare			5,000	3,000	2,000
	53.Utilities			5,000	3,000	2,000
	54.Office Supplies			5,000	3,000	2,000
	59.Component Total			20,000	12,000	8,000
60.	Miscellaneous					
	61.Sundry			0	0	0
	62.Auditing			0	0	0
	63.Contingencies			0	0	0
	69.Component Total			0	0	0
70.	National Management Cost					
	71.Executing Agency Management Cost			24,000	16,000	8,000
	72.Focal Point Monitoring			0	0	0
	79.Component Total			24,000	16,000	8,000
	SUBTOTAL			-	-	-
80.	Project Monitoring and Administration					
	81.ITTO Monitoring and Review			-		
	82.ITTO midterm, final, ex-post Evaluation Costs			-		
	83.ITTO Programme Support Cost (8% on items 10 to 82 above)			-		
	84. Donor Monitoring Costs			-		
	89.Component Total			-		
100.	GRAND TOTAL			54,000		

Yearly Project Budget by Source - ITTO

Annual Disbursements	Total	Year1	Year2
Budget Component			
10. Project Personnel	25,000	14,400	10,600
20. Sub-contracts	40,000	10,000	30,000
30. Duty travel	40,000	28,000	12,000
40. Capital items	15,000	15,000	0
50. Consumable items	0	0	0
60. Miscellaneous	8,000	4,000	4,000
Subtotal 1	128,000	71,400	56,600
80. ITTO Monitor, Evaluation Costs	10,000		
81. Monitoring and Review Costs	10,000		
82. Evaluation Costs	0		
Subtotal 2	138,000		
83. Programme Support Costs (8% of Overall Budget)	11,040		
84. Donor Monitoring Costs	0		
90. Refund of Pre-project Costs	0		
99. ITTO Total	149,040		

Yearly Project Budget by Source - E. Agency/Host Government

Annual Disbursements	Total	Year1	Year2
Budget Component			
10. Project Personnel	10,000	7,200	2,800
20. Sub-contracts	0	0	0
30. Duty travel	0	0	0
40. Capital items	0	0	0
50. Consumable items	20,000	12,000	8,000
60. Miscellaneous	0	0	0
70. Executing Agency Management Cost	24,000	16,000	8,000
EXECUTING AGENCY/HOST GOVT. TOTAL	54,000	35,200	18,800

Yearly Project Budget by Source - Other

Annual Disbursements	Total	Year1	Year2
Budget Component			
10. Project Personnel	0	0	0
20. Sub-contracts	0	0	0
30. Duty travel	0	0	0
40. Capital items	0	0	0
50. Consumable items	0	0	0
60. Miscellaneous	0	0	0
70. Executing Agency Management Cost	0	0	0
OTHER TOTAL	0	0	0

Overall Project Budget by Activity

Outputs/Activities	Budget Components							Grand Total
	10. Project Personnel	20. Sub-Contract	30. Duty Travel	40. Capital Items	50. Consumable Items	60. Miscellaneous	Year	
Output 1: Assessment report on environmental services derived from degraded and secondary tropical production forests in demonstrative area								
Activity 1.1: Choose one typical forest community (village) as demonstrative area in project area	1,800(I/E)	0	1,000	3,000	1,000(E)	0	Y1	6,800
Activity 1.2: Investigate and analyze the biophysical, socioeconomic and ecological factors in demonstrative area	1,800(I/E)	0	2,000	3,000	2,000(E)	0	Y1	8,800
Activity 1.3: Make an inventory on degraded and secondary tropical forests in demonstrative area	1,800(I/E)	5,000	5,000	6,000	2,000(E)	0	Y1	19,800
Activity 1.4: Assess the environmental services derived from degraded and secondary tropical production forests in demonstrative area	3,600(I/E)	0	0	3,000	1,000(E)	1,000	Y1	8,600
Subtotal 1	9,000(I/E)	5,000	8,000	15,000	6,000(E)	1,000		44,000
Output 2: Development and implementation on scheme of PES derived from degraded and secondary tropical production forests in demonstrative area								
Activity 2.1: Collect and analyze the relevant international literature and cases on scheme of PES derived from production and protection forests	1,800(I/E)	0	12,000	0	1,000(E)	0	Y1	14,800
Activity 2.2: Collect and analyze the relevant national literature and cases on SFEBCF for non-commercial forests provided by government	1,800(I/E)	0	0	0	1,000(E)	0	Y1	2,800
Activity 2.3: Hold one workshop on scheme of PES derived from degraded and secondary tropical production forests in project area	1,800(I/E)	5,000	8,000	0	2,000(E)	1,000	Y1	17,800
Activity 2.4: Develop draft scheme of PES derived from degraded and secondary tropical production forests in demonstrative area	3,600(I/E)	0	0	0	1,000(E)	1,000	Y1	5,600
Activity 2.5: Discuss, consult, optimize and identify scheme of PES derived from degraded and secondary tropical production forests in demonstrative area	3,600(I/E)	0	6,200	0	1,000(E)	1,000	Y1Y2	11,800
Activity 2.6: Implement scheme of PES derived from degraded and secondary tropical production forests in demonstrative area	4,400(I/E)	30,000	5,800	0	2,000(E)	1,000	Y2	43,200
Activity 2.7: Develop policy suggestions on scheme of PES derived from degraded and secondary tropical production forests to local governments	1,800(I/E)	0	0	0	2,000(E)	1,000	Y2	4,800
Subtotal 2	18,800(I/E)	35,000	32,000	0	10,000(E)	5,000		100,800
Output 3: Project general report								
Activity 3.1: Develop project completion and technical report	3,600(I/E)	0	0	0	2,000(E)	1,000	Y2	6,600
Activity 3.2: Check and accept the reports	3,600(I/E)	0	0	0	2,000(E)	1,000	Y2	6,600
Subtotal 3	72,000(I/E)	0	0	0	4,000(E)	2,000		13,200

	Subtotal (ITTO)	25,000	40,000	40,000	40,000	15,000	0	8,000	128,000
	Subtotal (E. Agency)	10,000	0	0	0	0	20,000	0	30,000
	Subtotal (Others)	0	0	0	0	0	0	0	0
	Total	35,000	40,000	40,000	40,000	15,000	20,000	8,000	158,000

(I) -- contribution of the ITTO

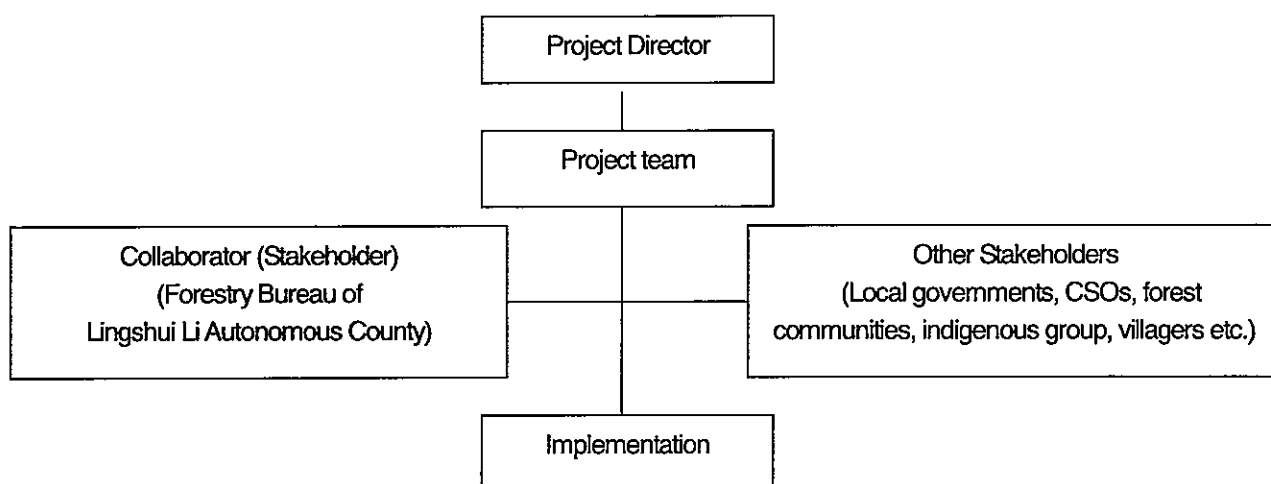
(E) -- contribution of the Executing Agency / Host Government

(o) -- Contribution from Other Sources

PART IV: IMPLEMENTATION ARRANGEMENTS

4.1 Executing agency and organizational structure

The executing agency is the Research Institute of Forest Resource Information Techniques of Chinese Academy of Forestry (CAF). The Profile of the Executing Agency is showed in ANNEX 1. The project will be implemented under the overall supervision of the Ministry of Commerce of the Peoples' Republic of China, the State Forestry Administration (SAF) of the Peoples' Republic of China, and ITTO. Project organizational structure is as follows:



4.2 Project management

The profile of the key experts is showed in ANNEX 2. The Key team members and their duties are as follows:

Name	Title and Institution	Duties in Project
Huang Qinglin	Professor, Ph.D., IFRIT of CAF	Project director In charge of activity 3.1 and 3.2
Huang Jingcheng	Ph.D., Senior engineer, Vice Director of Forestry Bureau of Hainan Province	In charge of activities activity 2.7
Zhang Xiaohong	Master, IFRIT of CAF	Assistant of Project director In charge of activity 1.4, 2.4 and 2.5
Ma Zhibo	Master, IFRIT of CAF	In charge of activity 1.1 and 2.1
Chen Yuelong	Ph.D. student, IFRIT of CAF	In charge of activity 2.2
Zhang Chao	Ph.D., Lectuer, Southwest Forestry College	In charge of activity 1.3 and 2.3
He Chulin	Senior engineer, Master, Forestry Bureau of Hainan Province	In charge of activity 1.2
Liang Youhao	Enginer, Director of Forestry Bureau of Lingshui Li Autonomous County	In charge of activity 1.3
Yang Keren	Enginer, Vice-director of Forestry Bureau of Lingshui Li Autonomous County	In charge of activity 2.6

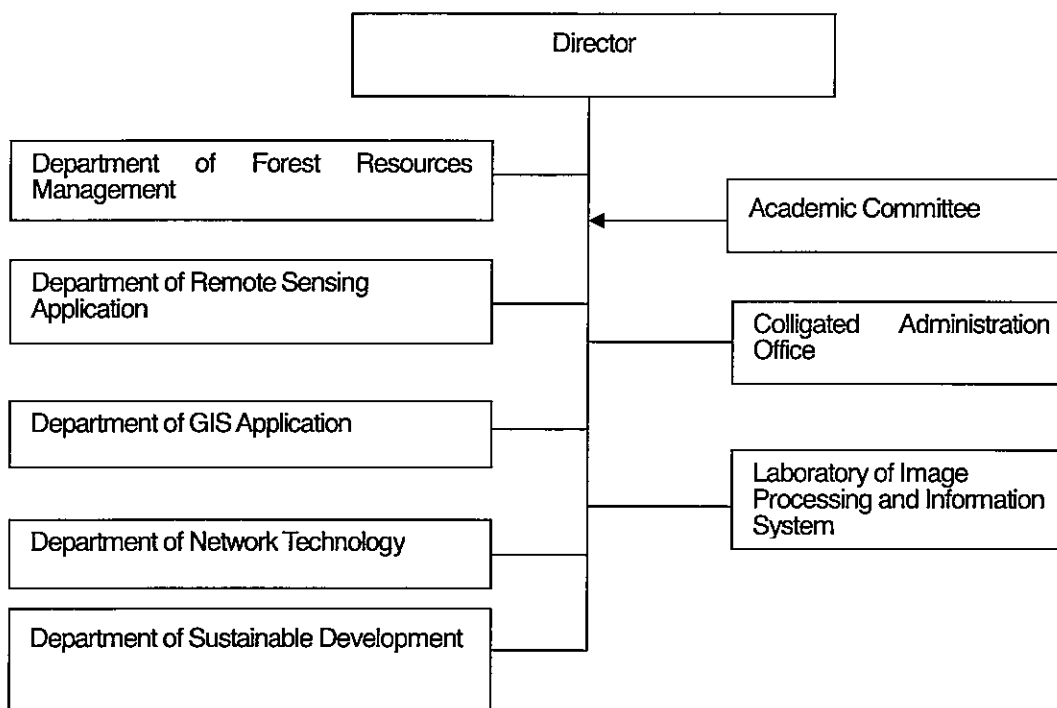
4.3 Monitoring and reporting

A project progress report will be submitted to ITTO every six month during the process of project implementation. Enough copies of project completion report will be composed, printed and submitted to ITTO in three months after completion of the project as ITTO may require. A project technique report will be submitted to ITTO in three months after completion of the project as ITTO may require. Key technique reports will be submitted during the process of project implementation. Specific monitoring and review by ITTO can be carried out at any moment during the process of project implementation.

ANNEX 1: PROFILE OF THE EXECUTING AGENCY

1. The Expertise of Executing Agency

The Chinese Academy of Forestry (CAF) is an academic forestry organization of national level and is subordinate to the State Forestry Administration. The executing agency, the Research Institute of Forest Resources Information Techniques is a research institute affiliated to the CAF. The institute is a scientific research organization to develop satellite remote sensing application and forest resources management, its professional business refers to management of forest resources, research and application of remote sensing and GIS, monitoring of forest pests and fires, environment evaluation, exploitation of computer application software, network and communication techniques etc. Its framework is illustrated as follows:



The institute mainly undertakes national projects and researches on aspects of forest resources, remote sensing monitoring of forest disasters, information sharing and others. In recent three years, the institute altogether obtained 68 projects, among which 55 projects were subsidized by the government and 13 projects were of international cooperation. The major projects are:

- (1) Gathering of Basic Data of Forest Resources and Construction of Information Network (subsidized by the Ministry of Science and Technology)
- (2) Construction of National Digital Forestry (subsidized by the State Forestry Administration)
- (3) Application of Remote Sensing and GIS Techniques to Spatial, Dynamic and Quantitative Method on Forest Resources Forecast (supported by State Natural Science Fund)
- (4) National Forecast System of Forest Fire Danger (supported by the State Forestry Administration)
- (5) Research and Construction of "China Forestry Academic Network" (network system at CAF) (subsidized by the Ministry of Science and Technology)

There are 4 ITTO projects applied and executed by the institute:

- (1) Demonstration of Sustainable Utilization of Tropical Forests by Differentiated Management in Hainan Island of China

(ITTO PD 14/92 Rev.2(F)). It was finished in 1998. The institute was one of the executing agencies.

- (2) Development and Extension of Criteria and Indicators for Sustainable Management of Natural Tropical Forests in China (ITTO PD 12/00 Rev.3(F)). It was finished in 2003, and is now being executed in good condition. The institute is the executing agency.
- (3) Tropical Forest Fire Monitoring and Management System Based on Satellite Remote Sensing Data in China (ITTO PPD 22/01(F)). It was finished in 2003. The institute is the executing agency.
- (4) Tropical Forest Fire Monitoring and Management System Based on Satellite Sensing Data in China (ITTO PD 228/03 Rev.2 (F)). It was finished in July, 2009. The institute is the executing agency.
- (5) Training on Demonstration, Application and Extension of ITTO Manual on Restoring Forest Landscapes in Tropics of China (ITTO PD 423/06 Rev.2 (F)). It is implementing and will be finished in March, 2010.

2. The Infrastructure of the Executing Agency

The institute possesses semi-automatic receiving station equipments of NOAA-AVHRR data. The network center of "China Forestry Academic Network" is set up within the institute, with a main communication chain-route of 1000 M bandwidth for data transmission, and with related servers, data storages, data exchangers etc. It is also equipped with a lot of workstations, digitizers, plotters, micro-computers, GPS receivers etc. It is disposed with image processing and GIS software, e.g. ERDAS, PCI, ARC/INFO, Geomedia Professional & Web-GIS, IDRISI, ENVI/IDL etc.

The institute is provided with a total of 3000 square meters of laboratory and office rooms. Among them, the lab has 600 m², while computer and network training classroom 90 m² (with 25 sets of PCs connected to the Internet), and 3 meeting rooms of different sizes.

3. Budget

The budget of the Executing Agency in last three years is shown in the following table (in US\$).

Year	2006	2007	2008
Personnel	878,737	951,968	942,217
Sub-contracts	1,267,988	1,837,695	918,081,
Duty Travel	278,840	334,288	430,059
Capital Items	468,664	51,233	629,956
Consumable Items	1,147,557	1,173,774	1,334,596
Total	4,041,786	4,348,958	4,254,846

4. Professional Personnel

There are presently 56 fixed scientific and technical persons, among them 10 have doctor's degree, 28 master's degree and 13 bachelor's degree. We have 2 academicians of Chinese Academy of Sciences, 11 senior research scientists (professors), 18 associate professors and 11 personnel with intermediate title. The technical staff is all engaged in works pertinent to forestry research. Eight persons work for administrative management.

ANNEX 2: CURRICULA VITAE OF PERSONNEL PROVIDED BY EXECUTING AGENCY

1. Project Director

Name: **Huang Qinglin**
Date and place of birth: 1967/Fujian, China
Nationality: Chinese
Field and institution of graduation: Forestry, Fujian Forestry College, Nanping, China.
Field and institution of Post-graduation: Ph. D., Forest Management, Beijing Forestry University, Beijing
Relevant work undertaken in the last three years:

- (1) Participated in ITTO PD 14/92 Rev .2 (F) "A Demonstration Programme of Sustainable Utilization of tropical Forests by Means of Differentiated Management in Hainan Province, China"
- (2) Participated in ITTO PD 12/00 Rev .3 (F) "Developing and Extending of Criteria and Indicators for Sustainable Management of Natural Tropical Forests in China "
- (3) Held 4-month ITTO Fellowship Programme in Goettingen University in Germany and finished the technical document on "Key Techniques of Continuous Cover Forestry and Their Possible Applications in Tropical Forest Management in China"
- (4) Director of ITTO PD 423/06 Rev.2 (F) "Training on Demonstration, Application and Extension of ITTO Manual on Restoring Forest Landscapes in Tropics of China"
- (5) Professor of CAF

2. Key Staff Member

Name: **Huang Jincheng**
Date and place of birth: 1962/ Guangdong, China
Nationality: Chinese
Field and institution of graduation: Tropical crops, South China Tropical Agriculture University, China.
Field and institution of Post-graduation: Ph. D., Forest Silviculture, Chinese Academy of Forestry, Beijing, China
Relevant work undertaken in the last three years:

- (1) Director of sub-project No.4 of ITTO PD 14/92 Rev .2 (F) "A Demonstration Programme of Sustainable Utilization of tropical Forests by Means of Differentiated Management in Hainan Province, China".
- (2) Director of ITTO PD 10/99 "Selection and Cultivation of Fast-growing and High-yielding Strains of Timber-oriented Rubber Tree in Hainan, China"
- (3) Participated in ITTO PD 423/06 Rev.2 (F) "Training on Demonstration, Application and Extension of ITTO Manual on Restoring Forest Landscapes in Tropics of China"
- (4) Senior Engineer of Hainan Forestry Bureau

Name: **Zhang Xiaohong**
Date and place of birth: 1981/ Shandong, China
Nationality: Chinese
Field and institution of graduation: Master, Forest Management, Chinese Academy of Forestry, Beijing, China
Relevant work undertaken in the last three years:

- (1) Participated in ITTO PD 12/00 Rev .3 (F) "Developing and Extending of Criteria and Indicators for Sustainable Management of Natural Tropical Forests in China".

- (2) Participated in SFA project "Developing Criteria and Indicators for Sustainable Management of Tropical Forests in China".
- (3) Participated in ITTO PD 423/06 Rev.2 (F) "Training on Demonstration, Application and Extension of ITTO Manual on Restoring Forest Landscapes in Tropics of China"

Name: **Ma Zhibo**

Date and place of birth: 1977/ Shandong, China

Nationality: Chinese

Field and institution of graduation: Master, Forest Ecology, Beijing Forestry University, Beijing, China.

Relevant work undertaken in the last three years:

- (1) Participated in ITTO PD 12/00 Rev .3 (F) "Developing and Extending of Criteria and Indicators for Sustainable Management of Natural Tropical Forests in China ".
- (2) Participated in SFA project "Developing Criteria and Indicators for Sustainable Management of Tropical Forests in China".
- (3) Participated in ITTO PD 423/06 Rev.2 (F) "Training on Demonstration, Application and Extension of ITTO Manual on Restoring Forest Landscapes in Tropics of China"

Name: **Chen Yuelong**

Date and place of birth: 1972/ Hunan, China

Nationality: Chinese

Field and institution of graduation: Forestry, Central-South Forestry University, Hunan, China.

Relevant work undertaken in the last three years:

- (1) Participated in SFA project "Developing Criteria and Indicators for Sustainable Management of Tropical Forests in China".
- (2) Participated in ITTO PD 423/06 Rev.2 (F) "Training on Demonstration, Application and Extension of ITTO Manual on Restoring Forest Landscapes in Tropics of China"

Name: **Zhang Chao**

Date and place of birth: 1980/ Hebei, China

Nationality: Chinese

Field and institution of graduation: Ph. D., Forest Management, Chinese Academy of Forestry, Beijing, China.

Relevant work undertaken in the last three years:

- (1) Participated in ITTO PD 12/00 Rev .3 (F) "Developing and Extending of Criteria and Indicators for Sustainable Management of Natural Tropical Forests in China ".
- (2) Participated in SFA project "Developing Criteria and Indicators for Sustainable Management of Tropical Forests in China".
- (3) Participated in ITTO PD 423/06 Rev.2 (F) "Training on Demonstration, Application and Extension of ITTO Manual on Restoring Forest Landscapes in Tropics of China"

Name: **He Chulin**

Date and place of birth: 1962/ Hunan, China

Nationality: Chinese

Field and institution of graduation: Computer science, University of National Defensive Science and Technology, Changsha, China.

Field and institution of Post-graduation: Master, Tropical Forest and International Forest, Goettingen University, Germany

Relevant work undertaken in the last three years:

- (1) Application of Remote sensing and GIS, Forest resource monitoring, Forest inventory
- (2) Participated in ITTO PD 57/97 "Establishment of Satellite Remote Sensing Monitoring and Geographical Information System for Tropical Natural Forests in Hainan"
- (3) Participated in ITTO PD 423/06 Rev.2 (F) "Training on Demonstration, Application and Extension of ITTO Manual on Restoring Forest Landscapes in Tropics of China"
- (4) Senior Engineer of Hainan Forestry Bureau

Name: **Liang Youhao**

Date and place of birth: 1958/ Hainan

Nationality: Chinese

Relevant work undertaken in the last three years:

- (1) Participated in ITTO PD 423/06 Rev.2 (F) "Training on Demonstration, Application and Extension of ITTO Manual on Restoring Forest Landscapes in Tropics of China"
- (2) Director and Engineer of Forestry Bureau of Lingshui Li Autonomous County

Name: **Yang Keren**

Date and place of birth: 1963/ Guangdong

Nationality: Chinese

Relevant work undertaken in the last three years:

- (1) Participated in ITTO PD 423/06 Rev.2 (F) "Training on Demonstration, Application and Extension of ITTO Manual on Restoring Forest Landscapes in Tropics of China"
- (2) Vice director and Engineer of Forestry Bureau of Lingshui Li Autonomous County

ANNEX 3: COMMITMENT LETTER FROM FORESTRY BUREAUS OF LINGSHUI LI AUTONOMOUS COUNTY TO SUPPORT PROJECT'S LONG-TERM SUSTAINABILITY

(Translation only for reference, the scanning file of original letter is attached in next page)

International Tropical Timber Organization:

We have participated in developing the ITTO project "Development and Demonstration on Scheme of Payment for Environmental Services (PES) Derived from Degraded and Secondary Tropical Production Forests in China". We believe that its implementation will promote the forest landscape restoration and development of economy and society of Hainan Province. We are willing to support the project team actively, to coordinate relevant stakeholders actively to guarantee the implementation and the long-term sustainability of the project during implementing and after completion provided the project is approved and funded by ITTO.

Forestry Bureau of Lingshui Li Autonomous County,
Hainan Province, P. R. China
September 23, 2009

承诺函

国际热带木材组织 (ITTO):

我们参与了《中国热带生产性退化与次生森林环境服务补偿制度的研制与示范》项目建议书的编写，并确信该项目的实施将促进陵水黎族自治县生产性退化与次生森林的保护与恢复，将促进区域经济社会可持续发展。因此，如果该项目得到 ITTO 的批准，我们将积极配合项目组的工作，积极协调各利益相关者，以确保该项目的顺利实施和项目结束后的长期持续性。

海南省陵水黎族自治县林业局

2009年9月23日



ANNEX 4: TERMS OF REFERENCE OF PERSONNEL AND CONSULTANTS AND SUB-CONTRACTS FUNDED BY ITTO

National experts, national consultants and international consultant will be funded by executive agency. Only other labor totally 28PM (including 13PM for assistants and 15 PM for other labor mainly for field work and assistant work) will be funded by ITTO.

There will be 2 subcontracts in the project.

Terms of references for Subcontract A (Implementing scheme of PES)

- Establish the Fund of Payment for Environmental Services (PES) derived from degraded and secondary tropical production forests in demonstrative area
- Implement on scheme of Payment for Environmental Services (PES) derived from degraded and secondary tropical production forests in demonstrative area

Terms of references for Subcontract B (Mapping and Publishing)

- Map before and after inventory in demonstrative area
- Publish relative documents for workshop etc.

ANNEX 5: SUMMARY OF MODIFICATION BASED ON REVIEWER COMMENTS

SN	Recommendations	Modifications in the proposal
1	The budget for ITTO Project Monitoring and Administration should be revised and formulated according to ITTO manual. Project monitoring and review should be increased to USD 10,000, Programme support costs must be revised accordingly.	Project monitoring and review has been increased to USD 10,000; and Programme support costs have been revised accordingly on page 15- 20.
2	The specific objective needs to be rewritten focusing on strengthening stakeholder capacity to reduce degradation and deforestation of degraded and secondary tropical production forest in Hainan Province	The specific objective has focused on strengthening stakeholder capacity to reduce degradation and deforestation of degraded and secondary tropical production forest in Hainan Province on page 11.
3	Hainan Province should be included in the project title	Hainan Province has been included in the project title on first page and page 11.
4	A CLEAR statement of the key problem is missing, please include	A clear statement of the key problem has been added on page 9.
5	Terms of Reference (TOR) for personnel, consultants and sub-contracts are missing and need to be presented as annexes	Terms of reference for personnel and consultants and sub-contracts has been provided in Annex 4 on page 30.
6	Qualitative indicators and verifiable indicators for success in achieving objectives need to be included	Qualitative indicators and verifiable indicators for success in achieving objectives have been included on page 11.
7	Also, a description of environmental, social and economic effects should be included	A description of environmental, social and economic effects has been included on page 6.
8	Please also elaborate on sustainability of project results	Sustainability of project results has been elaborated on page 6.
9	All changes must be highlighted in bold and underlined text.	The additions in revised version are shown in underlining, while the deletion in strikethrough.