COMPLETION REPORT OF THE ITTO PROJECT

Host Government:	The People's Republic of China
Name of the Executing Agency:	Research Institute of Forest Resource Information Techniques, Chinese Academy of Forestry (CAF)

Title of the ITTO Project or Pre-project:	Demonstration on Investigation and Assessment of Tropical Forest Ecotourism Resources in Hainan Province, China
Project number:	RED-SPD 075/12 Rev. 1 (F)
Starting date of the Project:	1 May 2013
Duration of the Project (month)	18 months
Project costs (US $):	145, 800 (ITTO)
The ordinal number and type of the Report	Project Completion Report
Project technical and scientific staff:	Huang Qinglin，Huang Jincheng, Ma Zhibo, Zhuang Chongyang, Luo Hong， He Chulin, Peng Wencheng
Implementing institutions:	Full Name: Research Institute of Forest Resource Information Techniques, Chinese Academy of Forestry (CAF) Address: Box 33, Chinese Academy of Forestry (CAF), Wan shou shan, Beijing 100091, P. R. China Telephone: +86-10-62888889 Fax: +86-10-62888315 E-mail: huangql@caf.ac.cn
The place and date the report was issued:	Beijing, China 31 August 2015

Table of contents

Executive summary

This project originated from the ITTO Thematic Programme on Reducing Deforestation and Forest Degradation and Enhancing Environmental Services in Tropical Forests (REDDES). There is not specific method of investigation and assessment for tropical forest ecotourism resources in China. The existing methods are simple, extensive and no specific. They are introduced from universal methods, mainly from "*Classification, Investigation and Evaluation of Tourism Resources*" (GB/T 18972-2003, National Standard of the People's Republic of China) developed by National Tourism Administration and "*China Landscape Resources Grade Evaluation of Forest Park in China*" (GB/T 18005-1999, National Standard of the People's Republic of China) developed by State Forestry Administration. 3 main problems in the existing method are as fellows. (1) The ecotourism attractions in tropical forests are not specific. (2) The ecotourism attractions inventory is not conducted in all subcompartments in the Forest Management Unit (FMU). (3) The Recreation Opportunity Spectrum (ROS) inventory and visual landscape inventory (including scenic attractiveness, scenic integrity, landscape visibility and scenic classes etc.) are not included.

The project development objective was to promote tropical forest ecotourism in support of a sound assessment method in Hainan Province. The project specific objective was to strengthen the capacity of local stakeholders in fully assessing the potential of developing tropical forest ecotourism through the formulation of a sound assessment method in Hainan Province.

All outputs and activities were finished, scheduled in the project plan. There are not critical differences between planned and actual project implementation. Methodology for investigating and assessing tropical forest ecotourism resources based on stakeholders participatory was finished. Investigation and assessment report on 6 typical forest ecotourism resources in Hainan Province based on stakeholders participatory was finished.

1 book (in Chinese) titled "*The Guides Collection for Inventory and Assessment of Forest Recreation Resources in USA*" was published in 2015 by China Forestry Publishing House. 2 relative papers (in Chinese) were published: (1) *Research Progress on Classification, Investigation and Evaluation of Forest Tourism Resource* was published in *World Forestry Research* (2014, 27(6): 8~13); (2) *Valuation and Payments for Forest Ecosystem Service: Concepts, Principles, and Indicators* was published in *Journal of China Agriculture University* (2014, 19(5): 263~268). 3 relative papers (in Chinese) were finished and will be submitted to the relative Journals: (1) *Progress from Visual Management System (VMS)* to *Scenery Management System (SMS)*; (2) *Characteristics of Buttresses of Mountain Rain Forests in Diaoluoshan National Forest Park of Hainan Province*; (3) *Characteristics of "Gardens in the Air" of Mountain Rain Forests in Diaoluoshan National Forest Park of Hainan Province*.

There are 3 levels of ecotourism attractions for investigation and assessment of tropical forest ecotourism resources in Hainan Province: individual level, stand (forest community) level and forest landscape level. The buttress, gardens in the air, cauliflory, strangler, dangling lianas and special trees etc. are the main ecotourism attractions in individual level and should be inventoried in each subcompartment when conduct the forest management inventory in FMU. The density and distribution of individual ecotourism attractions, species diversity and structure of stand (forest community) etc. are

the main ecotourism attractions in stand (forest community) level and should be inventoried in each subcompartment when conduct the forest management inventory in FMU. The Recreation Opportunity Spectrum (ROS) and visual landscape characters (including scenic attractiveness, scenic integrity, landscape visibility and scenic classes etc.) are the main ecotourism attractions in forest landscape level.

The beneficiaries of the project were villagers, local communities, Forest Management Unit（FMU），the forestry research and development institutions, and local governmental departments who have been directly or indirectly involved in the implementation of the project.

1 Project identification

1.1 Context

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 elevation from 0-1,867 m. The top point is Wuzhi (five fingers) mountain. 70% of the lands are plain, tableland and hills, with 200-500 m low hills accounting for 20.2%, and mountains of above 500 m accounting for 9.8%.

The annual average sunshine amounts to 2,000 hours, and the annual average temperature is 23-28 ℃. The accumulated annual temperature above 10 ℃ is 8,300 ℃. The extremely lowest temperature is 1.4-7 ℃. The season with monthly average temperature above 20 ℃ 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 beach. Different topography is distributed and related with their different soil types, temperature, moisture and sun illumination etc.

There are 4,600 species of vegetation with vascular bundle, which belong to 259 families and 1,347 genus. 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 rare and endangered species. There are 600 species of mammal and amphibians, birds and fishes. There is 2,072,000 ha of tropical forests (659,333 ha of natural tropical forests). The forest coverage is 60.2%. The total forest stock volume is 125,000,000 m^3. The typical forest ecotourism resources are distributed in the forest parks and natural reserves in different levels. There are 8 national forest parks (including Jianfengling, Bawangling, diaoluoshan and Limushan etc. national forest parks), 3 provincial forest parks and 1 county-level forest park. There are 8 national natural reserves (including Jianfengling, Bawangling, Diaoluoshan and Limushan etc. national natural reserves), 18 provincial natural reserves and 6 county-level natural reserves which cover 240,000 ha (from *Hainan Statistical Yearbook 2012*).

The total population of Hainan Province was 8,773,800 in 2011, mainly comprised of nations Han, Li, Miao, Zhuang and Hui. The population percent of 0-14 year old, 15-64 year old and above 65 year old were 19.56%, 72.36% and 8.08% respectively. There were 2 cities at prefectural level, 6 cities at county level, 4 counties, 6 autonomous counties and 204 townships (towns) (from *Hainan Statistical Yearbook 2012*). The highway in Hainan Province was well developed. The round-Island expressway and the first, second, third level highways form a highway network on the Island. The round-Island railway and high speed railway was well constructed.

The project area is located in Diaolushan National Forest Park that lies in the southeast of Hainan Island. The Diaolushan National Forest Park located at 18° 40'-18° 48' N and 109° 45'-109° 56' E, mainly located in Lingshui County, and connecting Baoting County and Qiongzhong County. The total cover area is 18,389 hm^2. The annual average temperature is 24.4 ℃. and annual rainfall is

1,870-2,760 mm. The total cover area is 18,389 hm^2. The annual average temperature is 24.4 ℃ and annual rainfall is 1,870-2,760 mm.

The 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". The 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*.

The 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. The 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.

1.2 Origin and problem

This project originated 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 was 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.

The construction of Hainan International Tourist Island became a national strategy after *Several Suggestions on the Advancement of Construction and Development for Hainan International Tourism Island* issued by State Council in December 2009. The government of Hainan Province developed *outline of Construction and Development for Hainan International Tourism Island* in June 2010 and issued *Decisions on Accelerating Development of Hainan Tropical Forest Tourism* in July 2011. In the *Decisions*, the development of Hainan tropical forest tourism was recognized as an important measure to ensure the ecological security of Hainan Province and an important approach to improve local livelihoods in central and west part of Hainan Province, because of important ecological and economic values and unique tourism values of tropical forest resources. Forest ecotourism is an important part of the construction of Hainan International Tourism Island. Forest ecotourism is an important and effective effort to enhance environmental services and local livelihoods in Hainan Province. Investigation and assessment of typical forest ecotourism resources in Hainan Province is the most important step for implementing and promoting forest ecotourism in Hainan Province.

Hainan Province is a major tourism province in China because of its tropical climate and ocean scenery. The forest ecotourism in Hainan Province is still weak, but should have great potential because of

60.2% of tropical forest coverage (especially 0.659 million hectare of natural tropical forests) and unique minorities cultures etc. Besides weakness in the infrastructure for forest ecotourism, there main problem for forest ecotourism in Hainan Province was that tourists visited Hainan were not interests in tropical forests (including rain forest). In other words, the results and their dissemination from existing extensive investigation and assessment of forest ecotourism resources in Hainan Province have not obviously attracted the tourists and public. The important and unique ecotourism values of tropical forest ecotourism resources in Hainan Province should be introduced to public by sound investigation and assessment methods.

Up to now, only small proportion of tourists visited Hainan went to forests for forest ecotourism. The income generated from tropical forest ecotourism was limited, the values of tropical forest ecotourism resources was under presented, and the incentives to the forest owners to sustainable management was lack. Development of tropical forest ecotourism strategies, policies and activities in Hainan Province is still weak. The key problem for tropical forest ecotourism in Hainan Province is lack of capacity for investigating and assessing of tropical forest ecotourism resources. The important and unique ecotourism values of forest ecotourism resources should be introduced to public by sound investigation and assessment methods. There is not specific method of investigation and assessment for tropical forest ecotourism resources in China. The existing methods are simple, extensive and no specific. They are introduced from universal methods, mainly from "*Classification, Investigation and Evaluation of Tourism Resources*" (GB/T 18972-2003, National Standard of the People's Republic of China) developed by National Tourism Administration and "*China Landscape Resources Grade Evaluation of Forest Park in China*" (GB/T 18005-1999, National Standard of the People's Republic of China) developed by State Forestry Administration. 3 main problems in the existing methods are as fellows. (1) The ecotourism attractions in tropical forests are not specific. (2) The ecotourism attractions inventory is not conducted in all subcompartments in the Forest Management Unit (FMU). (3) The Recreation Opportunity Spectrum (ROS) inventory and visual landscape inventory (including scenic attractiveness, scenic integrity, landscape visibility and scenic classes etc.) are not included.

2 Project objectives and implementation strategy

Project objectives

The project development objective was to promote tropical forest ecotourism in support of a sound assessment method in Hainan Province.

The project specific objective was to strengthen the capacity of local stakeholders in fully assessing the potential of developing tropical forest ecotourism through the formulation of a sound assessment method in Hainan Province.

Implementation strategy

The project worked collaboratively with all stakeholders directly or indirectly interested in investigation and assessment of typical forest ecotourism resources in Hainan Province. The potential stakeholders were local villager and indigenous group (for the collective forests), local forest community (for the collective forests) and forest management unit (for the state forests), local forestry agency, project staff, local government agency, civil society organization, private sector, education and research institution and donor. Using participatory approach would help interested groups to participate equally. It was necessary to raise awareness of different stakeholders on tropical forest ecotourism, to gain the support on policy and finance from local governments, local forestry agency and private sectors by propagandizing and consulting meetings. The following steps were taken to implement this participatory approach in project area.

Methodology for investigating and assessing tropical forest ecotourism resources: relevant international literature and cases on tropical forest ecotourism were collected and analyzed by project staff. Participatory workshop was held among different stakeholders to develop the methodology. Special attention was given to possible conflicting interests among different stakeholders.

Draft investigation and assessment report: participatory investigation and assessment on 6 typical forest ecotourism resources were undertaken. Meanwhile, the investigation and assessment helped different stakeholders to improve the awareness and knowledge on tropical forest ecotourism.

Investigation and assessment report: participatory discussion and consultation were undertaken to identify the investigation and assessment report on 6 typical forest ecotourism resources in Hainan Province.

The project results were made useful to interested parties and users by publishing and distributing the investigation and assessment report and by different internet websites.

3 Project performance (Project elements planned and implemented)

Specific objective

The specific objective of the project was achieved. The capacity of local stakeholders in fully assessing the potential of developing tropical forest ecotourism through the formulation of a sound assessment method in project area was significantly strengthened.

Outputs

All outputs were finished, scheduled in the project plan.

Methodology for investigating and assessing tropical forest ecotourism resources based on stakeholders participatory was finished (Output 1). Investigation and assessment report on 6 typical forest ecotourism resources in Hainan Province based on stakeholders participatory (Output 2) was finished (Output 3).

1 book (in Chinese) titled "*The Guides Collection for Inventory and Assessment of Forest Recreation Resources in USA*" was published in 2015 by China Forestry Publishing House. 2 relative papers (in Chinese) were published: (1) *Research Progress on Classification, Investigation and Evaluation of Forest Tourism Resource* was published in *World Forestry Research* (2014, 27(6): 8~13); (2) *Valuation and Payments for Forest Ecosystem Service: Concepts, Principles, and Indicators* was published in *Journal of China Agriculture University* (2014, 19(5): 263~268). 3 relative papers (in Chinese) were finished and will be submitted to the relative Journals: (1) *Progress from Visual Management System (VMS)* to *Scenery Management System (SMS)*; (2) *Characteristics of Buttresses of Mountain Rain Forests in Diaoluoshan National Forest Park of Hainan Province*; (3) *Characteristics of "Gardens in the Air" of Mountain Rain Forests in Diaoluoshan National Forest Park of Hainan Province*.

Activities

All activities were finished, scheduled in the project plan.

The relevant international and national literature and cases on tropical forest ecotourism were collected and analyzed (Activity 1.1). Draft methodology for investigating and assessing tropical forest ecotourism resources in Hainan Province was developed (Activity 1.2). Draft methodology for investigating and assessing tropical forest ecotourism resources in Hainan Province was discussed, consulted and identified (Activity 1.3).

6 typical objects of forest ecotourism resources (2 at forest landscape level, 3 at forest community level and 1 at individual level) in Diaoluoshan National Forest Park of Hainan Province were chosen (Activity 2.1). The comprehensive factors of 6 typical objects of forest ecotourism resources in Diaoluoshan National Forest Park of Hainan Province was investigated (Activity 2.2). The fascinating and distinguishing characteristics of 6 typical objects of forest ecotourism resources in Diaoluoshan National Forest Park of Hainan Province were analyzed (Activity 2.3). Draft investigation and assessment report

on 6 typical forest ecotourism resources in Diaoluoshan National Forest Park of Hainan Province (in Chinese) was developed (Activity 2.4). Investigation and assessment report on 6 typical forest ecotourism resources in Diaoluoshan National Forest Park of Hainan Province (in Chinese) was discussed, consulted and identified (Activity 2.5). The investigation and assessment report on 6 typical forest ecotourism resources in Diaoluoshan National Forest Park of Hainan Province was published and distributed (Activity 2.6).

There are 3 levels of ecotourism attractions for investigation and assessment of tropical forest ecotourism resources in Hainan Province: individual level, stand (forest community) level and forest landscape level. The buttress, gardens in the air, cauliflory, strangler, dangling lianas and special trees etc. are the main ecotourism attractions in individual level and should be inventoried in each subcompartment when conduct the forest management inventory in FMU. The density and distribution of individual ecotourism attractions, species diversity and structure of stand (forest community) etc. are the main ecotourism attractions in stand (forest community) level and should be inventoried in each subcompartment when conduct the forest management inventory in FMU. The Recreation Opportunity Spectrum (ROS) and visual landscape characters (including scenic attractiveness, scenic integrity, landscape visibility and scenic classes etc.) are the main ecotourism attractions in forest landscape level.

Typical photos of ecotourism attractions in individual level, in stand (forest community) level and landscape level are attached in Annex 3, Annex 4 and Annex 5 respectively. Photos of field inventory and meeting is attached in Annex 6.

The starting date of project was 1 May 2013 and the planned duration was 18 months. The realized duration was 25 months (on 31 May 2015) because the third installment of ITTO fund was received on 24 October 2014.

The total amount of expenditures was 130,000 US$ (ITTO contribution) and the planned total input was 130,000 US$ (ITTO contribution).

4 Project outcome, target beneficiaries involvement

Extent to which the project specific objective was achieved

The project specific objective was successfully achieved in the project area. The capacity of local stakeholders in fully assessing the potential of developing tropical forest ecotourism through the formulation of a sound assessment method in project area was significantly strengthened.

Situation existing at project completion as compared to the pre-project situation

The situation existing at project completion as compared to the pre-project situation is as follows:

(1) The understanding about the attracted characteristics of tropical forest ecotourism resources in project area to the public has be enhanced obviously;
(2) Sound methods for investigating and assessing tropical forest ecotourism resources have be widely extended in project area;
(3) The capacity of local stakeholders in fully assessing the potential of developing tropical forest ecotourism through the formulation of a sound assessment method in project area was significantly strengthened;
(4) Policy recommendations of sound methods for investigating and assessing tropical forest ecotourism resources will be accepted and conduct in the forest management inventory in FMU in the future.

Target beneficiaries involvement

In general, the beneficiaries of the project were villagers, local communities, forest management units (FMUs), the forestry research and development institutions, and local governmental departments who had been directly or indirectly involved in the implementation of the project. Specifically, these beneficiaries include:

The project staff, most of them were from Chinese Academy of Forestry, Diaoluoshan National Forest Park and Hainan Forestry Department, were beneficiaries of the project. They could get their work experiences for sound methods for investigating and assessing tropical forest ecotourism resources.

Local villagers, indigenous groups and communities in project area had benefited from the project directly.

Local forestry agencies and other governmental departments got experience on how to conduct sound methods for investigating and assessing tropical forest ecotourism resources.

Other stakeholders (Civil society organizations, private sectors, donors and the international organizations etc.) benefited from improved capacity in fully assessing the potential of developing tropical forest ecotourism.

Project sustainability after project completion

Diaoluoshan National Forest Park (project area) has set up special management organization and related mechanism to take charge of the protection of demonstration forests, and guarantee the long-term sustainability after project completion.

5 Assessment and analysis

Forest ecotourism is an important part of the construction of Hainan International Tourism Island. Forest ecotourism is an important and effective effort to enhance environmental services and local livelihoods in Hainan Province. Investigation and assessment of tropical forest ecotourism resources is the most important step for implementing and promoting tropical forest ecotourism in Hainan Province. The key problem for tropical forest ecotourism in Hainan Province is lack of capacity for investigating and assessing of tropical forest ecotourism resources. The important and unique ecotourism values of forest ecotourism resources should be introduced to public by sound investigation and assessment methods.

There is not specific method of investigation and assessment for tropical forest ecotourism resources in China. The existing methods are simple, extensive and no specific. They are introduced from universal methods, mainly from "*Classification, Investigation and Evaluation of Tourism Resources*" (GB/T 18972-2003, National Standard of the People's Republic of China) developed by National Tourism Administration and "*China Landscape Resources Grade Evaluation of Forest Park in China*" (GB/T 18005-1999, National Standard of the People's Republic of China) developed by State Forestry Administration. 3 main problems in the existing method are as fellows. (1) The ecotourism attractions in tropical forests are not specific. (2) The ecotourism attractions inventory is not conducted in all subcompartments in the Forest Management Unit (FMU). (3) The Recreation Opportunity Spectrum (ROS) inventory and visual landscape inventory (including scenic attractiveness, scenic integrity, landscape visibility and scenic classes etc.) are not included.

The key problems for Lack of capacity for investigating and assessing of tropical forest ecotourism resources in Hainan Province are as follows: (1) Limited understanding about the opportunities and constraints of tropical forest ecotourism development; (2) Limited understanding about the attracted characteristics of tropical forest ecotourism resources to the public; (3) Limited understanding about best practice and method for investigating and assessing of tropical forest ecotourism; (4) Lack of experiences in participatory approach in investigating and assessing of tropical forest ecotourism resources. About 4 project problems analysis was appropriate and correct. It would be helpful to develop the measures (activities), outputs and objectives appropriately. The project development and specific objectives was also appropriate and correct, and was compliance with scope and objectives of ITTO REDDES programme. The implementation strategy was proved appropriately and correctly.

There are not critical differences between planned and actual project implementation.

There is no significant gap between the inputs (both ITTO and Chinese government) and project requirement for fund, the input was able to keep the project going normally and smoothly.

The project staff, most of them were from Chinese Academy of Forestry, Diaoluoshan National Forest Park and Hainan Forestry Department, were beneficiaries of the project. They got their work experiences for sound methods for investigating and assessing tropical forest ecotourism resources. Local villagers, indigenous groups and communities in project area had benefited from the project directly. Local forestry agencies and other governmental departments got experience on how to conduct sound methods for investigating and assessing tropical forest ecotourism resources. Other stakeholders (Civil society organizations, private sectors, donors and the international organizations etc.) benefited

from improved capacity in fully assessing the potential of developing tropical forest ecotourism.

Diaoluoshan National Forest Park (project area) has set up special management organization and related mechanism to take charge of the protection of demonstration forests, and guarantee the long-term sustainability after project completion.

It was essential that the roles and responsibilities of the institutions involved in the project implementation were clearly defined and documented by subcontracts in the beginning and during the implementing of the project.

6 Lessons learned

There are 3 levels of ecotourism attractions for investigation and assessment of tropical forest ecotourism resources in Hainan Province: individual level, stand (forest community) level and forest landscape level. The buttress, gardens in the air, cauliflory, strangler, dangling lianas and special trees etc. are the main ecotourism attractions in individual level and should be inventoried in each subcompartment when conduct the forest management inventory in FMU. The density and distribution of individual ecotourism attractions, species diversity and structure of stand (forest community) etc. are the main ecotourism attractions in stand (forest community) level and should be inventoried in each subcompartment when conduct the forest management inventory in FMU. The Recreation Opportunity Spectrum (ROS) and visual landscape characters (including scenic attractiveness, scenic integrity, landscape visibility and scenic classes etc.) are the main ecotourism attractions in forest landscape level.

The project problems analysis (problem tree) and the objects analysis (object tree) are the key analysis for achieving the Specific Objective contributing to the Development Object. The stakeholder identification and participation are the basic of the project. The cooperation between the relevant parties interested in project is critical to the project's success. Project work meetings between the relevant parties interested in the project should be held periodically and any problems should be resolved as soon as they are occurred. Field survey, assessment report, draft plan, formal plan, implementation of the formal plan and stakeholder participation etc. are important steps and elements for the implementation strategy.

The variations should be timely identified and adjusted by project work meetings. Activities which exceed the scope of project plan but are in line with project objectives and do not take extra fund may be encouraged. The project progress should be examined in project work meeting. The expected time for output to be achieved should be adjusted according to the actual situation sometimes. A set of project organizational systems and management regulations should be established. Various activities of output of the project should be assigned to project members with duty-bound responsibility respectively. All activities cooperated among project staff should be arranged in unison by project director. The Project Technical Committee meetings, workshops and project work meetings for project members and relevant parties should be organized periodically during the implementation of the project.

It is essential that the roles and responsibilities of the institutions involved in the project implementation are clearly defined and documented by subcontracts in the beginning and during the implementing of the project.

A special system should be set up to keep project files and documents. The relative documents and information of the project in different stages are added and presented in the system.

Monitoring and evaluating mechanism should be carried out effectively by the project. The project implementation should be inspected and guided by the Project Technical Committee every year. A project progress report should be submitted to ITTO every six months.

7 Conclusions and recommendations

All project activities and outputs were finished, scheduled in the project plan. The specific objective of the project was achieved. The capacity of local stakeholders in fully assessing the potential of developing tropical forest ecotourism through the formulation of sound investigation and assessment methods in project area was significantly strengthened.

There are 3 levels of ecotourism attractions for investigation and assessment of tropical forest ecotourism resources in Hainan Province: individual level, stand (forest community) level and forest landscape level. The buttress, gardens in the air, cauliflory, strangler, dangling lianas and special trees etc. are the main ecotourism attractions in individual level and should be inventoried in each subcompartment when conduct the forest management inventory in FMU. The density and distribution of individual ecotourism attractions, species diversity and structure of stand (forest community) etc. are the main ecotourism attractions in stand (forest community) level and should be inventoried in each subcompartment when conduct the forest management inventory in FMU. The Recreation Opportunity Spectrum (ROS) and visual landscape characters (including scenic attractiveness, scenic integrity, landscape visibility and scenic classes etc.) are the main ecotourism attractions in forest landscape level.

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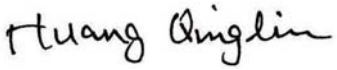
The implementation of sound investigation and assessment methods for tropical forest ecotourism resources is so urgent and important for implementing and promoting tropical forest ecotourism in Hainan Province. The successful implementing of this project will play very important demonstrative roles in tropical areas of China.

Responsible for the Report

Name: Huang Qinglin

 (signature)

Position held: Project Director

Date: 31 August 2015

Annex 1 Project financial statement

Project financial statement (ITTO Contribution, in US dollar)

Project No. RED-SPD 075/12 Rev. 1 (F) **Period ending on:** 31 May 2015

Project Title: Demonstration on Investigation and Assessment of Tropical Forest Ecotourism Resources in Hainan Province, China

Component	Original Amount (A)	Expenditures To-date			Available Funds (E) { A - D }
		Accrued (B)	Expended (C)	Total (D) { B + C }	
I. Funds managed by Executing Agency					
10. Project Personnel					
11. National Experts (long term)	0	0	0	0	0
11.1 Project Coordinator	0	0	0	0	0
11.2 Forester 1	0	0	0	0	0
11.3 Market/industry expert etc.	0	0	0	0	0
11.4 Administrator	0	0	0	0	0
12. Other Personnel	25,000	0	25,520	25,520	-520
12.1 Assistant 1	7,000	0	7,174	7,174	-174
12.2 Assistant 2	6,000	0	5,799	5,799	+201
12.3 Other labor	12,000	0	12,547	12,547	-547
13. National Consultant(s) (short term)	0	0	0	0	0
13.1 Consultant 1	0	0	0	0	0
13.2 Consultant 2	0	0	0	0	0
14. International Consultant(s)	0	0	0	0	0
14.1 Forest Inventory Expert	0	0	0	0	0
14.2 Consultant 2	0	0	0	0	0
15. Fellowship and Training	0	0	0	0	0
15.1 Training 1	0	0	0	0	0
15.2 Training 2	0	0	0	0	0
19. Component Total	25,000	0	25,520	25,520	-520
20. Sub-contracts					
21. Sub-contract (Implementing PES Scheme)	30,000	0	29,485	29,485	+515
22. Sub-contract (Mapping and Publishing)	10,000	0	9,828	9,828	+172
29. Component Total:	40,000	0	39,313	39,313	+687
30. Travel					
31. Daily Subsistence Allowance	20,000	0	20,769	20,769	-769
31.1 National Expert(s)/ Consultant(s)	12,000	0	11,748	11,748	+252

		31.2 International Consultant(s)	0	0	0	0	0
		31.3 Others	8,000	0	9,021	9,021	-1,021
	32.	International Travel	6,000	0	5,259	5,259	+714
		32.1 National Expert(s)/ Consultant(s)	6,000	0	5,259	5,259	+714
		32.2 International Consultant(s)	0	0	0	0	0
		32.3 Others	0	0	0	0	0
	33.	Local Transport Costs	11,000	0	11,484	11,484	-484
		32.1 National Expert(s)/ Consultant(s)	9,000	0	9,428	9,428	-428
		32.2 International Consultant(s)	0	0	0	0	0
		32.3 Others	2,000	0	2,056	2,056	-56
	39.	Component Total:	37,000	0	37,512	37,512	-512
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	15,000	0	14,902	14,902	+98
		44.1 Computer Equipment	6,000	0	5,907	5,907	+93
		44.2 Forestry Equipment	9,000	0	8,995	8,995	+5
		44.3 Others	0	0	0	0	0
	49.	Component Total:	15,000	0	14,902	14,902	+98
50.	**Consumable Items**						
	51.	Raw Materials	0	0	0	0	0
	52.	Spare	0	0	0	0	0
	53.	Utilities	0	0	0	0	0
	54.	Office Supplies	0	0	0	0	0
	59.	Component Total:	0	0	0	0	0
60.	**Miscellaneous**						
	61.	Sundry	12,000	0	12,163	12,163	-163
	62.	Auditing Costs	1,000	0	590	590	+410
	63.	Contingencies	0	0	0	0	0
	69.	Component Total	13,000	0	12,753	12,753	+247
70.	**National Management Costs**						
	71.	Executing Agency Management Costs	0	0	0	0	0
	72.	Focal Point Monitoring	0	0	0	0	0
	79.	Component Total	0	0	0	0	0
Sub-Total:			130,000	0	130,000	130,000	0
100. GRAND TOTAL:			145,800	-	-	-	-

Note: Amounts in U.S. dollars are converted from the local currency using the average exchange rate which was 6.1049 RMB/US$ in this period (39,988 US$ in 6.1307 RMB/US$ in 14 May 2013, 49,988 US$ in 6.0792 RMB/US$ in 4 December 2013 and 39,988 US$ in 6.1111 RMB/US$ in 14 October 2014).

Project financial statement (Chinese Government Contribution, in US dollar)

Project No. RED-SPD 075/12 Rev. 1 (F) **Period ending on:** 31 May 2015

Project Title: Demonstration on Investigation and Assessment of Tropical Forest Ecotourism Resources in Hainan Province, China

Component		Original Amount (A)	Expenditures To-date			Available Funds (E) { A - D }
			Accrued (B)	Expended (C)	Total (D) { B + C }	
I.	**Funds managed by Executing Agency**					
10.	**Project Personnel**					
11.	National Experts (long term)	10,000	0	9,800	9,800	+200
	11.1 Project Coordinator	6,000	0	5,900	5,900	+100
	11.2 Forester 1	4,000	0	3,900	3,900	+100
	11.3 Market/industry expert etc.	0	0	0	0	0
	11.4 Administrator	0	0	0	0	0
12.	Other Personnel	0	0	0	0	0
	12.1 Assistant 1	0	0	0	0	0
	12.2 Assistant 2	0	0	0	0	0
	12.3 Other labor	0	0	0	0	0
13.	National Consultant(s) (short term)	0	0	0	0	0
	13.1 Consultant 1	0	0	0	0	0
	13.2 Consultant 2	0	0	0	0	0
14.	International Consultant(s)	0	0	0	0	0
	14.1 Forest Inventory Expert	0	0	0	0	0
	14.2 Consultant 2	0	0	0	0	0
15.	Fellowship and Training	0	0	0	0	0
	15.1 Training 1	0	0	0	0	0
	15.2 Training 2	0	0	0	0	0
19.	Component Total	10,000	0	9,800	9,800	+200
20.	**Sub-contracts**					
21.	Sub-contract (Implementing PES Scheme)	0	0	0	0	0
22.	Sub-contract (Mapping and Publishing)	0	0	0	0	0
29.	Component Total:	0	0	0	0	0
30.	**Travel**					
31.	Daily Subsistence Allowance	0	0	0	0	0
	31.1 National Expert(s)/ Consultant(s)	0	0	0	0	0
	31.2 International Consultant(s)	0	0	0	0	0
	31.3 Others	0	0	0	0	0

	32.	International Travel	0	0	0	0	0
		32.1 National Expert(s)/ Consultant(s)	0	0	0	0	0
		32.2 International Consultant(s)	0	0	0	0	0
		32.3 Others	0	0	0	0	0
	33.	Local Transport Costs	0	0	0	0	0
		32.1 National Expert(s)/ Consultant(s)	0	0	0	0	0
		32.2 International Consultant(s)	0	0	0	0	0
		32.3 Others	0	0	0	0	0
	39.	Component Total:	0	0	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	0	0	0	0	0
		44.1 Computer Equipment	0	0	0	0	0
		44.2 Forestry Equipment	0	0	0	0	0
		44.3 Others					
	49.	Component Total:	0	0	0	0	0
50.	**Consumable Items**						
	51.	Raw Materials	9,000	0	10,000	10,0000	-1,000
	52.	Spare	7,000	0	6,800	6,800	+200
	53.	Utilities	7,000	0	6,800	6,800	+200
	54.	Office Supplies	7,000	0	6,800	6,800	+200
	59.	Component Total:	30,000	0	29,200	29,200	-400
60.	**Miscellaneous**						
	61.	Sundry	0	0	0	0	0
	62.	Auditing Costs	0	0	0	0	0
	63.	Contingencies	0	0	0	0	0
	69.	Component Total	0	0	0	0	0
70.	**National Management Costs**						
	71.	Executing Agency Management Costs	13,200	0	13,000	13,000	+200
	72.	Focal Point Monitoring	0	0	0	0	0
	79.	Component Total	13,200	0	13,000	13,000	+200
Sub-Total:			53,200	0	53,200	53,200	0
100. GRAND TOTAL:			53,200	0	53,200	53,200	0

Note: Amounts in U.S. dollars are converted from the local currency using the average exchange rate which was 6.1049 RMB/US$ in this period (39,988 US$ in 6.1307 RMB/US$ in 14 May 2013, 49,988 US$ in 6.0792 RMB/US$ in 4 December 2013 and 39,988 US$ in 6.1111 RMB/US$ in 14 October 2014).

Annex 2 Project cash flow statement

Project cash flow statement (ITTO Contribution)

Project No. RED-SPD 075/12 Rev. 1 (F) **Period ending on:** 31 May 2015

Project Title: Demonstration on Investigation and Assessment of Tropical Forest Ecotourism Resources in Hainan Province, China

	Component	Reference	Date	Amount in US$	Local Currency
A.	**Funds received from ITTO:**				
	1. First installment	G0130990701001	2013/04/24	39,988	245,154
	2. Second Installment	G0133110942101	2013/11/07	49,988	303,887
	3. Third installment	010300994	2014/10/24	39,988	244,371
	Remittance charge by CITYBANK N. A. of US (3 times)			36	220
	Total Funds Received:			130,000	793,632
B.	**Expenditures by Executing Agency:**				
10.	**Project Personnel**				
	11. National Experts (long term)			0	0
	11.1 Project Coordinator			0	0
	11.2 Forester 1			0	0
	11.3 Market/industry expert etc.			0	0
	11.4 Administrator			0	0
	12. Other Labor			25,520	155,800
	12.1 Assistant 1			7,174	43,800
	12.2 Assistant 2			5,799	35,400
	12.3 Other labor			12,547	76,600
	13. National Consultant(s) (short term)			0	0
	13.1 Consultant 1			0	0
	13.2 Consultant 2			0	0
	14. International Consultant(s)			0	0
	14.1 Forest Inventory Expert			0	0
	14.2 Consultant 2			0	0
	15. Fellowship and Training			0	0
	15.1 Training 1			0	0
	15.2 Training 2			0	0
	19. Component Total			25,520	155,800
20.	**Sub-contracts**				
	21. Sub-contract (Implementing PES Scheme)			29,485	180,000
	22. Sub-contract (Mapping and Publishing)			9,828	60,000
	29. Component Total:			39,313	240,000
30.	**Travel**				
	31. Daily Subsistence Allowance			20,769	126,790

	31.1 National Expert(s)/ Consultant(s)			11,748	71,720
	31.2 International Consultant(s)			0	0
	31.3 Others			9,021	55,070
32.	International Travel			5,259	32,106
	32.1 National Expert(s)/ Consultant(s)			5,259	32,106
	32.2 International Consultant(s)			0	0
	32.3 Others			0	0
33.	Local Transport Costs			11,484	70,110
	32.1 National Expert(s)/ Consultant(s)			9,428	57,560
	32.2 International Consultant(s)			0	0
	32.3 Others			2,056	12,550
39.	Component Total:			37,512	229,006
40.	**Capital Items**				
41.	Premises			0	0
42.	Land			0	0
43.	Vehicle			0	0
44.	Capital Equipment			14,902	90,973
	44.1 Computer Equipment			5,907	36,060
	44.2 Forestry Equipment			8,995	54,913
	44.3 Others			0	0
49.	Component Total:			14,902	90,973
50.	**Consumable Items**				
51.	Raw Materials			0	0
52.	Spare			0	0
53.	Utilities			0	0
54.	Office Supplies			0	0
59.	Component Total:			0	0
60.	**Miscellaneous**				
61.	Sundry			12,163	74,253
62.	Auditing Costs			590	3,600
63.	Contingencies			0	0
69.	Component Total			12,753	77,853
70.	**National Management Costs**				
71.	Executing Agency Management Costs			0	0
72.	Focal Point Monitoring			0	0
79.	Component Total			0	0
Total Expenditures To-date:				130,000	793,632
Remaining Balance of Funds (A-B):				0	0

Note: Amounts in U.S. dollars are converted from the local currency using the average exchange rate which was 6.1049 RMB/US$ in this period (39,988 US$ in 6.1307 RMB/US$ in 14 May 2013, 49,988 US$ in 6.0792 RMB/US$ in 4 December 2013 and 39,988 US$ in 6.1111 RMB/US$ in 14 October 2014).

Annex 3 Typical photos of ecotourism attractions in individual level

Buttress

Buttress

Buttress

Buttress

Gardens in the air

Gardens in the air

Cauliflory

Cauliflory

Cauliflory

Cauliflory

Strangler

Dangling lianas

Dangling lianas

Special trees

Special trees

Special trees

Special trees

Special trees

Special trees

Special trees

Special trees

Special trees

Annex 4 Typical photos of ecotourism attractions in stand (forest community) level

Stand (forest community) level

Stand (forest community) level

Stand (forest community) level

Stand (forest community) level

Stand (forest community) level

Stand (forest community) level

Annex 5 Typical photos of ecotourism attractions in landscape level

Landscape level

Landscape level

Landscape level

Landscape level

Annex 6 Photos of main field inventory and meeting

Field inventory

Field inventory

Field inventory

Field inventory

Meeting

Meeting

First PTC meeting

Second PTC meeting