



Asia-Pacific Network for Sustainable Forest Management and Rehabilitation

Project ID	APFNet-2010-PP-002	Project Type	
Project Title	Multi-function forest restoration and management of degraded forest areas in Cambodia		
Submitting Country	Cambodia		
Submitting Organization	Institute of Forest and Wildlife Research and Development, the Forestry Administration of Cambodia		
Executing Agency	Institute of Forest and Wildlife Research and Development, the Forestry Administration of Cambodia		
Total Budget	US\$ 441,830		
	APFNet grant: US\$ 386,570		
	FA contribution: US\$ 55,260		
Duration	36 months		

Details of the Project Proposal

Summary

About 400,000 ha of forested areas in Cambodia are managed by local communities living in or adjacent to the forests whose livelihoods depend on access to forest resources. However, the majority of community forests are severely degraded and poorly stocked with timber and non-timber forest products. The forests have never been rehabilitated, and such rehabilitation depends solely on natural regeneration process because local communities do not have sufficient knowledge and seedling to restore their forests. Two pilot sites, a degraded forest in Kampong Thong province and a community forest in Siem Reap province, have been selected for project implementation. To enhance the restoration of a community forests in Siem Reap and Kampong Thom provinces for production of timber and NTFPs as a means to improve livelihood of local community.

In order to achieve these objectives, a series of activities have been proposed. Initially, a nursery is to be established for production of seedlings, and local communities and core staff from the local Forestry Administration will be trained on nursery management including applied research in the nurseries. Models of forest restoration plots will be established in the two pilot sites and these plots will be used as demonstration plots for learning and dissemination of project results. At the end of the project, project results and experience will be compiled, published and distributed to interested stakeholders. With a sum of US\$ 386,570 support under AFPNet's grant, the project will bring about significant change to the biodiversity and community forests in term of increased tree density and diversity of forest products and thus improving livelihoods of local communities.

1. Background and rationale

In Cambodia, the rapid economic growth in the last two decades, coupled with the increase of population, has resulted in increased demand for forest products. Illegal cutting, over exploitation, firewood collection and habitat loss, through conversion of natural forests to other land uses, are the main threats causing deforestation and forest degradation. Natural forest contributes significantly to the livelihoods of both the rural and urban population through consumption and income generation. The majority of the rural people collect wood products for fuel and construction materials and non-timber forest products for their livelihoods. Deforestation and forest degradation not only lead to the loss of biodiversity and other services, but diminish wood and non-wood forest products and thus threaten the livelihoods of rural communities. As biodiversity declines, communities are faced with more serious problems of sustaining their livelihoods. The vicious cycle of poverty and forest degradation put more pressure to the remaining forest resources. The availability of livelihoods among the community members has significantly influenced the sustainable management of the forest.

In Cambodia, the majority of rural communities access to the forests for livelihoods and income generation. Local communities have been involved in management of forest resources through Community Forestry system. By 2010, nearly 400 000 ha of natural forests have been placed under the management of local communities living in or adjacent to the forests. One of the objectives of community forestry system is to improve livelihoods of participating communities through access to timber and non-timber forest products (NTFP). However, the majority of community forests are severely degraded with poorly stocked with timber and non-timber forest products. Forest degradation has reduced forest quality and diminished forest products which in turn severely threatened livelihood of local communities. Community forests lack natural regeneration, specifically those of high-value timbers and NTFP trees, as mature seed-producing trees are limited. The situation is exacerbated as many community forests are located in fragmented forest landscapes or are isolated from climax forests resulting in the lack of proper seed dispersal. Furthermore, the forests have never been rehabilitated, and such rehabilitation occurs through a natural regeneration process which is slow and only naturally selected species are able to capture the sites.

In order to reverse these conditions and improve livelihood of local communities through managing community forests, there is an urgent need to restore the productivity and function of the forests. However, this task is enormous for an institution responsible for the forestry given the limited resources allocated to the sector. Therefore, this project seeks to hand on knowledge and skills on forest restoration to local communities managing the forests. Key persons from selected communities will be trained on forest restoration both in theory and skills. The project intervention will bring about significant change to the community forests in terms of increased tree density and diversity of forest products.

This project is in consistence with the national policy of ensuring the conservation of forest resources through the implementation of a sustainable forest management strategy with participation of rural communities. One of the project outcomes of great significance for the country's sectoral policies is its contribution to poverty alleviation, which is currently being promoted by the Rectangular strategy II of the Government of Cambodia as part of its commitment to the Millennium Development Goals of the United Nations. The Royal Government of Cambodia

ratified the Convention on Biological Diversity (1995) in order to encourage the sustainable use of biological resources and the fair and equitable sharing of benefits resulting from the use of biological resources. In the national context, the Royal Government of Cambodia has formulated policies and strategies such as the National Forest Sector Policy Statement (2002) which prioritizes rehabilitation of degraded forests for poverty alleviation. The Statement is supported by the Forestry Law (2002) and Forest Action Plans. Forestry Law is supported by the Sub-Decree on Community Forestry Management (2003) which aims at provision of an effective means for a community forestry community to participate in the reforestation, rehabilitation and conservation of natural resources, forest and wildlife. Recently, the Government endorsed the National Forest Programme (2010) targeting to increase and maintain a 60% forest cover of the total land area by 2029. One of the objectives of the programme is to maximize the contribution of sustainable forest management to poverty alleviation, enhanced livelihoods and equitable economic growth. The programme identifies management of forest resources including rehabilitation of degraded forests using a diversity of tree species as one of six priority areas within the forestry sector. Thus, the government of Cambodia acknowledges the urgent measures to sustainably use the remaining forest resources for the benefits of its population, particularly local communities.

The Forestry Administration (FA) is at the forefront in the management of the forest resources. The Institute of Forest and Wildlife Research and Development is tasked to support and provide technology to the FA in the sustainable management of forest resources including propagation of the indigenous tree species and restoration of degraded forests for biodiversity conservation and livelihood improvement. The skills and technologies available to the FA are undoubtedly the key to the sustainable development of the forest resources. Improving the capability of the institute on forest restoration deserves an urgent attention.

2. Goals and objectives

The broad goal of the project is to develop the capability of the Forestry Administration of the Royal government of Cambodia on the management and restoration of the country's biodiversity.

The proposed project has two specific objectives as follows:

1. To restore a degraded forest of protected forest in Koh Kong province for environmental protection and biodiversity conservation of a protected forest.
2. To enhance the restoration of a community forest in Siem Reap province for production of timber and NTFPs as a means to improve livelihood of local community.

Two pilot sites with two different management objectives have been selected. These include a protected forest in Koh Kong for biodiversity conservation and a community forest in Siem Reap for poverty alleviation (Annex 1). In order to achieve these goals, a series of activities is proposed including training, nursery establishment, establishment of research/ demonstration plots and dissemination of project's results to relevant stakeholders. Local communities and local FA in these pilot sites will be trained on managing a nursery in each pilot site. High-value legume trees and those classified as endangered or threatened species, such as *Azelia xylocarpa*, *Dalbergia cochinchinensis*, *Xylia xylocarpa*, *Pterocarpus macrocarpus*, *Sindora cochinchinensis* and those providing NTFPs, will be used for research in the nurseries as well as in the field demonstration plots. It is expected that, a total area of 20 ha of degraded forests in the two pilot sites will be

restored using different methods of forest restoration. Another impact from the project's intervention is the increased density of valuable trees in the targeted forests resulting in biodiversity richness and increased diversity of forest products responding to the improvement of the environment and living conditions of local communities.

In addition to the outputs listed in the following section, a significant outcome of this project is the improvement of the capacity of local communities and staff from local Forestry Administration on forest restoration. The proposed project is designed to strengthen the capability of the central and local FA staff, local CF communities on forest restoration for biodiversity recovery and livelihood improvement. Knowledge and skills that have been learned from this project can be applied in other parts of Cambodia with similar site conditions. The demonstration plots are expected to motivate stakeholders to participate in forest restoration. Wider public and stakeholders will also be benefited through the sharing and dissemination of the knowledge and experience developed from the project.

3. Expected outputs and activities

3.1 Output

Output 1: Community nursery established in each pilot site

Indicators:

By the end of the project:

1. Annual work plan and overall work plan prepared, approved and used.
2. Two nurseries (one in each pilot site) will have been established (equipped with basic facilities, such as nursery beds, shading area, storage, water supply facilities and tools) and producing seedlings.
3. A forest track of three km opened in natural forests for studying seed phenology.
4. Five staff from local Forestry Administration and two community members will have been trained on nursery management.
5. Research on seed pre-treatment and germination of some priority tree species and optimum potting mix conducted.

Output 2: Models of forest restoration plots established in each pilot site

Indicators:

By the end of the project:

1. The two forest sites will have been zoned and appropriate methods of forest restoration suggested in each zone.
2. Between two to three models of forest restoration plots of about 2 ha each will have been established in each pilot site. These model plots will be used as demonstration plots.
3. One research plot of about 1 ha on forest restoration will have been established in each pilot site.

Output 3: Knowledge and experience on multi-functional forest restoration published and disseminated to relevant stakeholders and general public.

Indicators:

By the end of the project:

1. Policy and legislative framework for the forest restoration will have been reviewed.
2. A “Technical Note on Forest Restoration” will have been published and disseminated to relevant stakeholders.
3. A TV spot on forest restoration will have been produced and presented on the TV’s screen.
4. A workshop on “forest restoration for livelihood improvement and biodiversity conservation organized.

3.2 Activity

Output 1: Community nursery established in each pilot site.

- Activity 1.1* Formation and running of the project coordination group and project steering committee
- Activity 1.2* Preparation of Annual Work Plan and Overall Work Plan
- Activity 1.3* Meeting of the Steering Committee for approving the AWP and OWP
- Activity 1.4* Organizing inception workshop
- Activity 1.5* Identification of suitable locations for nursery establishment
- Activity 1.6* Establishment of a nursery in each pilot site
- Activity 1.7* Study of seed phenology of indigenous tree species suitable for forest restoration
- Activity 1.8* Training course on nursery management for local community (in Siem Reap) and local FA staff (in Koh Kong)
- Activity 1.9* Seed collection and/or procurement
- Activity 1.10* Seedling production
- Activity 1.11* Research in the nursery

Output 2: Models of forest restoration plots established in each pilot site.

- Activity 2.1* Assessment of sites, zoning and mapping of forests in the two pilot provinces.
- Activity 2.2* Survey of community envision by a multidisciplinary PRA team in the two pilot sites
- Activity 2.3* Planning of forest restoration for each forest zone in each pilot site.
- Activity 2.4* Establishment of model forest restoration plots in each pilot site.
- Activity 2.5* Establishment of research plots on forest restoration in each pilot site.
- Activity 2.6* Monitoring and maintenance of the forest restoration and research plots.

Output 3: Knowledge and experience on multi-functional forest restoration published and disseminated to relevant stake holders and general public.

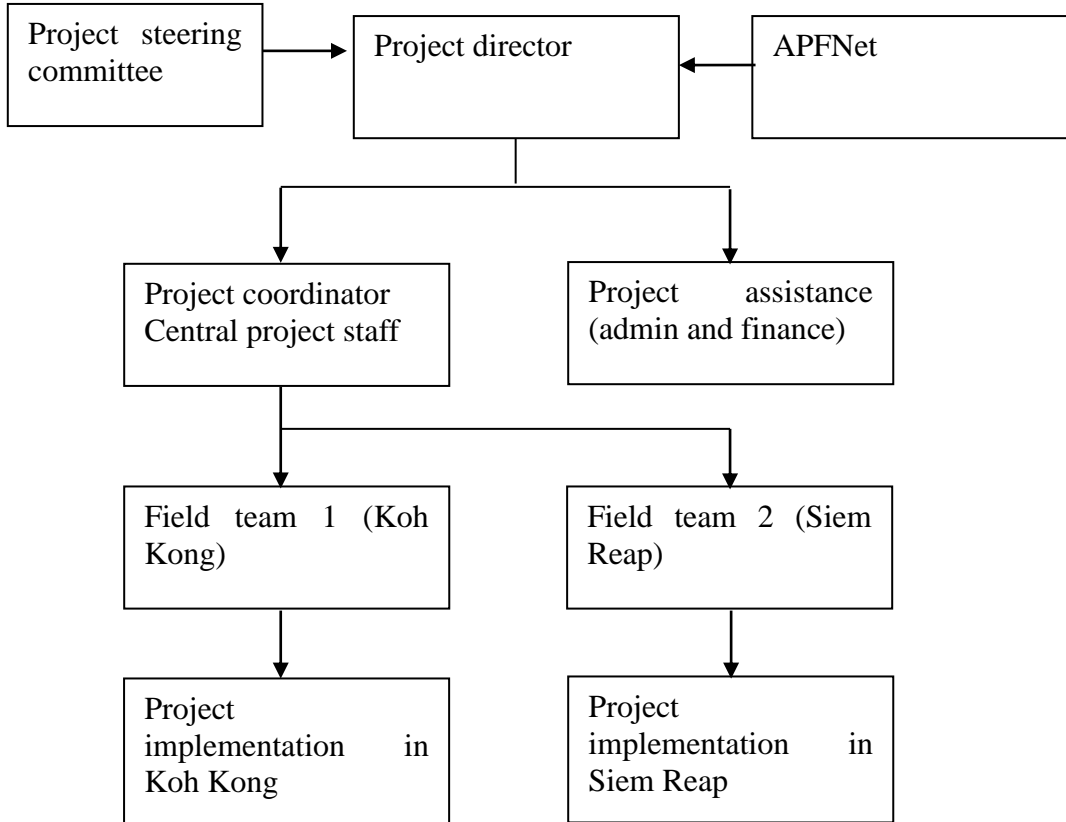
- Activity 3.1* Study on the policy and legislative framework for the forest restoration.
- Activity 3.2* Publishing project results titled “Technical Note on Forest Restoration”
- Activity 3.3* Production of a TV spot on forest restoration.
- Activity 3.4* Organizing a workshop on “forest restoration for livelihood improvement and biodiversity conservation

Logical framework is shown in Annex 2.

4. Management structure

Executing agency and partners: The Forestry Administration's Institute for Forest and Wildlife Research and Development would be the executing agency for this project. The Forestry Administration, one of the core institutions responsible for the forestry sector in Cambodia, has an extensive experience in reforestation and forest restoration, particularly with involvement of Community Forestry communities. A number of projects, funded by ITTO and Development Partners, have been implemented in community forests throughout the country. The Cambodia Development Research Institute and the Royal University of Agriculture will be invited to join implementing the project as members of the Steering Committee. The monitoring and evaluation team of the Forestry Administration will be closely supervising and monitoring of the project implementation.

Project organizational chart



Project management team: The project will be implemented by a project management team composed of a project director, project assistance, project coordinator and two field teams (one in each pilot province) each composing of three staff (Please refer to Annex 3 for Term of References). The project management team headed by the proponent of this project has extensive experience in the implementation of development project as well as in handling the financial resources. Among the researches implemented by the Institute are the IDRC-funded researches, the FAO-funded Forestry Programme, and the ITTO-funded forest projects, among others. The members of the project who will be involved will be selected based on their track record on forest restoration, training and interest to undertake the project. The project team compose of project director, responsible for overall project implementation, project coordinator, responsible for daily implementation of the project, Central project staff, responsible for technical guidance for the project, project administrator/financial officer and six project staff, three from each pilot province, responsible for the implementation of the project in the field. The project team will be trained on project implementation after the project inception.

Project personnel	Number of person	Remark
Project Manager	1	Part time
Project Coordinator	1	Part time
Central project staff	1	Full time
Admin and financial assistance	1	Full time
Local project staff (Koh Kong)	3	1 full time + 2 part time

Local project staff (Siem Reap)	3	1 full time + 2 part time
Guard (1 at each project site)	2	Full time

Project steering committee: Members of the project steering committee include representative from the FA, the IRD, the Focal Point of Cambodian APFNet, and one representative from each of the following institutions: the Department of Forest and Community Forestry (FA), the Royal University of Agriculture, and Cambodia Development Research Institute.

Institution	Number of person
Head/Deputy Head of the Forestry Administration (FA)	1
Cambodian Focal Point for APFNet	1
Department of Forest and Community Forestry (FA)	1
Representative of Cambodia Development Resource Institute, CDRI	1
Representative of the Royal University of Agriculture	1
One representative of APFNet, as observer	1

Stakeholder involvement mechanisms: A consultation will be conducted with the different stakeholders, primarily the communities and NGOs and to some degrees academic or research institutions. Local communities will be consulted on the identification of important species that will be propagated. The concerns of the different stakeholders will be incorporated in the fine tuning of the implementation of the project. Basically, the stakeholders will be involved in the management and conservation of the biodiversity as well as in developing the local technology of propagating the indigenous species as well as the sustainable utilization of the forest products.

Reporting, monitoring and evaluation: The implementation of the project will be subject to monitoring. The Executing Agency shall conduct internal monitoring and evaluation, and APFNet shall conduct external mid-term and final evaluation. The project evaluation workshop will be convened at about six months after the start of the project.

5. Financial System

The book keeping of the expenses will be the primary responsibility of the Project Management. However, the records will be made open to the Accounting Unit of the FA and to the Funding Institution. The basic salaries of the staff involved will be shouldered by the Research Unit of the FA. However, the project will provide monthly compensation and the DSA for the project implementation team. The project will foster collaboration with the local and international NGOs working in the area, particularly on the priority areas for development and in mainstreaming the project to poverty alleviation of the communities and conservation of biodiversity.

6. Sustainability

From a socio-economic point of view, it is expected that the communities will fully embrace the process of forest restoration as the actions recommended in restoration of community forest. The implementation process proposed in the project will motivate the communities to see themselves as the key players of the process and thus, they will take ownership of each of the elements that make up a forest restoration structure and adapting the process to their needs. It is expected that the CF community and local FA will ensure the follow-up of project activities after the completion of project implementation. The costliest exercise will be required to initiate a process of forest

restoration at local levels by building necessary facilities at the nurseries and the provision of appropriate equipment and building the capacity of the pilot community and local FA in activities required to strengthen technical capacities on forest restoration for biodiversity conservation and improvement of local livelihoods. The project intervention will create an opportunity for the pilot community to prepare for generation of income, through selling of poles and other NTFPs, for sustaining its activities and improving livelihoods. It is also expected that some of the forest restoration practices, such as patrolling of the community forest, prevention of forest fire, will be implemented by the community itself even if there is no financial follow-up from the donor. Furthermore, the pilot community forest has a well-developed management structure and has some resource administration capacity, which they have developed by managing the income received through activities related to thinning and opening of forest lines and gaps for interpolating of high-value timber species. The nurseries will become a source of income generation for local community and local FA as they can supply seedlings to other communities, NGOs and government institutions involving in tree planting activities. They can be used for producing seedlings of fruit trees for supplying to local markets. In addition, activities, such as agro-forestry system, will not be costly for the follow-up activities, as the main component of the activities is the interest of the community members to produce agricultural crops.

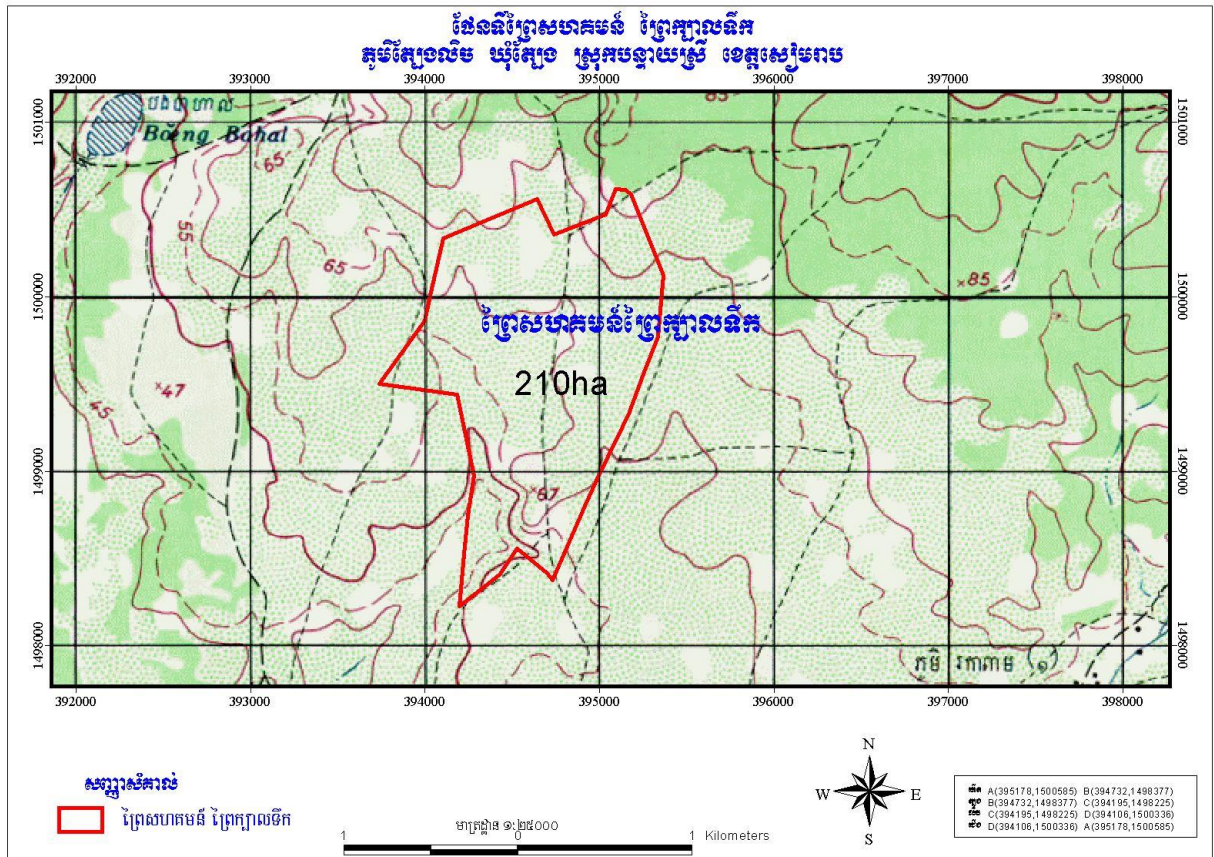
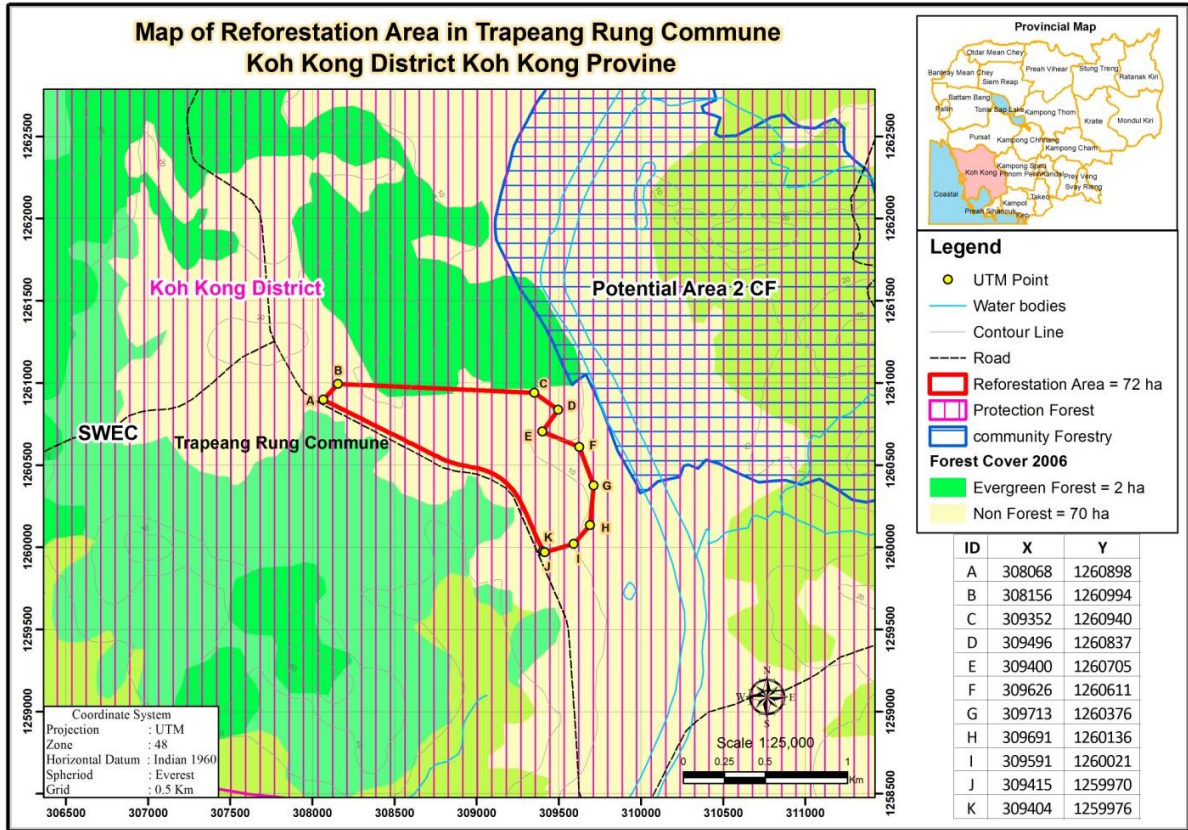
From a technical viewpoint, and based on Forestry Law 2002 and the Sub-Decree on Community Forestry Management, it is expected that, technical assistance will continue to be provided by local FA for the community of the pilot site. Furthermore, it is envisaged that throughout the project life, the project management team will ensure the involvement of local authorities, NGOs as well as other communities who have direct or indirect linkages with the pilot sites, so as to make them aware of the process and so that they can thus become multiplier agents in the implementation of the goals of forest restoration. In addition, the expressed interest of the pilot community and local FA to manage the natural resources will ensure that appropriate techniques of forest restoration will be adopted and used as the preferred instrument in activities related to the conservation and management of tropical forests in their areas.

At the end of project implementation, a forum will also be organized to disseminate the lessons learned of the project implementation. The project will also publish the lessons learned and experience for sharing with interested stakeholders. The pilot sites will serve as demonstration plots for relevant stakeholders and general public as well as member countries of the APFNet. Good practices will then be recommended for application in other parts of the country and other countries in the region with similar conditions.

Annex 1. Locations of the project sites

Site A is located in Trapeang ROUNG commune, Koh Kong District, Koh Kong province. It is located in a protected forest along the national road 48 (about 230 km from the capital city, Phnom Penh). The total area is 72 ha with mosaic patches of regrowth (formerly evergreen forests) dominated by tree species from the families *Shorea* spp. and *Dipterocarpus* spp., grasslands covered with *Imperata cylindrica* and bush lands. The proposed area was part of a forest concession during the 1990s, and subsequently cleared as a result of land grabbing and illegal cutting. Currently, the area is under the authority of the Division of Koh Kong Forestry Administration; and it has been prioritized as a forest restoration site in the forest management plan of Koh Kong Forestry Administration. This site is suggested to test and demonstrate with enrichment plantations of high-value indigenous tree species, such as *Dalbergia cochinchinensis*.

Site B is a community forest, called Kbal Toek Community Forest, located in Tbeng Lech village, Tbeng Commune, Banteay Srey District, Siem Reap Province. It is about 50 km to the Northeast of the Siem Reap provincial town, or about 370 km from Phnom Penh. The proposed site covers a total area of 210 ha. The area was formerly a dry evergreen forest with presence of species like *Peltophorum dasyrachis*, *P. ferrugineum*, *Anisoptera costata*, *Dipterocarpus alatus* and *Shorea roxburghii*. During the 1980s, the forest was illegally harvested; and in 1990s the area was used for shifting cultivation practiced by local communities. Since 2000, a community forest was established and the area has been left for natural regeneration. As a consequence only trees that have the capacity to regenerate through coppices or root suckers that dominate the stand structure of the regrowth forest. It is observed that, there is a lack of seed bearing-trees of some high-value timber species. This site is suggested to test and demonstrate a number of methods of forest restoration, such as assisted natural regeneration, enrichment planting and agro-forestry system.



Annex 2: Logical framework matrix

	Intervention logic	Objectively verifiable indicators	Sources/means of verification	Assumptions/risks
Goal	To develop the capability of the Forestry Administration and local communities on the management and restoration of the Cambodia's biodiversity for sustainable development	<ul style="list-style-type: none"> ▪ By the 3rd year of project implementation, between 10 and 20% of community members learned techniques of forest restoration ▪ About 20% of local FA staff learned techniques of forest restoration 	<ul style="list-style-type: none"> ▪ Reports of the local FA ▪ CF community reports/records 	The policy on biodiversity conservation and poverty reduction remain priority for sustainable development of the Government of Cambodia
Objectives				
Objective 1	To restore a degraded forest of protected forest in Koh Kong province for environmental protection and biodiversity conservation of a protected forest	<ul style="list-style-type: none"> ▪ By the 3rd year of project implementation, about 10% of the protected forest restored with suitable tree species 	<ul style="list-style-type: none"> ▪ Project completion report ▪ Results from biodiversity surveys 	<ul style="list-style-type: none"> ▪ Key stakeholders in the proposed provinces are interested and take part in the project implementation ▪ The project teams will build relationship and work closely with stakeholders from the beginning ▪ Project staff remain in their posts throughout the project period
Objective 2	To enhance the restoration of a community forest in Siem Reap province for production of timber and NTFPs as a means to improve livelihood of local community	<ul style="list-style-type: none"> ▪ By the 3rd year of project implementation, 10 – 20% of the community forest area restored with timber and NTFPs ▪ The productivity of and income generated from community forest increased by 10% 	<ul style="list-style-type: none"> ▪ Project completion report ▪ CF community reports/records ▪ TV show(s) ▪ Interview with local communities 	<ul style="list-style-type: none"> ▪ There will be no major changes on the policy of allowing the community to enjoy the benefits of the forest products ▪ Project staff remain in their posts throughout the project period
Outputs				
Output 1	Community nursery established in each pilot site	<ul style="list-style-type: none"> ▪ Two nurseries established and produced seedlings. ▪ A forest track of three km opened in natural forests for studying seed phenology. ▪ Five staff from local FA and two community members 	<ul style="list-style-type: none"> ▪ Training materials ▪ Training and evaluation reports ▪ Project progress report ▪ Research manuals ▪ Report on manual distribution 	<ul style="list-style-type: none"> ▪ Livelihood improvement and biodiversity conservation remain a priority in the forestry reform policies in Cambodia ▪ Motivation and commitment of participants in Cambodia remains high, and is sustainable

	Intervention logic	Objectively verifiable indicators	Sources/means of verification	Assumptions/risks
		<p>trained on nursery management.</p> <ul style="list-style-type: none"> Research results on seed pre-treatment methods, germination tests and optimum potting mix published and disseminated. 		<ul style="list-style-type: none"> Local communities are interested to participate. All trained staff will remain in their assignment Timely disbursement of funds by donors (APFNet)
Output 2	Models of forest restoration plots established in each pilot site	<ul style="list-style-type: none"> The two pilot sites zoned and appropriate methods of forest restoration suggested. Between two to three models of forest restoration plots of about 2 ha each established in each pilot site. One research plot of about 1 ha on forest restoration established in each pilot site 	<ul style="list-style-type: none"> Zoning maps Monitoring and evaluation reports Project progress and completion report 	<ul style="list-style-type: none"> The Ministry of Agriculture, Forestry and Fisheries officially recognizes the project sites Ongoing interest of pilot community leaders and local FA for the implementation of forest restoration No major land use development in the pilot areas
Output 3	Knowledge and experience on multi-functional forest restoration published and disseminated to relevant stakeholders and general public	<ul style="list-style-type: none"> Policy and legislative framework for the forest restoration reviewed A “Technical Note on Forest Restoration” published and disseminated A TV spot on forest restoration produced and presented on the TV’screen A workshop on “forest restoration for livelihood improvement and biodiversity conservation organized 	<ul style="list-style-type: none"> Project progress and completion report Consultancy report (including review document and Technical Notes) List of receivers of Technical Notes TV shows Workshop materials Number of participants attending the workshop 	<ul style="list-style-type: none"> Livelihood improvement and biodiversity conservation remain a priority in the forestry reform policies in Cambodia Ongoing interest of pilot community leaders and local FA for the implementation of forest restoration All trained staff will remain in their assignment Timely disbursement of funds by donors (APFNet)
Activities				
<i>Activity 1.1</i>	Management and running cost of the project coordination group	Project staff recruited and be ready for running the project	Project progress report	All project staff remains in their assigned posts throughout the project life
<i>Activity 1.2</i>	Preparation of Annual Work Plan and Overall Work Plan	Annual Work Plan and Overall Work Plan prepared	<ul style="list-style-type: none"> Consultancy report Project progress report 	Availability of international consultant

	Intervention logic	Objectively verifiable indicators	Sources/means of verification	Assumptions/risks
<i>Activity 1.3</i>	Meeting of the Steering Committee for approving the AWP and OWP	The Annual Work Plan and Overall Work Plan approved by the SC members	<ul style="list-style-type: none"> ▪ Minute of the SC meeting ▪ Project progress report 	All project staff remains in their assigned posts throughout the project life
<i>Activity 1.4</i>	Organizing inception workshop	Inception workshop organized with participant	<ul style="list-style-type: none"> ▪ List of participants ▪ Project progress report 	All project staff remains in their assigned posts throughout the project life
<i>Activity 1.5</i>	Identification of suitable locations for nursery establishment	Two sites selected for establishment of nurseries	Project progress report	Lands are available and secured for setting up the nurseries.
<i>Activity 1.6</i>	Establishment of a nursery in each pilot site	<ul style="list-style-type: none"> ▪ Two nurseries established ▪ Nursery equipped with necessary facilities and equipment 	Project progress report	<ul style="list-style-type: none"> ▪ Lands are available and secured for setting up the nurseries ▪ Sources of water are available
<i>Activity 1.7</i>	Study of seed phenology of indigenous tree species suitable for forest restoration	<ul style="list-style-type: none"> ▪ Tree species suitable for forest restoration identified ▪ A three-km tract opened in natural forest for studying seed phenology 	<ul style="list-style-type: none"> ▪ Project progress report ▪ List of identified tree species ▪ Record of seed phenology (database) 	A suitable forest is available at each pilot site
<i>Activity 1.8</i>	Training course on nursery management for local community (in Siem Reap) and local FA staff (in Koh Kong)	<ul style="list-style-type: none"> ▪ Two training courses organized ▪ Five local FA staff and three local community members trained 	<ul style="list-style-type: none"> ▪ Project progress report ▪ List of participants ▪ Training materials 	<ul style="list-style-type: none"> ▪ Trainers are available and willing to accept the proposed rate ▪ Local FA and community members are committed to the training course
<i>Activity 1.9</i>	Seed collection and/or procurement	Seeds of identified tree species collected or procured	<ul style="list-style-type: none"> ▪ Project progress report ▪ Report of seed collection or procurement 	Seeds of identified tree species are available
<i>Activity 1.10</i>	Seedling production	A minimum of 200 seedlings of identified tree species produced for research and planting purposes	<ul style="list-style-type: none"> ▪ Project progress and completion reports ▪ List of number of seedlings produced at each nursery 	Seeds of identified tree species are available
<i>Activity 1.11</i>	Research in the nursery	<ul style="list-style-type: none"> ▪ Training materials developed ▪ Tools and equipments procured ▪ Studies on seedling production of a minimum of 10 tree species conducted 	<ul style="list-style-type: none"> ▪ Project completion report 	<ul style="list-style-type: none"> ▪ Qualified consultant is available ▪ Local FA staff and community members are interested in research activities ▪ Project staff remain in their posts throughout the project period

	Intervention logic	Objectively verifiable indicators	Sources/means of verification	Assumptions/risks
<i>Activity 2.1</i>	Assessment of sites, zoning and mapping of forests in the two pilot provinces	Pilot sites assessed and zoned	<ul style="list-style-type: none"> ▪ Project progress and completion reports 	Project stakeholders interested in the project activities
<i>Activity 2.2</i>	Survey of community envision by a multidisciplinary PRA team in the two pilot sites	PRA conducted at the two pilot sites	Progress and completion reports	Project stakeholders interested in the project activities
<i>Activity 2.3</i>	Planning of forest restoration for each forest zone in each pilot site	Forest restoration plan prepared for each pilot site	Progress and completion reports	Project stakeholders interested in the project activities
<i>Activity 2.4</i>	Establishment of model forest restoration plots in each pilot site	Model forest restoration plots established at each pilot site	Progress and completion reports	<ul style="list-style-type: none"> ▪ Project stakeholders interested in the project activities ▪ Project staff remain in their posts throughout the project period
<i>Activity 2.5</i>	Establishment of research plots on forest restoration in each pilot site	One research trial established at each pilot site	Progress and completion reports	<ul style="list-style-type: none"> ▪ Project staff remain in their posts throughout the project period ▪ Project stakeholders interested in the project activities ▪ Consultant is available
<i>Activity 2.6</i>	Monitoring and maintenance of the model forest restoration and research plots	Model forest restoration and research plots monitored	Progress and completion reports	<ul style="list-style-type: none"> ▪ Project stakeholders are interested in the project activities ▪ Project staff remain in their posts throughout the project period
<i>Activity 3.1</i>	Study on the policy and legislative framework for the forest restoration.	Policy and legislative framework for the forest restoration will have been reviewed	Progress and completion reports	<ul style="list-style-type: none"> ▪ Availability of consultant ▪ Project stakeholders are interested in the project activities
<i>Activity 3.2</i>	Publishing project results titled “Technical Note on Forest Restoration”	Project results published	Progress and completion reports	<ul style="list-style-type: none"> ▪ Availability of consultant ▪ Project stakeholders are interested in the project activities
<i>Activity 3.3</i>	Production of a TV spot on forest restoration.	A TV spot produced and shown	Progress and completion reports	<ul style="list-style-type: none"> ▪ Availability of consultant ▪ Project staff remain in their posts throughout the project period
<i>Activity 3.4</i>	Organizing a workshop on “forest restoration for livelihood improvement and biodiversity conservation	A workshop organized	Progress and completion reports	Project staff remain in their posts throughout the project period

Annex 3. Term of references

“Multi-functional Forest Restoration and management of Degraded Forest Land in Cambodia”

1. Position: International Consultants

Requirement: 2 or 3

Reports to: Project Manager/ Director

Duration of assignment: 27 days (10 days for development of Annual Work Plan and Overall Work Plan, 10 days for assignment on designing of research plots on forest restoration and 7 days for development of policy and legislative framework for the forest restoration).

Coordinates with:

- National Consultant;
- Forestry Experts;
- Project manager/director;
- Project coordinator;
- APFNet Coordinator; and
- Project Steering Committee.

Duty Station: Phnom Penh with travels to the pilot provinces as necessary.

Qualifications and experience:

- Forester with a minimum of MSc. in forestry or related disciplines;
- Previous practical experience with community forestry in Cambodia is a benefit;
- Sufficient experience in designing and planning of natural-resources based project proposals;
- Sufficient experience in designing of research studies on forest restoration for biodiversity conservation and livelihood improvement;
- Background knowledge of GIS;
- Knowledge/skills on forest resource inventory and data processing using softwares;
- Experience/knowledge on forest policies and legislative framework on forestry, particularly on forest restoration/rehabilitation for improvement of livelihood and biodiversity conservation.

Duties and responsibilities:

The first international consultant is required to prepare the Annual Work Plan and Overall Work Plan during the inception phase of the project. The second international consultant will be assigned to design research studies, including laying out of research plots in the field, for biodiversity conservation and livelihood improvement as indicated in the Activity 2.5. In addition, s/he is required to provide advice on data collection and analysis. The third international consultant will conduct a study on the policy and legislative framework for the forest restoration in Cambodia which would explore linkage of the project to the policy and would lay foundation for sustainability of the restoration efforts after the completion of this project, as indicated in the

Activity 3.1. For each assignment, a specific TOR with detailed duties/responsibilities and deliverable products will be developed by the project team.

Deliverables

- Annual Work Plan and Overall Work Plan;
- Report detailing the design of research plots for biodiversity conservation and livelihood and methodology on data collection and analysis; and
- Report on policy and legislative framework for the forest restoration in Cambodia.

2. Position: National Consultants

Requirement: 3 - 5

Reports to: Project Manager/ Director

Duration of assignment: (totally 194 days)

Coordinates with:

- International Consultant;
- Forestry Experts;
- Project Coordinator; and
- Project Steering Committee.

Duty Station: Phnom Penh with travels to the pilot provinces.

Qualifications and Experience:

- Forester with a minimum of BSc. degree in forestry or related field;
- Cambodian national;
- Experience in research on natural resources management is an advantage;
- Background on GIS is an advantage;
- Sufficient knowledge and experience in nursery management and applied research studies in the nursery;
- Knowledge and experience in using the Participatory Rural Appraisal, participatory land use planning and Monitoring and Evaluation;
- Knowledge/skills on forest resource assessment and planning for forest restoration;
- Knowledge on forest policies of Cambodia, particularly those related to forest restoration for improvement of livelihood and biodiversity conservation;
- Experience in publication of research results;
- Background on spreadsheets; and
- Proficiency in written and spoken English with ability to edition of other's works.

Duties and responsibilities:

- Formulating recommendations on the effective disposition of nurseries within the project area to ensure continued supply of best possible quality of planting stocks of indigenous tree species;
- Provide training courses on nursery management for local communities and local FA;

- Prepare guideline/technical note on research in the nursery including monitoring of growth, data collection and analysis;
- Lead a multidisciplinary PRA team to conduct community envisioning survey and planning for the restoration of the degraded sites and the sustainable utilization of the forest resources therein;
- Prepare guideline/technical note on site assessment and zoning of the pilot sites;
- Planning of forest restoration for each forest zone in each pilot site;
- Assist the International Consultant in studying the policy and legislative framework for the forest restoration in Cambodia which would explore linkage of the project to the policy and would lay foundation for sustainability of the restoration efforts after the completion of this project, as indicated in the Activity 3.1;
- Primarily be responsible in translating from Khmer to English and vice versa;
- Prepare a Technical Note on Forest Restoration in consultation with Project Director and Project Coordinator;
- Prepare scripts for production of a TV spot, in consultation with a film-making company, on forest restoration in community forests and protected area;
- Organizing and facilitating a workshop (including the preparation during the pre- and post-workshop) for dissemination of the project results and best practice experience;
- Responsible for the translation during the workshop; and
- Compiling and editing presentations and relevant materials into a workshop proceeding.

Deliverables

- Training materials on nursery management;
- Guideline/technical note on research in the nursery including monitoring of growth , data collection and analysis;
- PRA report on the community envisioning survey and planning for the restoration of the degraded sites;
- Guideline/technical notes on site assessment and zoning of the pilot sites for forest restoration;
- Report on studying the policy and legislative framework for the forest restoration in Cambodia;
- Technical Note on Forest Restoration;
- Script and the TV spot; and
- Workshop proceedings.

3. Position: Project Manager/Director (FA-part time)

Requirement: 1

Reports to: APFNet Coordinator and Director General of the Forestry Administration

Coordinates with:

- International Consultants;
- National consultants; and

- Project Steering Committee.

Duty Station: Phnom Penh with frequent travels to the pilot provinces.

Qualifications and experience:

- Forester with advance degree on forestry or natural resource management;
- Cambodian national;
- Background on spreadsheets;
- Background on GIS is an advantage;
- Experience in research on natural resources management;
- Knowledge of PRA tools, participatory land use planning and Monitoring and Evaluation;
- Background on management of development and research projects related to biodiversity conservation and livelihood improvement; and
- Proficiency in written and spoken English with ability to edit other's works.

Duties and responsibilities:

- Ensure the efficient flow of communication and reporting of the progress of the project to the donor agency (APFNet);
- Provide the overall supervision of the project and its staff;
- Responsible for the implementation of all project activities;
- Responsible for the timely producing of project outputs;
- Responsible for the management of the financial resources of the project;
- Preparation and submission of periodic progress and technical reports on project findings and experience;
- In consultation with the project coordinator, recruit national consultants and project personnel as required for the production of project outputs; (APFNet is responsible for recruiting international consultants in consultation with the EA);
- Oversee the monitoring of the progress of the project against project implementation schedule;
- Advice national consultants in the development of training materials for nursery management, research in the nursery, assessment and zoning of the pilot sites for forest restoration, development of Technical Note on Forest Restoration, shooting of TV spot and workshop organization for dissemination of results and experience;
- Provide guidance on establishment and operation of the nurseries and research in the nurseries;
- Oversee the implementation of the followings:
 - a) Development and implementation of project's overall work plan (OWP) and the annual work plan (AWP), and pre-operation plans;
 - b) Conduct of needs assessment and socio-economic/poverty profiles survey;
 - c) Development of framework strategies that will sustain the forest restoration efforts after the completion of this project;
 - d) Survey and planning for the restoration of the degraded sites and the sustainable utilization of the forest resources therein;
 - e) Capability building and training of the technical staff in conducting the participatory research and planning;
 - f) Conduct of forest resource and biodiversity inventories and assessments;
 - g) Establishment and operation of the nurseries;
 - h) Establishment of model plots for forest restoration;

- i) Establishment of research plots on forest restoration;
- j) Monitoring and analyzing of data from the research plots;
- k) Development of Technical Note on Forest Restoration;
- l) Producing TV spot; and
- m) Organization of workshop for dissemination of project outputs and best practices.

Deliverables

- Progress reports;
- Completion report;
- Project's Operations and Strategic Plans;
- Project monitoring and evaluation reports;
- Auditing reports; and
- Project recommendations.

Duration of assignment: 36 months.

4. Position: Project Coordinator (FA-part-time)

Requirement: 1

Reports to: Project Manager/ Director

Coordinates with:

- International Consultants;
- National consultants;
- Forestry Experts; and
- Project Steering Committee.

Duty station: Phnom Penh with frequent travels to the pilot provinces.

Qualifications and experience:

- Forester with advance degree on forestry or natural resource management;
- Cambodian national;
- Background on spreadsheets;
- Background on GIS is an advantage;
- Advance knowledge and experience in forest restoration;
- Knowledge and experience in organizing and monitoring of applied research on forest restoration;
- Experience in research on natural resources management is an advantage;
- Knowledge of PRA tools, participatory land use planning and Monitoring and Evaluation is an advantage;
- Background on managing development and research projects; and
- Proficiency in written and spoken English with ability to edit other's works.

Duties and responsibilities:

- Will primarily be responsible for the implementation of the work plans and monitoring of the progress of the implementation of activities in the fields;
- Work closely with the Consultants as well as the field staffs;
- Responsible for keeping/preparing the field/research data for analysis by the consultants;
- Serve as a liaison between the consultants and the communities;
- Oversee the monitoring of project implementation in the field;
- Guiding national consultants on preparation of the project documents for publication;
- Assist the Project Manager/Director with progress report preparation;
- Making recommendations on the effective disposition of nurseries within the project area to ensure continued supply of planting stock of indigenous tree species and NTFPs for restoration;
- Supervising national consultants on preparation and publication of “Technical Note on Forest Restoration”, preparation of scripts and shooting of the TV spot and organizing a workshop for dissemination of results and experience;
- Provide guidance to the Forestry Experts in establishment and operation of the nurseries, preparation of technical guidelines for site and species selection for community restoration, reviewing current site preparation, establishment, silvicultural and nursery practices.

Deliverables

- Field accomplishment reports;
- Project monitoring and evaluation reports; and
- Data collection.

Duration of assignment: 36 months.

5. Position: Forestry Expert (Central FA - Full time)

Requirement: 1

Reports to: Project Manager/ Director

Coordinates with:

- International Consultant;
- National Consultant;
- Project Coordinator; and
- Project Steering Committee.

Duty station: Phnom Penh with frequent travels to the pilot provinces.

Qualifications and experience:

- Forester with a minimum of MSc. degree in Forestry or related disciplines will be an advantage;
- Cambodian national;
- Background on spreadsheets;
- Background on GIS is an advantage;
- Experience in research on natural resources management is an advantage;

- Knowledge of PRA tools, participatory land use planning and Monitoring and Evaluation is an advantage;
- Background on managing development and research projects; and
- Familiar with natural resource assessment and propagation of the indigenous plants.

Duties and responsibilities:

- Responsible for implementation of the work plans;
- Work closely with the Project Coordinator particularly in the collection and analyzing of data;
- Responsible for supervising the field staffs;
- Primarily responsible for preparing the field research data;
- Responsible for liaison with or involvement of local communities/authorities in the pilot areas;
- Participate with a multidisciplinary PRA team to conduct community envisioning survey;
- Establishment and operation of the nurseries, preparation of technical guidelines for site and species selection for community restoration of denuded and degraded forest areas, reviewing current site preparation, establishment, silvicultural and nursery practices;
- Conducting forest and biodiversity inventories and assessments of natural forest management units, including sampling procedures, determination of sampling intensity, data recording and analysis;
- Prepare draft extension materials in consultation with the Project Coordinator;
- Oversee the monitoring of project implementation in the field; and
- Will be responsible in the preparation and submission of periodic progress and technical reports.

Deliverables

- Field accomplishment reports;
- Project monitoring and evaluation Report; and
- Data collection.

Duration of assignment: 36 months.

6. Position: Admin and Finance Officer (full time)

Requirement: 1

Reports to: Project Manager/Director

Coordinates with: Project Coordinator

Duty station: Phnom Penh with travels to pilot provinces as necessary.

Qualifications and experience:

- Background in accounting and finance (with a minimum of BSc. in accounting);
- Cambodian national;
- Experience in handling finances and personnel management;
- Knowledge on the use of Microsoft software particularly spreadsheets and financial software; and
- Proficiency in the English language.

Duties and responsibilities:

- S/he will be responsible for handling of the project's financial resources;
- S/he will be responsible for disbursement and liquidation of the financial resources of the project;
- Preparation of financial reports for auditing;
- Keeping of the records of the project;
- Assisting the Project Manager in consolidating the reports of the project;
- Drafting and processing administrative letters;
- Preparing and submitting project financial reports for auditing; and
- Assisting the Project Coordinator in organizing meetings and workshops.

Deliverables

- Regular financial reports; and
- Accomplishment reports.

Duration of assignment: 36 months.

7. Position: Field Staff (local FA: 2 full time + 4 part time)

Requirement: 6 (3 per site)

Reports to: Project Manager/Director

Coordinates with:

- Forestry Experts;
- Project Coordinator;
- Project Manager/Director; and
- National Consultants.

Duty Station:

- Site A (Trapeang Rung, Koh Kong Province): 3 field staffs.
- Site B (Kbal Toek community forest, Bontey Srey District, Siem Reap Province): 3 staffs

Qualifications and experience:

- Cambodian national with a BSc. degree in forestry or related disciplines;
- Knowledge in nursery management and research studies;
- Experience in community forestry management and biodiversity conservation;
- Experience with development and research projects;
- Experience in management of workers;
- Some knowledge of English; and
- Willingness to work and stay at the project sites.

Duties and responsibilities:

- Responsible for the implement of the project's activities in the field under the guidance of the Forestry Experts, Project Coordinator and Project Director;

- Works in the field particularly with the communities; and
- Monitoring of demonstration/research plots and collection of data.

Deliverables

- Field accomplishment reports; and
- Collected data.

Duration of assignment: 2 full time staff each 36 months, and the 4 part time staff each 35 months.

8. Position: Guard (full time)

Requirement: 2 (1 per site)

Reports to: Project Manager

Coordinates with:

- Field Staff
- Forestry Experts;
- Project Coordinator;
- Project Manager/Director; and
- National Consultants.

Duty Station:

- Site A (Trapeang Rung, Koh Kong Province): 1 guard.
- Site B (Kbal Toek community forest, Bontey Srey District, Siem Reap Province): 1 guard.

Qualifications and experience:

- Cambodian national with highly disciplinary behaviour;
- Previous experience with private companies or NGOs is a benefit;
- Experience with development and research projects;
- Some knowledge of English; and
- Willingness to work and stay at the project sites.

Duties and responsibilities:

- Maintenance of the project's properties at each project site;
- Assist in nursery and field work as requested/necessary.

Deliverables

- Field accomplishment reports; and

Duration of assignment: 35 months each.