

WORKING TOWARDS A GREENER ASIA

WITH THE ASIAN FOREST COOPERATION ORGANIZATION



OUR WORK IN THE REGION



11 Projects in **9** countries
23.87 million USD committed to
achieve impacts in member countries

ABOUT AFoCO

Formalized in 2018, the Asian Forest Cooperation Organization (AFoCO) is an intergovernmental organization that is committed to strengthening regional forest cooperation and taking concrete actions to promote sustainable forest management and address the impacts of climate change.

OUR MEMBERS

Bhutan, Brunei Darussalam, Cambodia, Indonesia, Kazakhstan, Lao PDR, Mongolia, Myanmar, Philippines, Republic of Korea, Singapore, Thailand, Timor-Leste, Viet Nam

AFoCO develops and implements new projects and programs in line with our 5 strategic priorities (2019-2023).



Initiating Customized Restoration & Reforestation Models



Supporting Research and Development in Climate Change Adaptation Approaches



Introducing Systematic Management of Forest-related Disasters



Local Livelihood Improvement & Community-based Enterprise Development



Strengthening Institutional Capabilities, Diversifying Resources, & Promoting Regional Actions

1	Reclamation, Rehabilitation & Restoration of Degraded Forest Ecosystems (RRR-DFE) in Mekong Basin Countries	Cambodia, Lao PDR, Myanmar, Thailand, & Viet Nam	2013-2015
2	Capacity Building on Improving Forest Resources Assessment & Enhancing the Involvement of the Local Communities to Address the Impact of Climate Change	Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Myanmar, Philippines, Thailand, & Viet Nam	2013-2015
3	Promotion of Forest Rehabilitation in Cambodia & Viet Nam through Demonstration Models & Improvement of Seed Supply System	Cambodia & Viet Nam	2014-2019
4	Facilitating the Participatory Planning of Community-based Forest Management Using Geographic Information System & Remote Sensing Technologies in Forest Resources Management in the Philippines, Indonesia & Thailand	Indonesia, Philippines & Thailand	2014-2019
5	Establishment of Forest Genetics Research Center for Restoration of Major Timber Species in Cambodia	Cambodia	2016-2025
6	Rehabilitation & Development of Mangrove Forest Ecosystem in Thai Binh Province, Viet Nam	Viet Nam	2016-2025
7	Establishment of AFoCO Regional Education and Training Center (RETC) in Myanmar	Myanmar	2014-2023
8	Village-based Forest Rehabilitation in Lao PDR	Lao PDR	2016-2025
9	Developing High Valuable Species in Viet Nam & Thailand as a Mechanism for Sustainable Forest Management & Livelihood Improvement for Local Communities	Viet Nam & Thailand	2015-2018
10	Domestication of Endangered, Endemic & Threatened Plant Species in Disturbed Terrestrial Ecosystems in Malaysia & Thailand	Malaysia & Thailand	2016-2022
11	Capacity Building for Landscape Approach to Support the Sustainable Natural Resources Management in Brunei, Indonesia, Philippines, & Singapore	Brunei Darussalam, Indonesia, Philippines, & Singapore	2016-2019
N	Newly Approved Country-specific Projects	Bhutan, Cambodia, Myanmar, Philippines, Timor-Leste & Viet Nam	2020~

RECLAMATION, REHABILITATION & RESTORATION OF DEGRADED FOREST ECOSYSTEMS IN MEKONG BASIN COUNTRIES

 **2013 - 2015**  **500,000 USD**
 **Cambodia, Lao PDR, Myanmar, Thailand (lead) & Viet Nam**

The Mekong Basin is an economically and ecologically important region that remains vulnerable to the impacts of climate change and land conversion. Although some of the poorest people in the region rely on this ecosystem to sustain themselves, the loss of forest cover continues to threaten their livelihoods.

The 2-year regional project aims to strengthen transboundary cooperation for biodiversity conservation, forest restoration, watershed management and ecotourism through pilot investigations, the organization of workshops on best practices and technology transfer, as well as other capacity development activities involving local communities.

Objectives

- Investigate the current status of biodiversity utilization and forest management;
- Strengthen transboundary cooperation among the Mekong Basin Countries on the conservation of landscape biodiversity and ecotourism; and
- Exchange knowledge and lessons learned on best practices of sustainable forest management and biodiversity conservation.

Regional activities conducted include the Regional Training on Enhancing Livelihoods through Community Forestry (jointly organized with RECOFTC) and the Regional Workshop on Lessons Learned from Ecotourism Linked with Forest Restoration.



Biodiversity Conservation Linked with Ecotourism in Monduliri Protected Forest Reserve

- ✓ Developed a detailed map with potential ecotourism sites and information of wildlife and biodiversity in Monduliri Protection Forest area (a transboundary forest area between Cambodia & Viet Nam)
- ✓ Conducted a local and national workshop on biodiversity conservation linked with ecotourism
- ✓ Organized a survey and technical training course for biodiversity conservation and utilization



Participatory Forest Management Linked with Forest Certification in Xebangnouane Community Forest

- ✓ Completed boundary demarcation and mapping through the utilization of GPS and onsite inventories
- ✓ Constructed a village nursery at Khamsavang Village
- ✓ Established a planting site for commercially important tree species and rattan seedlings
- ✓ Organized training courses on rattan seedling production, mushroom cultivation and participation in sustainable forest management, including the development of low-impact logging models for 4 villages
- ✓ Organized exchange visits and overseas workshops, as well as a national level workshop



Ecotourism Linked with Watershed Management in Pindaya Protected Watershed

- ✓ Initiated an ecotourism development plan for Pwe Hla Watershed
- ✓ Implemented a series of capacity development activities on watershed management, biodiversity conservation and ecotourism development for the local communities
- ✓ Constructed a hostel for the watershed management training center, and built check dams with the participation of the local people
- ✓ Undertook knowledge-sharing activities through the participation of forestry officials and community leaders in regional workshops



Ecotourism Linked with Forest Restoration in Mae Kok Restored Forest Site, Chiang Rai

- ✓ Conducted a survey to assess the state of implementation of environment-related projects (ecotourism, urban forests, forest carbon, etc.) by other organizations
- ✓ Formulated an ecotourism model for Mae Yao Watershed and disseminated the model to all participating countries and concerned watershed communities
- ✓ Organized a national workshop and training on linking ecotourism with forest restoration



Ecotourism & PES Linked with Biodiversity Conservation in Bidoup Nui Ba National Park, Dalat

- ✓ Conducted a baseline survey on ecotourism impacts, payments for forest environmental services and biodiversity conservation, and utilized the results to develop a model for payment for ecosystem (PES)
- ✓ Implemented awareness-raising activities targeted at local people, visitors and students through the Center for Ecotourism and Environmental Education (CEEE)



Asian Forest Cooperation Organization

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Korea Forest Service

CAPACITY BUILDING ON IMPROVING FOREST RESOURCES ASSESSMENT & ENHANCING THE INVOLVEMENT OF THE LOCAL COMMUNITIES TO ADDRESS THE IMPACT OF CLIMATE CHANGE

2013 - 2016 **1,847,528 USD**
Brunei, Cambodia, Indonesia, Lao PDR, Myanmar, Philippines, Thailand & Viet Nam

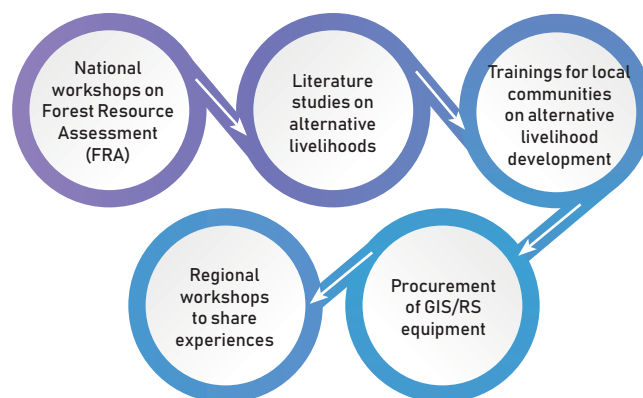
Developing countries struggle with forest management due to a number of constraints. The lack of a robust database makes it difficult to conduct proper forest assessments and consequently results in the formation of inappropriate strategies that may negatively affect the achievement of national targets.

In efforts to narrow the technical gap among countries in the ASEAN region, 8 countries worked together to enhance the capacities of forest stakeholders in forest resource assessment (FRA) to address the adverse impacts of climate change.

Objectives

- Build capacity on forest resources inventory/assessment through supporting satellite imagery and facilities to use GIS/RS technology and developing training modules;
- Enhance the involvement of local communities in forest-related activities to deal with climate change;
- Strengthen community resilience through alternative livelihoods; and
- Exchange expertise and experiences between implementing countries and the Republic of Korea

KEY ACTIVITIES



REGIONAL ACTIVITIES

- ✓ Regional Workshop on the Current State of Utilization of RS/ GIS Technology for FRA
- ✓ Comparative Study on Utilization of Satellite Imagery Technology to Support FRA
- ✓ Regional Training of Trainers on RS Application for FRA
- ✓ Study Tour on Community Participation to Support REDD+ Implementation



ToT on RS Application for FRA in Lao PDR, 2014



GIS/RS
Equipment

- ✓ Conducted a national workshop on FRA
- ✓ Organized a 2 trainings for trainers on the application of GIS/RS for FRA (data acquisition, GIS/RS theories and techniques; and land cover change and biomass estimation)
- ✓ Established a new GIS/RS Laboratory Unit under the Forestry Division and installed key equipment



GIS/RS Equipment

- ✓ Conducted a national workshop on FRA and an accuracy assessment of land use and land cover
- ✓ Organized a training for trainers on the application of GIS/RS for FRA
- ✓ Conducted a case study of Phnom Dek Jombok Hoas Community Forestry in Rumaney Commune
- ✓ Organized a training on community forestry management and REDD+ concepts



Training modules

- ✓ Conducted a national workshop on FRA
- ✓ Organized a training for trainers on the application of GIS/RS for FRA
- ✓ Developed training modules - Introduction to RS and Its Application for FRA; Satellite Imagery Analysis for FRA; and Land Cover Ground Check
- ✓ Carried out a study on alternative livelihoods
- ✓ Implemented trainings on mangrove ecotourism development, mangrove conservation to improve incomes, and honey bee cultivation



GIS/RS Equipment

- ✓ Conducted a national workshop on FRA
- ✓ Organized a training for trainers on the application of GIS/RS for FRA
- ✓ Carried out a study on alternative livelihoods
- ✓ implemented trainings to support local communities in generating alternative incomes from goat and poultry raising, and bamboo handicrafts



GIS/RS
Equipment

- ✓ Conducted a national workshop on FRA
- ✓ Organized a training for trainers on the application of GIS/RS for FRA
- ✓ Carried out a study on alternative livelihoods in 47 villages in 14 townships
- ✓ Implemented a training on bamboo plantation and bamboo-based livelihood improvement for rural development for members of Community Forestry User Groups (CFUG) from across the country



GIS/RS
Equipment

- ✓ Conducted a national workshop on FRA
- ✓ Organized a training for trainers on the application of GIS/RS for FRA
- ✓ Carried out a study on alternative livelihoods in 6 communities in Luzon, Visayas and Mindano
- ✓ Implemented trainings that introduced climate change concepts and potential livelihood products for 3 communities



GIS/RS
Equipment

- ✓ Conducted a national workshop on FRA
- ✓ Organized a training for trainers on the application of GIS/RS for FRA
- ✓ Carried out a study on alternative livelihoods in Mae Ta sub-district in Chiang Mai
- ✓ Developed an agroforestry model to increase alternative livelihoods for local communities



GIS/RS Equipment

- ✓ Conducted a national workshop on FRA
- ✓ Organized a training for trainers on the application of GIS/RS for FRA
- ✓ Carried out a study on alternative livelihood in Xuan Thuy National Park in Nam Dinh Province
- ✓ Implemented technical courses on research models to improve livelihoods, oyster mushroom cultivation, ecotourism and honey beekeeping



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PROMOTION OF FOREST REHABILITATION IN CAMBODIA & VIET NAM THROUGH DEMONSTRATION MODELS & IMPROVEMENT OF SEED SUPPLY SYSTEM

 2013 - 2015  1,000,000 USD
 Cambodia (lead) & Viet Nam

The regional project aims to promote reforestation forest rehabilitation in Cambodia and Vietnam by initiating a tree seed supply and distribution system to improve tree seed collection and nursery practices, and make quality seeds readily accessible to seed users and forest restoration practitioners.

Objectives

- Initiate a seed distribution system in Cambodia with identified seed sources and seed distributors;
- Establish support laboratories with equipment and trained staff in Cambodia and Viet Nam;
- Improve seed sources and seedling production in Viet Nam
- Assess the impact of forest rehabilitation on the environment and climate change in Viet Nam; and
- Establish demonstration models of forest rehabilitation in Cambodia and Viet Nam.

Access to quality seeds and planting materials is a major challenge in these countries due to the lack of a proper seed supply and distribution system. With the support of the project, seed sources and the supply chains for economically and ecologically important tree species will be surveyed and established across the implementing countries. The demonstration models established will serve as study sites for future capacity building activities on forest restoration and rehabilitation.

Key support facilities such as a tree seed laboratory (Cambodia) and a tissue culture laboratory (Viet Nam) have been constructed under the project. These facilities are now being used not only for research purposes but also as a venue for external education and training activities.





Banteay Srey Area, Siem Reap Province

- ✓ 20 priority tree species were identified following field surveys from 15 seed sources in natural forests, and leaflets on these sources have been distributed locally. A total of 5 seed production areas of 2 fast growing tree species (*A. auriculiformis* and *A. mangium*) as well as 3 high-value indigenous timber species (*A. lebbbeck*, *F. fragrans*, and *T. sureni*) were established.



Maintenance and monitoring of seed production area

- ✓ In 2016, a tree seed laboratory was installed with the necessary equipment and tools. A Cambodian official also received training on tree seed technology in the Republic of Korea.
- ✓ Trainings and workshops were organized to impart knowledge on seed collection, handling and storage to suppliers from community forestry and protected areas. Seed collection equipment and tools were also distributed to representatives from local communities across the country to facilitate the establishment of a seed distribution system.
- ✓ A 2-hectare demonstration plot for 26 native species was established. The lessons learned on forest restoration by direct seeding and the list of identified seed sources in natural forests have been compiled in a book titled "Direct Seeding for Forest Restoration" in Khmer.



Hoa Binh Province

- ✓ A survey on nursery systems, seed sources and seedling production and management was conducted, and technical trainings on seed and seedling production and management were organized to improve capacities of local stakeholders.
- ✓ The establishment of a tissue culture laboratory was completed in 2015, and laboratory staff were trained on seedling production and management as well as tissue culture technology.
- ✓ Permanent study plots were established to study the impact of forest rehabilitation on soil, water resources, hydrologic patterns and biodiversity in the watershed forests of Hoa Binh. The project also resulted in the establishment of a 5-hectare agroforestry model, a 3-hectare enrichment model and a community forest model.



Agroforestry model establishment



3D model of the community forest made during a participatory practice session

EXPECTED OUTPUTS

Cambodia

- Seed sources in natural forests identified, seed production areas established, and a tree seeds distribution system put in place
- A tree seed laboratory established and operating with support facilities and trained staff
- Demonstration plots of forest rehabilitation established and regularly monitored

Viet Nam

- Improvement of seed sources, seedling production and management in Hoa Binh Province
- A tissue culture laboratory established and operating with support facilities and trained staff
- Demonstration plots of forest rehabilitation established and regularly monitored

FACILITATING THE PARTICIPATORY PLANNING OF COMMUNITY-BASED FOREST MANAGEMENT USING GIS & RS TECHNOLOGIES IN FOREST RESOURCES MANAGEMENT IN PHILIPPINES, INDONESIA & THAILAND

 **2015 - 2020**  **1,500,000 USD**
 **Philippines (*lead*), Indonesia & Thailand**

With an overall goal of contributing to the improvement of forest resources and their management, particularly in areas with community settlements, the regional project aims to achieve the following short and long-term objectives:

Short-Term Objectives (3~5 years)

- Streamline existing planning guidelines and procedures with the aid of GIS and RS technologies in the preparation of Community-level Forest Management (CFM) plans;
- Improve the planning capacities of target beneficiaries;
- Improve the certainty of tenured forests with workable CFM plans;
- Support the CFM plans successfully implemented; and
- Increase the number of forest technicians with the capabilities to provide assistance in the preparation of CFM plans.

Long-Term Objectives (6~10 years)

- Maintain and/or increase in area developed within established tenured forests;
- Improve financial capabilities of target beneficiaries to implement forest development activities;
- Increase the number of target beneficiaries with improved forest management planning capabilities; and
- Apply improved participatory planning guidelines through the aid of GIS and RS in community-based forest management projects.

The project features the application of advanced technologies in the planning and implementation of community forestry activities. 3 pilot sites were selected in each implementing country, and project outputs within the framework of national programs and policies as well as future perspectives were identified accordingly.

- ✓ **Philippines:** Improvement of Community Based Forest Management (CBFM) under the country's National Greening Program, by strengthening grassroots' capacity in the planning and implementation of forest resource management
- ✓ **Indonesia:** Policy improvements on Social Forestry by continuous engagement with local communities and the dissemination of technical documents
- ✓ **Thailand:** Development of an interactive online system, consisting of community forest registration programs, socio-economic information and a forest resources database management mechanism

KEY ACTIVITIES





**Rang-ay Bantay Association, Inc., Pangasinan (R1)
Maonon Upland Planters Association, Inc., Albay (R5)
Babali Farmer's Marketing Cooperative, Davao City (R11)**

160 hectares of agroforestry plantations were established in the pilot sites in the Philippines, along with facilities such as nurseries and bunkhouses. Following a series of readiness and resource assessments, and expert-led enterprise development workshops and trainings, each People's Organization (PO) agreed on a livelihood product and the corresponding materials and equipment. A database management and monitoring system for CBFM was developed and roll-out trainings to train relevant officials and PO members on basic computer operations, database management and geotagging to improve record-keeping and monitoring efficiencies.



**Cempaka Forestry Partnership, Lampung Province
Tuar Tana Community Forestry, Sikka, East Nusa Tenggara
Paru Village Forest, Sijunjung Regency, West Sumatra**

A total of 28 hectares of agroforestry plots have been established in the pilot sites in Indonesia, and infrastructure such as farmer's huts and water reservoirs were constructed. Capacity building and technology transfer activities were organized to support each Forest Management Unit's (FMU) development of forest agribusinesses. The development of a CBFM database which will feature forest resource inventories, herbarium data, soil data and a zoning map of local priority species is currently underway.



**Mae Tha Community Forest, Chiang Mai (North) Sahakorn
Nikhom Community Forest, Kanjanaburi (Central-west)
Khlong Cha-un Community Forest, Suratthani (South)**

Tree buffer zones were established in Mae Tha and Khlong Cha-un while a forest plantation area of 6 hectares was established in the pilot site in Sahakorn Nikhom. A national workshop was conducted to identify potential forest-based enterprises for each pilot site and subsequent trainings were organized to build the capacities of the Community Forest (CF) Groups. A community forest management database has been developed to facilitate the monitoring and management of community forests.



EXPECTED OUTPUTS

Report on assessment and analysis of the status of CFM planning processes among the implementing countries

Enhanced procedures in formulation and development of CFM plans through participatory planning processes facilitated by GIS/RS technologies

Community-level forest management plans in selected tenured forest areas of each country using enhanced procedures

A capacitated planning team on community-level forest management planning



ESTABLISHMENT OF FOREST GENETICS CENTER FOR RESTORATION OF MAJOR TIMBER SPECIES IN CAMBODIA

📅 2016 - 2025 💰 1,500,000 USD 📍 248 ha
🌍 Khun Ream, Siem Reap Province, Cambodia

Overview

Cambodia lost 22% of its forest cover from 73.1% (13.2 million ha) in 1973 to 57% (10.3 million ha) in 2010. The main causes of forest cover loss include more frequent increased forest fires, population increase, shifting cultivation, fuel wood/charcoal, land conversion, encroachment and expansion of infrastructure for economic development. Intensified efforts are required to restore forest cover in Cambodia.



Despite the implementation of a series of restoration projects in Cambodia, the fundamental issue regarding the source of seeds is still being questioned. Most of the time, seeds are collected or purchased from different places across the country as well as neighboring countries, without clear genetic information. Especially for major timber species such as *Dalbergia cochinchinensis*, the quality of seeds in terms of its genetic superiority (e.g. phenotype and productivity) cannot be guaranteed. It is necessary to produce genetically improved seeds within Cambodia through a long-term tree breeding plan in order to ensure the effective and efficient restoration of the major timber species in Cambodia.

For that, the project supports the broadening of experience and knowledge on tree breeding in the forestry sector in Cambodia. Through a technical cooperation with the National Institute of Forest Science of the Republic of Korea (NIFoS), the project will establish a clonal seed orchard (CSO) for three major timber species *Dalbergia cochinchinensis*, *Dipterocarpus macrocarpus* and *Pterocarpus macrocarpus*. This will be the first CSO in the country.

Objectives

- **Implement a long-term tree breeding plan**
 - Plus tree selection of 3 major timber species: *Dalbergia cochinchinensis*, *Dipterocarpus macrocarpus* and *Pterocarpus macrocarpus*
 - Establishment of progeny test plantation (24 ha)
 - Establishment of clonal seed orchard (6 ha)
 - Establishment of demonstration forest (18 ha)
 - Silvicultural management for conservation of forest genetic resources (200 ha)
- **Strengthen the restoration and tree breeding capabilities of Forestry Administration of Cambodia**
 - Training on tree breeding for technical staff
 - Educational programs on restoration techniques and tree breeding
 - Local trainings on forest protection for villagers
 - Publication of textbook on tree breeding in Cambodia in both English and Khmer

“Model forest for SFM based on conservation of tree genetic resources”

Implementation Progress

After the identification of plus trees for target species, the country-wide collection of seeds was carried out between November 2015 and April 2016. At the same time, the vegetative propagation test for the species was conducted as the first step towards the establishment of the clonal seed orchard. The inception workshop was organized by the implementing agency, the Institute of Forest and Wildlife Research and Development

(IRD) under the Forestry Administration of Cambodia, in May 2016 in Siem Reap, Cambodia. From July to September 2016, the first progeny test plantation and seed orchard were established (15 ha). Weeding, pruning, monitoring and establishment of firebreaks for the 200 ha *Dalbergia* plantation site were conducted as part of silvicultural management activities.



Expected Outcomes

The project will contribute to the national goals in Cambodia, and provide environmental and socio-economic benefits. The establishment of a progeny test plantation, a clonal seed orchard and a demonstration forest will improve the genetic quality of seeds in Cambodia, as well as the overall environmental quality of the area.

Furthermore, it will support the Cambodia National Forest Program (2010–2029) to achieve sustainable forest management. Timber market competence will also be improved through the stable provision of high-quality seeds.

At the end of the project, a forest based on genetic resources of timber trees will be established in Cambodia, and it will serve as one of the AFoCO model forests in the region to demonstrate sustainable forest management and promote the implementation of national forest programs.

AFoCO Landmark Program

Launched in 2014, the AFoCO Landmark Program is a regional project with a holistic approach of 'Restoring Degraded Forests in Southeast Asia as a Model for a Greener Asia', as well as long-term activities and goals to contribute to the socio-economic development of local communities in accordance with the strategic framework of the Initiative for ASEAN Integration (IAI) to narrow the developmental gaps among AMS.

The Landmark Program consists of 4 components, and this project is under Component 3 of the program, 'Restoration of Degraded Forest Regions'.

REHABILITATION AND DEVELOPMENT OF MANGROVE FOREST ECOSYSTEM IN THAI BINH PROVINCE, VIET NAM

📅 2015 - 2024 💰 1,500,000 USD 📍 960 ha
🌐 Thai Binh Province, Viet Nam

Overview

Due to climate change, the number of heavy floods and typhoons moving to Viet Nam are directly affecting local livelihoods, especially those living in the coastal areas of

Viet Nam. Mangrove ecosystems play an important role in the protection of coastal erosion, which is worsening due to climate change. In 2000, the total mangrove forest area of the province was 6,987 ha and it has since reduced by 19%. Coastal communities are in danger of losing their livelihoods to increasing land erosion resulting from the loss of mangrove forests.

Mangrove survival in northern Viet Nam, where Thai Binh province is located, is constantly challenged by low temperatures at a relatively higher latitude. Under this special ecological condition, Viet Nam requires more crucial scientific knowledge on the management and rehabilitation of mangrove forests as compared to its neighboring countries. The project on the “Rehabilitation and Development of Mangrove Forest Ecosystem in Viet Nam” aims to support the mangrove forest rehabilitation efforts in Thai Binh province by resolving the issues faced in mangrove forest management.



Mangrove forest in Thai Binh at high tide

Objectives

- **Afforest, rehabilitate and sustainably manage mangrove forests in Thai Binh province**
 - Planting of a new mangrove forest: 80 ha
 - Supplementary planting of mangrove forests: 80 ha
 - Protect existing mangrove areas: 800 ha (including new and supplementary planting areas)
 - Provide equipment for mangrove forest protection and development
- **Raise awareness and enhance knowledge and capacities of local communities on the rehabilitation, protection and sustainable development of mangrove forests, biodiversity conservation, climate change mitigation and livelihood improvement strategies**
 - Develop suitable reading materials for local communities, and training courses of mangrove forest management for technical staff
 - Develop community regulations on the management and protection of mangrove forests
 - Organize training courses on sustainable mangrove management and ecotourism for livelihood improvement for provincial technical staff and local communities

“Model forest for addressing climate change through coastal forest rehabilitation”

Implementation Progress

The inception workshop was organized by the implementing agency, the Viet Nam Administration of Forestry, together with the Department of Agriculture and Rural Development of Thai Binh Province in March 2016 in Thai Binh, Viet Nam. Two project offices were established to facilitate project coordination. The Research Institute of Forest Ecology and Environment (RIFEE) was assigned as the national consultancy agency for the project to take charge of the monitoring and assessment of the technical

aspects of the project. From April 2016, seedling production and plantation design were conducted for the 40 ha target area. A village patrol group was established for the protection of the existing 800 ha mangrove forest. In line with this, the project developed a set of regulations and organized meetings with local communities to disseminate information on the importance of mangrove ecosystems.



Training course to strengthen capacities and promote effective communication



Village patrol group for forest protection



Mangrove seedlings planted in 2016



Public hearing of the project

Expected Outcomes

The project will contribute to the Viet Nam National Forest Strategy (2006–2020) by achieving sustainable forest rehabilitation, and healthy mangrove forest ecosystems, protecting biodiversity, reducing greenhouse gas emissions, minimizing the impacts of climate change, protecting the coastal dyke system, and enhancing knowledge of mangrove forests, while improving the livelihoods of local communities in the long run.

At the end of the project, the project site will serve as one of the AFoCO model forests of coastal forest rehabilitation against climate change while providing opportunities for research on mangrove forests.

AFoCO Landmark Program

Launched in 2014, the AFoCO Landmark Program is a regional project with a holistic approach of 'Restoring Degraded Forests in Southeast Asia as a Model for a Greener Asia', as well as long-term activities and goals to contribute to the socio-economic development of local communities in accordance with the strategic framework of the Initiative for ASEAN Integration (IAI) to narrow the developmental gaps among AMS.

The Landmark Program consists of 4 components, and this project is under Component 3 of the program, 'Restoration of Degraded Forest Regions'.

AFoCO Regional Education and Training Center (RETC)

aims to strengthen the capacity of the forestry sector in member countries through advanced training and education programs.

CORE TRAINING TOPICS

- **Forest Rehabilitation and Reforestation**
Seed harvesting, seed storage and supply, nursery management, tree plantation
- **Forest Fire Management**
Fire safety and behavior, fire prevention, fire inspection, fire information system, fire suppression
- **Community-based Forest Management**
Economical accounting, forest assessment, monitoring, forest resources, forest-related enterprise development



TYPES OF TRAINING & EDUCATION PROGRAMS

Short-term	Long-term	Community development	Customized
Enhance the capacity of government officials in managing forests sustainably; exchange knowledge and experiences; and build networks	Learn and adopt advanced technology and new management systems in forestry, to narrow the development gap	Forest-related activities and programs to improve local people's understanding of forests and their roles	On-demand education and training programs in line with objectives of AFoCO

FACILITIES

The AFoCO RETC is built on a total area of 24,419m² with a total floor area of 5,014m². Equipped with modern training facilities and meeting venues, the RETC caters to the space and equipment needs of various training programs and curricula while ensuring the comfort and safety of trainees and guests. The training facility is divided into three zones:



Education & Training Zone



Meeting rooms



Lecture room



Laboratory

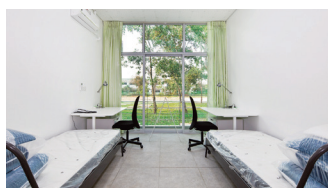


Conference hall



Media room

Accommodation Zone



Dormitory room

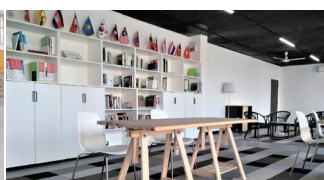


Exterior view

Public & Support Zone



Dining hall



Resting lounge



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VILLAGE-BASED FOREST REHABILITATION IN LAO PDR

📅 **2016 - 2025** 💰 **1,500,000 USD** 📍 **3,620 ha**
 🌐 **Paksong District, Champasak Province,
 & Sangthong District, Vientiane Capital, Lao PDR**

Overview

Forest cover in Lao PDR decreased from 17 million to 9.5 million ha between 1992 and 2012, and it is declining at an estimated rate of 1.4% per annum. Deforestation is largely due to agricultural expansion, hydropower, mining, infrastructure and urban expansion. Enforcement of regulations and enhancement of public awareness on environmental issues are required to overcome these problems.

In one of the efforts to rehabilitate degraded forests and restore forest cover, the Lao government has been collaborating with local authorities and international organizations to address the livelihood of people living in rural areas through national forest rehabilitation program.

The restoration project on “Village-based Forest Rehabilitation in Lao PDR” is being implemented in 2 areas - Champasak Province and Vientiane Capital. Drawing on the Republic of Korea’s experience in national forest rehabilitation, the project will establish the first village-driven rehabilitation model in Lao PDR, with a focus on capacity building to boost villagers’ ownership of forests in the project sites to ensure sustainable management in the long run.

Objectives

- **Increase forest cover**
 - Seedling production for ex-situ conservation plantation and enrichment planting:
 - 60 ha of ex-situ conservation plantation establishment
 - 790 ha of enrichment plantation
 - 2,770 ha of forest protection by local villagers
 - Rehabilitation of barren land owned by individual landowners in Sangthong through agroforestry extension services
- **Raise public awareness about the importance of national forest rehabilitation program**
- **Contribute to poverty reduction by providing direct income to local people, especially the poor through sale of seedlings, enrichment planting, maintenance and protection of rehabilitated areas**
- **Strengthen capabilities of stakeholders at all levels**
 - Capacity development of forestry sectors and local authorities to implement national forest rehabilitation policy at both district and village level by encouraging participation of local villagers
 - Capacity development of villagers on seedling production and forest rehabilitation activities
 - Provision of necessary materials and facilities for implementation of village based forest rehabilitation and its nation-wide replication

“Model forest for village-driven forest management in SFM”

Implementation Progress

After the finalization of the work plan for the two project sites, the inception workshop was organized by the implementing agency, the Department of Forestry, on May 2016 in Vientiane, Lao PDR. In August 2016, consultation meetings with villagers were organized to establish two types of village groups - village forest development groups (VFDGs) for plantation activities and village

forest protection groups (VFPGs) for protection activities. A series of technical meetings and consultations were held for villagers and project staff. A study tour to the Republic of Korea was conducted to impart knowledge on the ROK's concept of community-driven forest rehabilitation. Field offices in the two project sites were established in December 2016 after improving access roads.



Village Forest Development Groups (VFDGs)



Village Forest Protection Groups (VFPGs)



Expected Outcomes

This project will lead the country towards achieving the goal of sustainable forest management. In addition, since the project intends to engage local villagers to implement forest rehabilitation activities, the outcomes will also include an enhanced capacity of local communities in implementing national forest rehabilitation programs. The local communities will feel a stronger sense of ownership for the forests they manage and this would eventually lead to a change in attitudes towards forest resources.

This project provides additional income for local villagers and improves the livelihoods of the poor while contributing to the national poverty eradication target (FS2020) and zero hunger goal under the UN's Global Goals for Sustainable Development.

At the end of the project, the project site will serve as one of the AFoCO model forests in the region to demonstrate and promote village-driven forest rehabilitation in sustainable forest management.

AFoCO Landmark Program

Launched in 2014, the AFoCO Landmark Program is a regional project with a holistic approach of 'Restoring Degraded Forests in Southeast Asia as a Model for a Greener Asia', as well as long-term activities and goals to contribute to the socio-economic development of local communities in accordance with the strategic framework of the Initiative for ASEAN Integration (IAI) to narrow the developmental gaps among AMS.

The Landmark Program consists of 4 components, and this project is under Component 3 of the program, 'Restoration of Degraded Forest Regions'.

DEVELOPING HIGH VALUE SPECIES IN VIET NAM & THAILAND AS A MECHANISM FOR SUSTAINABLE FOREST MANAGEMENT & LIVELIHOOD IMPROVEMENT FOR LOCAL COMMUNITIES

 **2016 - 2019**
 **600,000 USD**
 **Viet Nam (lead) & Thailand**

Viet Nam is the lead country for this project and the Vietnamese Academy of Forest Sciences and the Royal Forest Department of Thailand are assigned as the implementing agencies.

The overall goal of the project is to improve sustainable forest management and livelihoods of local people in Viet Nam and Thailand through the development of high value plant species.

Objectives

- Assess and select the most suitable high value species, in the study sites;
- Develop appropriate techniques, marketing and policy recommendation for the development, processing and trade of the study species;
- Improve knowledge, techniques and skills of local people and relevant stakeholders through trainings, exchange visits and disseminations; and
- Develop demonstration models for the development of the study species.

The development of suitable high value species in each of the project sites will be utilized as a mechanism to manage forests sustainably and improve the livelihoods of the local communities. **4 highly valuable species and their study sites have been identified:**

Viet Nam

- Star anise species *Illicium verum* in Cao Bang
- Cinnamon species *Cinnamomum cassia* in Bac Kan

Thailand

- Bamboo species *Cephalostachyum pergracile* in Loei
- Bamboo species *Dendrocalamus sericeus* in Nan



Providing technical advice to villagers

This regional project builds on the successes of an individual project implemented under the ASEAN-Korea Forest Cooperation (AFoCo) between 2011 and 2014, titled "Developing Non-Timber Forest Products (NTFP) in the Northwest of Vietnam as the Mechanism for Sustainable Forest Management and Livelihood Improvement for Local Communities". The latter identified 4 valuable species for 4 provinces in Northwest Viet Nam, and developed technical procedures and demonstration models for knowledge and skills transfer.



Cao Bang Province Bac Kan Province

- ✓ A total of 14 hectares of planting and tending models were established in the project sites. Except for a 2-hectare planting model to be managed by a government agency-turned-company in Bac Kan province, all other models have been planted in the fields of individual farmers. Technical trainings have also been conducted in each province to impart knowledge on harvesting and processing techniques to the local people.



Nan Province Loei Province

- ✓ 16 hectares of planting and tending models were established in the project sites, and models for harvesting as well as processing and utilization were also identified. These demonstration models were set up in the land owned by individual farmers. The project provided seedlings and assistance in planting activities and the construction of water storage and supply facilities.



EXPECTED OUTPUTS

Demonstration models (planting and tending) of the selected species to be established at the respective sites, and utilized for training and research purposes

Relevant training modules developed and training courses organized for local communities and relevant stakeholders

Technical guidelines (seedling production, site preparation, planting, tending, harvesting, processing, preservation and usage) for selected species developed

Policy and marketing recommendations for the development and management of the study species proposed



Asian Forest Cooperation Organization

AFoCO is committed to strengthening regional forest cooperation by transforming proven technology and policies into concrete actions in the context of sustainable forest management to address the impact of climate change.



DOMESTICATION OF ENDANGERED, ENDEMIC & THREATENED PLANT SPECIES IN DISTURBED TERRESTRIAL ECOSYSTEMS IN MALAYSIA & THAILAND

📅 2016 - 2022 💰 1,200,000 USD 📍 12 ha
🌐 Malaysia (lead) & Thailand

The 6-year project primarily aims to develop and transfer domestication techniques of endangered, endemic and threatened plant species (EETS) in disturbed terrestrial ecosystems and conserve biological diversity in the implementing countries. Research will be conducted on the domestication models of these species, and the knowledge and experiences gained will be shared with other countries in the region through workshops and publications.

The selected disturbed terrestrial ecosystems in Malaysia and Thailand will be rehabilitated and enriched with some 12 to 30 national and IUCN Red List species, in efforts to address some of the impacts of mining. Biodiversity conservation through the domestication of EETS in disturbed sites will be promoted through collaborative activities between the implementing countries.

Objectives

- Establish domestication plots of national Red List species on degraded sites in both countries; and
- Strengthen cooperation between Malaysia and Thailand on the conservation of biodiversity, domestication techniques and technology transfer; and
- Exchange knowledge and lessons learned on best practices of rehabilitation and biodiversity conservation through workshops at national and regional levels.

In the long run, the project will aim to capacitate both countries in the reclamation rehabilitation and restoration of degraded forest ecosystems through the domestication of EETS, exchange of expertise and capacity development activities.



Direct watering of EETS at Mae Moh mine





Tin Tailing Afforestation Centre (TTAC), SPF Bidor, Perak

- ✓ *Aquilaria malaccensis*
- ✓ *Dipterocarpus chartaceus*
- ✓ *Dryobalanops oblongifolia*
- ✓ *Hopea ferruginea*
- ✓ *Hopea helferi*
- ✓ *Lagerstroemia langkawiensis*
- ✓ *Neobalanocarpus heimii*
- ✓ *Palaquium maingayi*
- ✓ *Shorea glauca*
- ✓ *Shorea sumatrana*

A total of 1,510 seedlings of the selected EETS has been purchased and planted on domestication plots near the FRIM research station in Bidor, and tending operations are ongoing. Perimeter fences with orchid netting have also been installed to prevent encroachment by wild animals.

Some knowledge sharing activities include the national workshop on 'Domestication of Climax Rainforest Species in Problematic Sites' in 2016 and the seminar on 'Reclamation, Rehabilitation and Restoration of Disturbed Sites' in 2017.



Technical discussion at Mae Moh mine



Mae Moh Mine, Lampang Takua Pa Site, Phang Nga

- ✓ *Aquilaria crassna*
- ✓ *Cotylelobium lanceolatum*
- ✓ *Dalbergia cochinchinensis*
- ✓ *Dalbergia oliveri*
- ✓ *Neobalanocarpus heimii*
- ✓ *Vatica diospyroides*

Mae Moh lignite mine was selected as the main study site and Takuapa ex-tin mine as an additional site. 6 EETS have been identified and a total of 1,812 EETS seedlings were purchased and planted at the project sites in 2016.

Plastic sheets were installed over the seedlings to provide shade and provide them from the rain. Banana shoots were planted as nursing plants. A fire lines were constructed to manage forest fires, and the plot was also fenced with barbed wire to keep free-ranging cattle out.



Monitoring the growth of EETS plants

EXPECTED OUTPUTS

Domestication models of Endangered, Endemic and Threatened Plant Species (EETS) established

Knowledge sharing and technology transfer related to domestication techniques through regional workshops and site visits

Domestication techniques developed during the project shared, adopted and applied to similar sites in the region



Asian Forest Cooperation Organization

AFoCO is committed to strengthening regional forest cooperation by transforming proven technology and policies into concrete actions in the context of sustainable forest management to address the impact of climate change.



CAPACITY BUILDING FOR LANDSCAPE APPROACH TO SUPPORT THE SUSTAINABLE NATURAL RESOURCES MANAGEMENT IN BRUNEI, INDONESIA, PHILIPPINES, & SINGAPORE

📅 2016 - 2019 💰 539,726 USD 📍 64.5 ha
🌐 Brunei, Darussalam Indonesia, Philippines (lead) & Singapore

Forest Landscape Restoration (FLR) is a planned process targeted at regaining ecological functions and enhancing human well-being in deforested or degraded forest landscapes. The participation of local communities constitute a key aspect of the FLR approach, from planning through implementation.

A joint effort among the Forest Management Bureau (FMB) of the Philippines, the Forestry Department of Brunei Darussalam, the Forestry and Environmental Research Development and Innovation Agency (FOERDIA) of Indonesia, and the National Parks Board (NPB) of Singapore, the regional project aims to strengthen transboundary forest cooperation through the application of the landscape approach in the management of natural resources.

Objectives

- Recognize and contribute to addressing a wide range of issues and concerns related to natural resources management across different ecosystems;
- Assess the management compatibilities of communities and stakeholders within a specific landscape and its interrelationships (pros and cons) between landscapes in a Ridge to Reef horizon; and
- Capacitate respective forestry sector technicians through formal and experiential learning on Reclamation, Rehabilitation and Restoration of Degraded Forest Ecosystems (RRR-DFE) following the landscape approach.



EXPECTED OUTPUTS

Model sites in various landscapes established for future replication and adoption

Knowledge sharing and technology transfer through exchange visits, regional workshops, and local training activities

Documentation on the lessons and experiences of the project developed to serve as reference for future development and policy actions in the region



Coastal Site in Berakas Forest Reserve Area

The project rehabilitated and reforested a 0.5-hectare degraded coastal area that had been severely eroded and damaged by forest fires with about 250 native tree species such as Ru Laut (*Casuarina equisetifolia*), Penaga Laut (*Calophyllum inophyllum*), Nyatoh Laut (*Pouteria obovata*), Baru-Baru (*Hibiscus tiliaceus*) and Keramunting (*Rhodomyrtus tomentosa*). The site will serve as a model beach forest for forest rehabilitation and also as a recreational area for visitors to Berakas Forest Reserve.



Peat Swamp Forest in Tumbang Nusa Research Forest, Central Kalimantan

The 4-hectare model reforestation site is located in a peat swamp forest area that was devastated by a forest fire in 2015. 4 indigenous tree species - Balangeran (*Shorea balangeran*), Jelutang Rawa (*Dyera polypylla*), Ramin (*Gonistylus bancanus*), Gemor (*Notaphobe coriaceae*) - were planted in 1-hectare plots. The project has also organized training courses on peat swamp optimization using agroforestry models, increasing community capacities for peat swamp optimization, and designing community-based peat swamp forest restoration projects.



Barangays Malabon and Taposo, Candelaria, Zambales, Central Luzon

60 hectares of degraded natural forest within the CBFM area managed by MALATAPI Community Livelihood Center, Inc., in Zambales (Region 3) was converted into a model site for sustainable forest management. Capacity building activities on vegetative assessment and assisted natural regeneration were also conducted with the participation of DENR personnel and People's Organization members.



Regional Workshop

A 3-day regional workshop on 'Urban Forestry and Biodiversity Conservation' was organized in 2017 to develop capabilities in urban forest management and biodiversity conservation through case studies, and understand various perspectives and issues related to urban forest management in the ASEAN region.





Capacity Building on Enhancing Resilience to Forest Fire & Local Livelihood in CLMV countries

Forests in CLMV countries are being converted and degraded to accommodate economic and development demands at the expense of ecosystem services that benefit the public. This regional project will seek to enhance the capacities of CLMV countries for the integrated management of forest fires in order to conserve natural resources, reduce carbon emissions and enhance local livelihoods.

Objectives

- Encourage community participation in the prevention and control of forest fires;
- Develop an integrated fire prevention, management and suppression program through the introduction of early warning systems and fire detection and monitoring systems; and
- Strengthen institutional and technical capacities for the integrated management of forest fires through training programs and public awareness-raising activities.



Sustainable Community-based Enterprise Development for Improved Rural Livelihood

With a focus on community forest management groups and non-timber forest product management groups in 12 districts across Bhutan, the project will explore income and employment generation opportunities through community-based enterprise development and upscale programs related to community-based payment for ecosystems services, ecotourism development and carbon trading by engaging rural communities.

Objectives

- Promote community forestry and NTFP industries by establishing community-based enterprises;
- Develop alternative income sources for livelihoods of rural communities; and
- Enhance knowledge and improve technology on climate change adaptation through sustainable forest management.



The Registration of Small-Scale Private Forest Plantations

Through the piloting of small-scale private forest plantations in Han Chey Commune in Kampong Cham Province, the project will aim to enhance forest cover, increase sustainable livelihood opportunities, reduce degradation of natural forests, and support local livelihood development. The project will also support the implementation of Cambodia's first Declaration on Private Forests.

Objectives

- Initiate the piloting of small-scale private forest plantations and prepare for the succeeding phase where the rate of plantation establishment is increased;
- Institutionalize the means of encouraging the establishment of sustainable small-scale private forest plantations; and
- Distribute 100,000 seedlings of selected tree species to households to establish up to 425 hectares of small-scale private plantations.



Integrated Pest and Disease Management in Teak Plantations in Bago Region, Myanmar

Teak grows naturally throughout Myanmar, and teak plantations have been widely established as part of the Myanmar Reforestation and Rehabilitation Programme. Nonetheless, many records of forest loss due to pests and diseases have been reported in teak plantations. The project will contribute to the health of forests in West Bago Yoma Region by exploring pest and disease lists, developing possible control and prevention measures, and enhancing capacity building programs for stakeholders of agroforestry-based reforestation models.

Objectives

- Sustainably manage teak forests through effective integrated pest and disease management;
- Improve capacities and facilities for pest and disease research and management for teak forests; and
- Create a network for the management of pest and diseases of teak.





Model Forest for Livelihood Improvement of Forest Dependent Communities through Development of Community-based Enterprise & Forest Conservation

With target sites in Paukkaung Township (Pyay District); Ywarngan Township (Taungyi District) and Nyaung Cho Township (Kyauk-me District) in Myanmar, the project will create alternative job opportunities and increase productivity based on the existing and enabling conditions. Home gardens and community-based tourism sites will be developed to help generate incomes. The establishment of community forests through the project will also contribute to the national strategy of community forest development in Myanmar.

Objectives

- Establish model forest villages to improve rural livelihoods and ensure sustainable landscapes;
- Develop community based tourism and community-based enterprises;
- Improve knowledge on updated forestry techniques, as well as related policies and management approaches.



Promotion of Vertical Integration in Wood Processing through People's Organizations in CBFM Areas

Designed to address the lack of value-added and sustainable timber production in CBFM areas, the project will engage CBFM People's Organizations in economic activities and adopt vertical integration as the business model in tree plantation establishment, utilization and marketing. It will also promote the sustainability of PO-managed tree plantations to generate income from timber utilization and wood processing.

Objectives

- Promote the engagement of the 2 participating CBFM POs into value adding activities in wood production;
- Provide adequate market linkages for the participating POs in the operation of their wood-based enterprises; and
- Formulate and recommend enabling policy guidelines for the implementation of vertical integration as a business model for CBFM POs.



Development of Agroforestry Models for Promotion of Reforestation in the Different Zones in Timor-Leste

The project will contribute towards strengthening Timor-Leste's efforts for reforestation and sustainable forest management through the development and dissemination of agroforestry-based reforestation models.

Objectives

- Promote reforestation throughout the country by developing and disseminating agroforestry-based reforestation models suitable for introduction in different natural conditions in the typical agro-ecological zones in the country and effective in satisfying the needs of local communities;
- Strengthen the institutional capacity of relevant government bodies to promote reforestation and SFM in collaboration relevant stakeholders such as NGOs and local communities; and
- Build and strengthen linkages with relevant stakeholders at the national and regional level for knowledge sharing and the scaling up of agroforestry-based reforestation models.



Improving *Pinus caribaea* Morelet for Plantation on Degraded Land in Viet Nam's Northern Mountainous Region

Pinus caribaea Morelet has been well-researched and experimentally planted on different soil types in the northern mountainous region, and is also known to be a plantation species that is suitable for a variety of sites. The project aims to establish *Pinus caribaea* Morelet forests on degraded land in the northern mountainous region by improving the production of high-quality seedlings, developing intensive cultivation techniques and appropriate timber processing and preservation technologies.

Objectives

- Improve the production of high-quality *Pinus caribaea* Morelet seedlings;
- Develop and disseminate guidelines on intensive forest plantation for production by establishing 11 hectares of model forests from the planted seedlings; and
- Propose and develop appropriate technologies to use *Pinus caribaea* Morelet timber in the timber processing industry to meet market demands.





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