



Purpose: Information

Fourth Meeting of the APFNet Council

25 March 2018 Beijing, China

APFNet Project Implementation 2017

1. Projects started in 2017

Out of eight projects planned for kick-off in 2017, five have started on-the-ground implementation, including one regional project covering Greater Mekong Sub-region (GMS), one each locating in Southeast Asia, East Asia and the Pacific Islands, and one that locates in China and aims to demonstrate SFM practices for Greater Central Asia (GCA).

These projects cover forest management planning and demonstration, watershed forest management and restoration of degraded forests. APFNet projects grants total US\$ 2,874,684.

1 Project title: Integrated Forest Ecosystem Management Planning and Demonstration Project in Greater Mekong Sub-region(GMS)

Intended to cover all six GMS economies (Cambodia, China, Lao PDR, Myanmar, Thailand and Vietnam), the Project has a long term goal to strengthen field implementation of integrated planning and management of forest ecosystems through developing living examples of sustainable forest management in the Lancang – Mekong watershed. In 2017, project implementation has been initiated in sites in Cambodia, China and Lao PDR, and project planning is still in the process for the other participating economies.

The Project, initiated by China, is led by the APFNet secretariat in development and coordination of implementation.

1.1 Sub-project in Cambodia [2017P2-CAM]

Supervisory agency: Forestry Administration of Cambodia

Executing agency: Institute of Forest and Wildlife Research and Development, Forestry Administration (FA), Cambodia

Budget in USD (total / APFNet grant): 1,792,664 / 1,515,465.60

Kick-off date & duration: June 2017, 48 months, on track

Site Location: Damrey Chak Thlok in Kampong Speu Province, Khun Ream Research station in Siem Reap Province, and Tamao zoo in Takeo Province, Cambodia

Objectives:

- To rehabilitate ecological services and product provision of forests in Cambodia through improving community forest (CF) management and strengthening conservation of state-owned forests, so as to contribute to sustainable forest management in Greater Mekong Sub-region.

Expected outputs:

- Ecological services of forest ecosystems in the project sites will be enhanced through sustainable uses and protection of forests by local people.
- The forest restoration models, village water system, the agroforestry farms and home gardens will be established as a model of good ecosystem management.
- Forest fire monitoring systems will be established in state-owned forests in Khun Ream and Tamao zoo to provide on-time monitoring on forest fire and wildlife.

What's achieved by 2017:

- The CF Management Plan formulated for the Damrey Chak Thlok Community in Kampong Speu Province, the CF boundary demarcated and the FA Triage nursery improved;
- The forest restoration models, village water system, the agroforestry farm and home garden established;
- Two forest monitoring systems and facilities established in Khun Ream and Tamao and are in good operation.



Photo 1. Forest fire monitoring tower established in Tamao zoo in Takeo Province, Cambodia (L); Participatory forest restoration in local community (R)

Activities & expected outputs in 2018

- The community forest management will be strengthened through formulation of CF management plan and protection of forest ecosystem will actively involve local people.
- Forest fire and wildlife monitoring will be supported by the monitoring systems.

1.2 Sub-project in Lao PDR[2017P7-GMS-LAO]

Executing agency: Department of Forestry, Ministry of Agriculture and Forestry, Lao PDR

Budget in USD (total / APFNet grant): 352,173 / 337,173

Kick-off date & duration: August 2017, 12 months, on track

Site Location: Nam Ha National Protected Area, Luang Namtha Province, Lao PDR

Objectives:

- To construct a forest fire monitoring and alarming system for the Luang Namtha Province, Lao PDR to serve as a reliable high-tech platform that supports a series of fire prevention works;
- To enhance the capacity of forestry officers in forest fire prevention and control.

Expected outputs:

- Forest fire monitoring and alarming system will be constructed in Luang Namtha Province, Lao PDR;
- Capacity of forestry staff in Luang Namtha Province will be improved.

What's achieved by 2017:

- Forest fire monitoring tower and command office established in Nam Ha National Protected Area.



Photo 2. Forest fire monitoring tower in Luang Namtha, Laos (L); the Forest watcher (R)

Activities & expected outputs in 2018

- Training courses on operating and maintaining the system will be arranged for local forest staff.

1.3 Sub-project in China [2016P1-GMS-PE]

Supervisory agency: Forestry Bureau of Pu'er Prefecture, China

Executing agency: Wanzhangshan State-owned Forest Farm, Pu'er Prefecture, China

Budget in USD (total / APFNet grant): 1,094,022 / 740,306

Kick-off date & duration: April 2017, 60 months, on track

Site Location: Wanzhangshan Forest Farm, Pu'er Prefecture, Yunnan Province, China

Objectives:

- To develop the Master Plan and Action Plan of Integrated Forest Ecosystem Management for Wanzhangshan Forest Farm;
- To establish demonstration plots for integrated forest ecosystem management and set best practices for the GMS region.

Expected outputs:

- The *Master Plan of Integrated Forest Ecosystem Management of WFF, Pu'er Prefecture (2017—2036)* and *Forest Management Action Plan of WFF, Pu'er Prefecture (2017—2026)* will be developed;
- The demonstration sites in *Pinus kesiya* and *Betula alnoides* plantations for forest tending will be established;
- The demonstration plots for resin production and develop a technical manual for resin collection will be established;
- The demonstration sites for secondary forest management will be established;
- A botanic garden, with 100 rare tree species occurring in the south-subtropics for seed introduction and conservation planting will be established.

What's achieved by 2017:

- Baseline survey for operational plan development and sample plot identification completed;
- A botanic garden established with 40 rare tree species occurring in the south-subtropics planted;
- *Master Plan of Integrated Forest Ecosystem Management (2017-2036)* and *Forest Management Action Plan (2017-2026)* for the Forest Farm drafted;
- Sites established to demonstrate resin production(30hm²) and secondary forest management(45hm²), including understory plantation(5hm²);



Photo 3 Establishment of botanic garden (left); the understory plantation of *Dendrobium*(right)

Activities & expected outputs in 2018

- Tending and monitoring of demonstration sites will be established;
- Understory species in the secondary forest will be planted;
- Another 30 rare tree species occurring in the south-subtropics for seed introduction and conservation will be planted;
- Two technical trainings for project staffs on forest silviculture and forest rehabilitation will be conducted;
- Project dissemination through media and conferences will be conducted.

2 Project title: Community tree planting project in Papua New Guinea[2017P3-PNG]

Supervisory agency: Papua New Guinea Forest Authority

Executing agency: Voice of Yongos

Implementing agency: Papua New Guinea Eco-Forestry Forum

Budget in USD (total / APFNet grant): 228,711 / 183, 811

Kick-off date & duration: July 2017, 24 months, on track

Site Location: Simbu Province, Papua New Guinea

Objectives:

- To produce, distribute and plant 320,000 tree seedlings by 2018;
- To conduct capacity building for farmers and project staff on nursery skills and planting site management;
- To increase the knowledge of students, teachers and community leaders on sustainable forest management;
- To improve and sustain the livelihoods of landowners, tree farmers and the local communities.

Expected outputs:

- Four nurseries will be established;
- Capacity building for community stakeholders will be conducted;
- A total of 320,000 tree seedlings will be produced, distributed and planted on degraded land;
- The knowledge of 2000 students, 75 teachers, 60 community leaders will be enhanced on sustainable forest management practices.

What's achieved by 2017:

- Four nurseries established, 80,000 seedlings produced and distributed to communities;
- Two trainings on basic nursery management techniques for 80 nursery workers, volunteers, tree farmers and family members conducted;
- Two trainings on basic vegetable production conducted.



Photo 4. Nursery built up and seedlings distributed to villagers

Activities & expected outputs in 2018

- Tree seedlings will be planted on 90-hectare degraded land;
- Training for farmers and project staffs on nursery, planting and vegetable production will be conducted;
- 10,000 plus people will be reached through public awareness on sustainable forest management;
- The knowledge of 2000 plus students will be enhanced through essay and poster

- competitions;
- The knowledge of 135 teachers and community leaders will be enhanced on sustainable forest management.

3 Project title: Development of Participatory Management of Micro Catchment at the Bengawan Solo Upper Watershed [2017P6-INA]

Supervisory agency: Extension and Human Resources Development Agency, Ministry of Environment and Forestry, Indonesia

Executing agency: Watershed Management Technology Center, Indonesia

Budget in USD (total / APFNet grant): 242,784/97,928

Kick-off date & duration: October 2017, 24 months, on track

Site Location: Naruan Micro Catchment, Central Java, Indonesia

Objectives:

- To improve the quality of the environment by increasing forest cover, increasing the quantity and quality of water resources as well as reducing the rate of erosion and sedimentation;
- To increase people's incomes through diversification of their farm commodities, improvement of soil and water conservation technology and development of creative small businesses based on natural resources; and
- To enhance capacity building and increase awareness in managing and conserving natural resources.

Expected outputs:

- Stakeholders' commitment to effective participatory management of micro-catchment will be increased;
- Integrated participatory management of micro catchment will be formulated;
- Demonstration plots of conservation farming and watershed rehabilitation will be established;
- Community awareness in management of micro catchment will be enhanced;
- Monitoring & Evaluation (M & E) of watershed performance within the scale of micro catchment and landscapes will be conducted.

What's achieved by 2017:

- Focus group discussions organized in three target villages to develop the participatory micro catchment management plan;
- 30 ha demonstration plots in three villages selected.

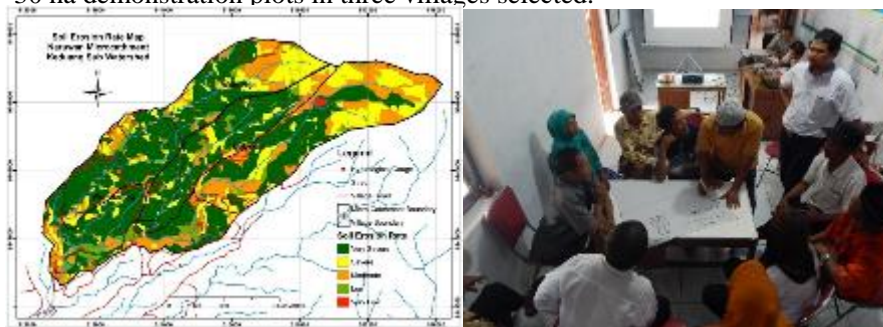


Photo 5. Soil erosion rate map of the Naruan Micro Catchment (L) Focus group discussing to develop the micro catchment management plan(R)

Activities & expected outputs in 2018

- Integrated participatory management plan of micro-catchment will be formulated;
- Demonstration plot (30 ha) that applied vegetative soil and water conservation techniques (agro-forestry) will be established.

4 Project title: Demonstration of vegetation restoration and management and utilization of forest resources in the Greater Central Asia[2016P3-INM]

The Project, initiated by China, is led by the APFNet secretariat in development and coordination of implementation.

Supervisory agency: Chifeng Forest Bureau, China

Executing agency: Sanyijing State-owned Forest Farm, Aohan Banner, Chifeng, Inner Mongolia, China

Budget in USD (total / APFNet grant): 744,000 / 500,000

Kick-off date & duration: April 2017, 36 months, on track

Site Location: Sanyijing Forest Farm, Chifeng City, Inner Mongolia, China

Objectives:

To promote regional vegetation recovery and improve the sustainable management of forest resources through demonstration of desertification control, vegetation restoration and development of sand industry.

Expected outputs:

- A research report of desertification prevention and control in Chifeng will be formulated;
- A 70 hm² demonstration site for forest restoration on sandy area will be established;
- A 13 hm² demonstration site for grafting *Armeniaca sibirica* (L.) Lam with *Armeniaca vulgaris sibirica*, 18hm² demonstration site for *Armeniaca sibirica* (L.) Lam fertility management and 8hm² demonstration site for *Armeniaca vulgaris sibirica* fertility management (including the soil preparation, pruning, fertilizing, watering, weeding, pest control and fire prevention) will be established;
- Capacity of forest station staff in desertification control and forest rehabilitation will be enhanced.

What is achieved by 2017:

- A 30 hm² plot of Mongolian pine mixed with Xinjiang poplar established;
- A 40 hm² plot of Mongolian pine mixed with shinyleaf yellowhorn established;
- A 13 hm² plot of economic forest established with wild apricot as the main species grafted with main species of *Prunus armeniaca*;
- A 18hm² stand of over-mature wild apricot and 18 hm² stand of *Prunus armeniaca* tended.



Photo 6. Farmers tending wild apricot (L); Establishing 30 hm² forest stands of Mongolian pine mixed with Xinjiang poplar (R)

Activities & expected outputs in 2018

- Integrated desertification prevention and control models will be collected and analyzed in the northern sandy area in Aohan Banner and other related areas;
- A 70 hm² demonstration site (30 hm² plot of Mongolian pine mixed with Xinjiang poplar and 40 hm² Mongolian pine mixed with shinyleaf yellowhorn) will be tended and maintained, including weeding, fertilization, forest fire prevention and pest control, construction of forest trails and water supply facilities;
- A 13 hm² demonstration site for grafting *Armeniaca sibirica* (L.) Lam with *Armeniaca vulgaris sibirica*, 18hm² demonstration site for *Armeniaca sibirica* (L.) Lam fertility management and 8hm² demonstration site for *Armeniaca vulgaris sibirica* fertility management will be tended and maintained;
- Carbon accounting methodology at the project level will be developed.

5 Project title: Demonstration on Sustainable Forest Management and Restoration in Hilly Area of Southern China [2016P2-CAF]

Executing agency: Research Institute of Forestry, Chinese Academy of Forestry

Implementing agency: Forestry Department of Anhui Province, China through Qingyang Forestry Bureau, and Forestry Department of Zhejiang Province, China through Lin'an Forestry Bureau

Budget in USD (total / APFNet grant): 1,410,27 / 695,207

Kick-off date & duration: April 2017, 48 months, on track

Site Location: Qingyang, Anhui Province; Lin'an, Zhejiang Province, China

Objectives:

- To promote sustainable forest management and demonstrate effective forest restoration and rehabilitation approaches adaptable for the degraded forests in hilly area of Southern China.

Expected outputs:

- Effective technical methods and strategies on sustainable management and restoration of forest at the landscape level will be developed and demonstrated;
- The carbon accounting methodology for SFM and restoration at the project level will be established;
- Knowledge and experience exchange in SFM and restoration among Asia-Pacific region will be promoted.

What's achieved by 2017:

- Six types of typical degraded forests in hilly area (150 hm²) selected, specific technical approaches for forest rehabilitation identified, implementation plans developed respectively;
- Baseline data of the carbon stock collected;
- Training for local communities on sustainable forest management completed.



Photo 7. Forest resources inventory in Qing Yang county

Activities & expected outputs in 2018

- A 150 ha site will be set up to demonstrate specific rehabilitation approaches for the selected 6 types of degraded forests;
- The carbon accounting methodology at the project level will be developed;
- A series of trainings on basic theories of SFM and forest landscape restoration will be organized to enhance the capacity of local forest staff and communities.

2. Completed projects

1 **Project title: Construction of a mini botanic park of 8.4 ha within the National Garden Park of Mongolia [2016P4-MN]**

The Project, initiated by China, is led by the APFNet secretariat in development and coordination of implementation.

Supervisory agency: Ministry of Environment and Tourism of Mongolia (MET)

Executing agency: Mongolian Nature and Environment Consortium (MNEC)

Budget in USD (total / APFNet grant): 1,315,399 / 1,309,488.56

Completed date & duration: October 2017,12 months

Site Location: National Garden Park of Mongolia, Ulaanbaatar City, Mongolia

Objectives:

- To develop a mini botanic park of 8.4 ha within the National Garden Park in Ulaanbaatar through planting flowers, decorative trees that will provide a pleasant and comfortable environment for recreation and entertainment of citizens.

Achievements and outputs:

- A 8.4 ha mini botanic park established in Ulaanbaatar, Mongolia with 7,000 seedlings planted and other affiliated facilities set up.
- The mini botanic park open to public citizens of Ulaanbaatar City on October 2016 and a lot of tourists attracted to the project site.



Photo 8. 3D visualization of the botanic park (L); A ribbon-cutting ceremony in October, 2016 (R)

Outcomes and impacts:

- The project received high attention from the Ministry of Environment and Tourism of Mongolia and the Ulaanbaatar City Government and are extremely welcomed by the general public as their first choice for outdoor recreation.

2 **Project title: Monitoring forest cover change in Mongolia with participatory approach [2015P5-MN]**

Supervisory agency: Ministry of Environment and Tourism of Mongolia

Executing agency: Environmental Research, Information and Study Center (ERISC)

Budget in USD (total / APFNet grant): 98,772 / 83,372

Completed date & duration: December 2017,12 months

Site Location: Forest Communities of “Khan Buyan” and “Bural Domuu” of Bulgan Province, Mongolia

Objectives:

- To make a validated quantitative assessment of the forest cover in Mongolia to assist the Government of Mongolia to strategically plan forest management using the high resolution Landsat data.

Achievements and outputs:

- The forest cover of Mongolia monitored
Mongolian forest cover change from 2000 to 2015 detected using high-resolution Landsat satellite data for the first time in forest sector of Mongolia, which indicates that in general the average forest cover in Mongolia has been decreasing in the last 15 years, in particular, Dornod and Khentii Provinces' steppe forests decreased so fast that reforestation and desertification control are urgently needed. The forest area in the northern permafrost may have increased due to global warming.
- Forest types of pilot community forests mapped
Forest community management plans developed for Khanbuyan and Buraldomuu forest communities using satellite data.
- The new method applied and extended
The method of formulating forest management plans using satellite data extended to other communities in Mongolia.
- Public awareness increased
Based on the project results, 3 books in Mongolian have been published, including *Methodology to Detect Forest Cover Change from the Satellite Data*, *Approach to Defining Forest Cover Area of Mongolia from the Satellite Data* and *Application of Satellite Data in Forest Management Plan*.

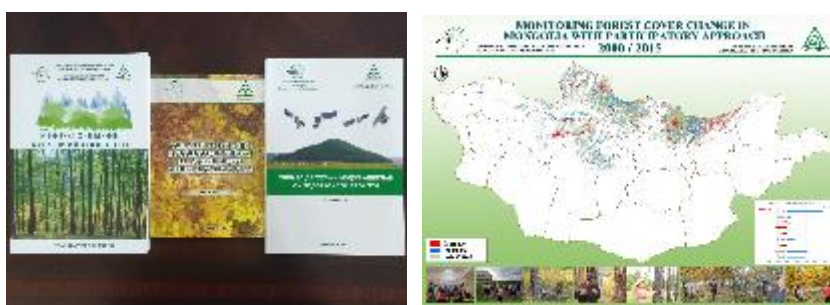


Photo 9. Books published (L); Map of forest cover change 2000-2015 for Mongolian (R)

Outcomes and impacts:

- Assisted the better informed decision making in the forest sector of Mongolia. The Ministry of Environment and Tourism of Mongolia (MET), the Supervisory Agency uses the project results for monitoring forest cover change in the UNREDD Mongolia National Program.
- Extended this state-of-the-art method to other communities of Mongolia. The approaches for using satellite data to define forest cover area and forest types in two pilot communities to assist forest management planning have been applied to other pilot communities in Mongolia, with the great support from MET.

3. Projects in implementation 2017

1 Project title: Strengthening Urban Forestry Demonstration Site of Bang Kachao (Thailand) for Biodiversity Conservation and Natural Learning Center [2012P1-THA]

Executing agency: Royal Forest Department (RFD) of Thailand

Budget in USD (total / APFNet grant): 300,900 / 128,600

Duration: April 2013 to April 2015, 24 months, delay

Site Location: Bang Kachao Island, Samut Prakarn Province, Thailand

Objective:

- To maximize biodiversity conservation and strengthen urban forestry development through a demonstration site and learning center establishment including ecotourism promotion and benefits flowing to local communities.

Expected outputs:

- A demonstration and learning site for interested groups and visitors will be established;
- Biodiversity conservation area and habitat for endemic flora and fauna species in Bang Kachao will be improved;
- Income flow of local people will be increased through maximizing ecotourism attraction;
- The availability of project information for the public outreach.

What's achieved by 2017:

- The exhibition and interpretative center established;
- A curriculum and teaching plan for natural conservation and urban forestry further developed for school children, local volunteers and youth groups involved in the education programs;
- Project supported to train local people as tour guide and helped to maximize ecotourism attraction of the project sites by improving the area's habitat of flora and fauna.



Photo 10. Local school children planting trees in promo event

Activities & expected outputs in 2018

- Local livelihoods will be further improved by participating in eco-tourism activities;
- Final evaluation will be conducted in July 2018 for closure.

2 Project title: Supporting Community Based Sustainable Forest Management and

Economic Empowerment of Women in Central Region of Nepal [2013P4-NPL]

Supervisory agency: Ministry of Forest and Soil Conservation of Nepal (MoFSC)

Executing agency: Consortium of Himalayan Grassroots Women's Natural Resource Management Association [HIMAWANTI], Ashmita Nepal and Community Resource Management Centre [CRMC]

Budget in USD (total / APFNet grant): 559,208/412, 238

Duration: October 2014 to September 2017, 36 months, delay

Site Location: Kathmandu District, Makawanpur District, Sarlahi District, Nepal

Objectives:

- To demonstrate sustainable forest management practices;
- To promote alternative energy to reduce pressure on forest and carbon emission;
- To promote development of community forest based mini-enterprises.

Expected outputs:

- Sustainable forest management practices will be demonstrated, and local communities' capacity on sustainable forest management will be improved;
- Community forest based mini-enterprises will be established to increase local communities' income;
- Alternative energy to reduce pressure on forest and carbon emission will be promoted;
- Community forest management mechanism will be improved.

What's achieved by 2017:

- Applications of silvicultural practices completed;
- Ecotourism services developed, and the ecotourism park to be opened in March 2018;
- All alternative energy equipment installed and in use;
- Training on ecotourism development, marketing of wooden handicrafts and aromatic herbs conducted in the three project sites;
- Ecotourism park publicity and media dissemination of the project conducted.



Photo 11. Wooden handicraft training for community women in Makawanpur, Nepal (L); Mini-NTFP enterprises established in Sarlahi, Nepal (R)

Activities & expected outputs in 2018

- Project publicity and promotion will be conducted;
- Project completion and dissemination workshop will be conducted, and the Project terminal evaluation will be organized;
- The project will be completed by the end of March, 2018.

3 **Project title: Sustainable Forest Management in Northern Provinces of Lao PDR [2014P1-ASEM]**

This project was developed based on the initiative proposed by the ex-prime minister of China- Wen Jiabao, during the 9th ASEM Summit Meeting in November 2012 in Vientiane, Lao PDR.

Executing agency: Department of Forestry, Ministry of Agriculture and Forestry, Lao PDR; Yunnan Forest Department

Implementing agencies: Department of Forest Inspection (DOFI), MAF; Xishuangbanna Nature Reserve

Budget in USD (total / APFNet grant): 3,563,433/2,982,573

Duration: August 2014 to December 2020, 76 months, delay

Site Location: Nampheang village, Oudomxay Province; Houayhom village, Luangnantha Province; Donegneun village, Bokeo Province, Lao PDR; Mengla, Yunnan Province, China

Objectives:

- To explore, test and demonstrate effective approaches on forest restoration and forest management and responding mechanism to generate sustainable flow of benefit to closely related stakeholders;
- To strengthen forest law enforcement and promote cooperation on trans-boundary biodiversity conservation;
- To share information and knowledge of best practices on forest restoration and rehabilitation.

Expected outputs:

- Forest land use plans at district and village levels will be developed;
- The best practices and approaches for forest restoration and rehabilitation will be demonstrated;
- Forest inspection system will be improved;
- Cooperation on trans-boundary biodiversity conservation will be enhanced;
- Capacity for forest staff and communities will be improved;
- Best practices and lessons learned will be disseminated.

What's achieved by 2017:

- 5-year Forest Land Use Plans(FLUPs) for target villages and districts drafted;
- 10 ha degraded forests in protection area of northern Laos rehabilitated, best practices of forest rehabilitation demonstrated;
- Forest Law Enforcement Action Plan for Oudomxay Province drafted;
- 13 inter-village forest inspection teams for target village clusters set up for daily patrolling of illegal activities related to forest management;
- Trans-boundary forest fire monitoring system in Nam Ha National Protected Area and Shangyong National Reserve established;
- Wild elephant tracking, endangered species survey at cross border area conducted.



Photo 12. Supporting to establish village nursery and forest restoration program in northern Laos

Activities & expected outputs in 2018

- FLUPs will be further improved and officially approved and released by district authorities;
- 5-year village forest management plan and the Annual Operational Plan for Nampheang, Houayhom, and Donegneun villages will be produced and approved by district governors;
- 36 ha degraded forests will be rehabilitated, 28,000 seedlings to be produced by project-supported nurseries;
- Forest Law Enforcement Action Plans for 3 target provinces will be further improved and officially released by director of Provincial Office of DOFI;
- 13 inter-village inspection teams will conduct 7 joint forest patrols regularly;
- Endangered and rare species survey, wild elephant tracking will be conducted by Nam Ha National Protected Areas and Shang Yong Nature Reserve;
- The capacity of forest staff and local communities will be enhanced through training programs supported by project, especially on participatory land use planning, seedling propagation and forest rehabilitation.

4 Project title: Landscape Approach to Sustainable Management of Forests in Prek Thnot Watersheds [2015P1-KHM]

Supervisory agency: Ministry of Agriculture, Forestry and Fishery, Cambodia (MAFF)

Executing agency: Institute of Forest and Wildlife Research and Development (IRD), Forestry Administration, MAFF

Budget in USD (total / APFNet grant): 573,015 / 499, 215

Duration: July 2015 to June 2018, 36 months, delay

Site Location: Prek Thnot Watershed, Kampong Speu Province, Cambodia

Objectives:

- To conduct capacity building for central and local stakeholders on integrated watershed landscape planning;
- To complete the Prek Thnot Watershed Management Plan;
- To improve local communities' livelihood;
- To share experiences and lessons learned from the project to stakeholders.

Expected outputs:

- Training for Forestry Administration staff and stakeholders on watershed plan development will be conducted;
- The Prek Thnot Watershed Management Plan will be developed;
- Livelihood of local communities will be improved through agroforestry development and forest based community enterprise.

What's achieved by 2017:

- Trainings conducted for FA Staff on GIS, agroforestry, hydrology, participatory action research;
- Three agroforestry plots established, where soil and hydrological monitoring systems installed;
- Characterization report of Prek Thnot watershed completed;
- Land allocation map of Prek Thnot watershed developed;
- Community based enterprise development plan finalized.



Photo 13. Agroforestry plot established (L); Hydrological monitoring systems set up (L)

Activities & expected outputs in 2018

- The Integrated Watershed Management Plan through participatory approach will be developed;
- Monitor and collect data on hydro meteorological and soil erosion from agroforestry plots will be continued;
- community-based mini-enterprise on cow raising will be developed;
- A policy brief on sustainable development of Prek Thnot watershed will be developed.

5 Project title: Rehabilitation and Management of Degraded Forests in Miyun Reservoir Watershed [2015P2-MY]

Supervisory agency: Beijing Municipal Bureau of Forestry and Park

Executing agency: Beijing Forestry Society

Budget in USD (total / APFNet grant) 696,300 / 491,100

Duration: July 2015 to June 2018, 36 months, on track

Site Location: Shicheng, Maoshigou and Shichangyu Villages, Beijing, China

Objectives:

- To improve the water conservation capacity of the forests in three sites of the project by applying close-to-nature management approach;
- To improve the livelihood of selected communities by promoting forest recreation;
- To enhance the capacity of stakeholders in forest management in an environment-friendly manner;
- To produce best practice models for long-term forest management in the watershed.

Expected outputs:

- Monoculture plantations of *Pinus tabulaeformis* and *Platycladus orientalis* (Linn.) Franco of 280 hectares in three project sites will be managed in a close-to-nature approach;
- The use of fertilizers that caused water pollution in selected orchard will be reduced;
- The livelihood of local communities will be improved by promoting eco-tourism;
- Capacity of stakeholders in managing forests and eco-tourism will be improved;
- Experience and lessons learned will be summarized and disseminated.

What's achieved by 2017:

- 151.2 ha of *Pinus tabulaeformis* plantation and *Platycladus orientalis* planted forest managed with the close-to-nature forest management approach;
- A draft master plan of eco-tourism for Shichangyu Village developed, the building of the Forest Culture Exhibition Center and 8 km forest trail in the project area completed;
- 5 on-site trainings of forest management and 2 eco-tourism trainings for villagers organized;
- A knowledge hub established on the basis of the website of Beijing Forestry Society to post project outputs, present best practices and case studies of forest management in the watershed.



Photo 14. Forest trails constructed in the project area of Shichangyu village

Activities & expected outputs in 2018

- Biophysical and socio-economic monitoring for project demonstration area will be conducted;
- The eco-tourism plan, marketing plan, and management plan of eco-tourism in Miyun Reservoir Watershed will be further reviewed;
- A book entitled *Integrated Forest Management in the Miyun Reservoir Watershed* will be written to share the integrated forest management practices in the Miyun Reservoir watershed based on project outcomes achieved;
- A policy brief on forest management in Miyun Reservoir will be completed and submitted to Beijing municipal government;
- An international Workshop on Rehabilitation of Degraded Forest and Multiple Use

- of Forest Resources in Miyun Reservoir will be organized.
- The project terminal evaluation will be conducted.

6 Project title: Capacity Building towards Effective Implementation of Sustainable Forest Management Practices in Fiji, Tonga and Niue[2015P3-SPC]
Executing agency: Secretariat of Pacific Committee (SPC)
Implementing agencies: Forestry Divisions within the governments of Fiji, the kingdom of Tonga and Niue
Budget in USD (total / APFNet grant): 666,500 / 488,500
Duration: June 2015 to June 2019, 48 months, on track
Target Economy(ies): Fiji, Tonga and Niue

Objectives:

- To develop National Forest Management Plans (FMP) for Tonga, and to complete the FMPs for Niue;
- To develop strategies and mechanisms for effective implementation of the FMPs and codes of forest practices in Tonga, Fiji and Niue;
- To develop monitoring and reporting mechanisms on FMPs implementation and codes of forest practices in Tonga, Fiji and Niue.

Expected outputs:

- The National Forest Management Plans (FMPs) for Tonga will be completed, and Niue finalized;
- Trainings for forest owners, forest users and governments officials will be conducted;
- Implementation strategies for FMPs and codes of forest practices will be developed in Tonga, Fiji and Niue;
- Monitoring and reporting mechanisms for FMPs implementation and codes of forest practices in Tonga, Fiji and Niue will be developed.

What's achieved by 2017:

- Background report on the current status of forests and forest management in Tonga completed;
- Background report on the current legal and policy framework, institutional arrangements for implementing FMPs and codes of practices in Tonga and Niue completed.
- The FMP and Implementation Strategies or FMPs and codes of forest practices approved in Tonga, in approval procedure in Niue and being drafted in Fiji;
- The first Sandalwood Regulations in Tonga adopted.



Photo 11 Hon. Semisi Tuelangi Fakahau, Minister of Forests, addressing to launch the Sandalwood Regulations (L), media coverage of the Sandalwood Regulations (R)

Activities & expected outputs in 2018

- Implementation Strategies or FMPs and codes of forest practices for Fiji will be completed;
- FMPs of Niue will be completed;
- Training and education packages will be developed to promote implementation of the FMPs and codes of practices in Fiji, Tonga and Niue;
- Workshops will be conducted to review options for implementing FMPs and codes, as well as raise awareness of all stakeholders.

7 Project title: Community Based Sustainable Forest Management of Sungai Medihit Watershed, Sarawak, MALAYSIA [2015P4-MAS]

Supervisory agency: International Tropical Timber Organization (ITTO)

Executing agency: Sarawak Forest Department, Malaysia

Budget in USD (total / APFNet grant) 666,710 / 460,000

Duration: July 2015 to May 2018, 36 months, delay

Site Location: Kampung Long Napir (Kelabit Community) and Kampung Bahagia (Penan Community), Limbang Town, Sarawak, Malaysia

Objective:

- To promote the sustainable forest management in Sungai Medihit watershed area by building the capacity of the community, demonstrating innovative operational model and establishing new governance mechanism on community development.

Expected outputs:

- Sustainable forest management will be improved through setting rational forest management plans, applying innovative forest management techniques and establishing effective forest management mechanism;
- The capacity of communities on sustainable forest management and livelihood development will be enhanced;
- The living conditions will be improved by renovating the community service infrastructure.

What's achieved by 2017:

- The baseline survey on forest resources assessment and socio-economic development of target communities in the Sungai Medihit catchment completed;
- High conservation value forests in SFM demonstration sites identified, and the two community forest management plans under development;
- A fish raising aquafarm, a chicken rearing demonstration site, and a vegetable cropping demonstration site established, and the communities are now generating incomes from chicken and vegetable sales;
- 7 KM road connecting Camp Kilo and Long Napir built;
- Solar power system in the two communities for alternative energy installed.



Photo 16. Livelihood much improved in the target communities

Activities & expected outputs in 2018

- Community Forest Resource Management Plans will be developed, and the sites to demonstrate best approaches and practices of SFM established;
- Livelihood of local communities will be further improved through capacity building activities.

8 Project title: To Demonstrate the Development and Application of Standing-Tree Carbon Equations to Improve the Accuracy of Forest-Cover Carbon Stock Estimates in Thailand [2015P6-THA]

Supervisory agency: Royal Forest Department, Thailand

Executing agency: Faculty of Forestry, Kasetsart University, Thailand

Budget in USD (total / APFNet grant) 253,345 / 199,045

Duration: January 2017 to December 2018, 24 months, on track

Site Location: Ngao Demonstration Forest (NFD), Lampang Province, Thailand

Objective:

- To provide accurate information on forest carbon stocks to support informed sustainable forest management policy decision-making and balanced public debate on the benefits of forests in climate change mitigation.

Expected outputs:

- Methodology to construct new tree carbon equations will be developed and pilot-tested.
- The tree carbon equation will be applied to generate a carbon stock map for the demonstration area.
- An action plan to construct equations of standing-tree carbon will be prepared and promoted.
- Information and knowledge from the project will be disseminated among stakeholders.

What's achieved by 2017:

- 54 sample plots in NFD cover mixed deciduous forest, deciduous dipterocarp forest, and dry evergreen forest selected, basic field data including tree species, DBH, height, etc. collected, per-hectare plot statistics, including basal area, wood density by specie, and Importance Value Index (IVI) analysed;
- Wood samples from 450 sample trees collected, analysis of wood samples on going;
- Forest type map updated based on remote sensing data for NFD area.



Photo 17. Tree selection and wood samples collection

Activities & expected outputs in 2018

- Methodology to construct new tree carbon equations will be developed and pilot-tested;
- Application of tree carbon equation to prepare a carbon cover map will be demonstrated.
- An action plan to construct and promote national tree carbon equations will be prepared.

**9 Project title: Adaptation of Asia-Pacific Forests to Climate Change (II)
[2015P7-UBC(II)]**

Phase I of the project executed by University of British Columbia was implemented during November 1, 2011 to October 31, 2014, and focused on temperate regions with the target economies including China, Canada and Australia. The total budget is USD1, 139,200, with APFNet grant of USD1, 039,200.

The major accomplishments include:

- (1) ClimateAP developed, which is a high-resolution climate model generate climate data for any location in the region for historical years (1901–2010) and future periods (2020s, 2050s and 2080s);
- (2) Climate niche models built for five major forest tree species in temperate region(China, Canada and Australia), including Chinese fir, Chinese pine, Masson pine, Douglas-fir and Blue gum, and their consensus projections generated for future periods;
- (3) Ecological models developed to predict impacts of climate change on major tree species distributions (Chinese fir, Eucalyptus and Douglas-fir);
- (4) A Google Map based web tool developed to facilitate data access and spatial visualization of climate data and climate niche projections;
- (5) Adaptation strategies developed to increase the resilience of forests and forest dependent communities in the Asia-Pacific region to climate change;
- (6) Network building and technology transfer among forest managers and policy makers;

Executing agency: University of British Columbia

Budget in USD (total / APFNet grant): 899,200 / 499,200

Duration: September 2015 to August 2018, 36 months, on track

Target Economy(ies): China, Laos, Malaysia, Myanmar and Chinese Taipei

Objectives:

- To improve and expand the ClimateAP developed in phase I of the project;
- To build a strong scientific basis and provide adaptive management options to enhance the target economies' capacity for decision making regarding adaptation to climate change;
- To expand the network built in phase one and continue capacity building through workshops, communication and policy notes to further enhance information sharing and technology transfer.

Expected outputs:

- Climate AP with future annual climate projections will be completed;
- Assessment of the climate change impact on forest ecosystems, key species and vegetation types will be completed in tropical and subtropical regions(China, Chinese Taipei, Laos, Malaysia, and Myanmar);
- Evaluation of the adaptive forest ecosystem management strategies will be completed through model integration, development of indicators and trade-off analysis for the region;
- A web platform for data access and visualization for targeted economies will be developed;
- Networking and capacity building will be conducted.

What's achieved by 2017:

- Data collection completed for vegetation and monthly climate projection;
- Ecological models for forest ecotypes in Chinese Taipei built;
- Economy-specific web-based climate models built for 5 target economies;
- Assessment of climate change impact on regional forest vegetation types and key species 50% completed.

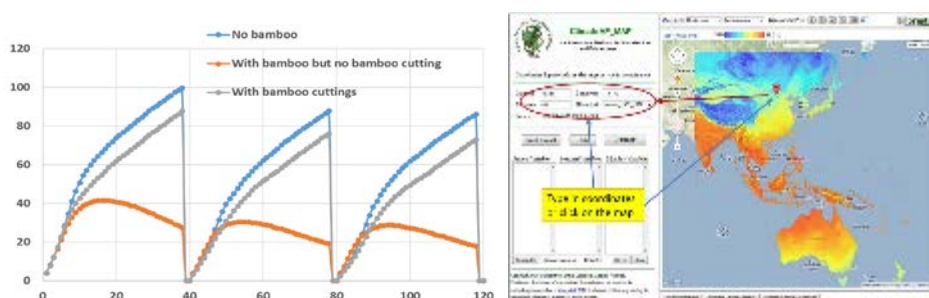


Photo 18. Result of FORECAST model for Teak plantation productivity in Myanmar with and without Bamboo competition (L); Web-based Climate AP access climate data and visualizes climatic and species distribution (R)

Activities & expected outputs in 2018

- ClimateAP with the monthly climate data will be updated;
- Climate niche modeling and projections will be completed;
- Process-based modelling in the pilot site areas in Malaysia and Myanmar will be completed;
- The web-based platform for data access and visualization will be completed ;
- Training on application of tools and models for all local partners and management authorities will be conducted;
- A robust mechanism for future maintenance and upgrade of the web will be

developed.

10 Project title: Construction of Multifunction Forest Management Demonstration Sites - Phase II [2015P8-INM(II)]

Basic introduction of project phase I:

In 2011, APFNet launched the first phase of captioned project in Chifeng, China, to demonstrate the close-to-nature forest management approach and promote multiple purposes of forests including ecological and socio-economic functions. During the first phase of project implementation, 467 ha of degraded secondary forests or plantations with different age groups were selected to practice close-to-nature forest transformation. Seventy-two permanent plots were developed using various age groups, slope positions and treatments for long-term monitoring. New management systems: the *Forest Inventory Management System*, *Office Administration System* and *Financial Management System* were also developed to enhance the capacity of Wangyedian Forest Farm.

Supervisory agency: Chifeng Forest Bureau, China

Executing agency: Wangyedian Forest Farm, Chifeng, Inner Mongolia, China

Budget in USD (total / APFNet grant) 1,762,500 / 1,404,000

Duration: January 2016 to December 2019, 48 months, on track

Site Location: Wangyedian Forest Farm, Chifeng, Inner Mongolia, China

Objective:

- To establish a demonstration base that integrates demonstrating best practices of sustainable forest management, community forestry, forest education and recreations, exhibition of forest cultures and other components.

Expected outputs:

- Innovative reforestation approach on cut-over land, intermediate thinning of young and middle-aged natural secondary forests, and close-to-nature forest management approach in mature forests will be demonstrated.
- Technical guidelines on close-to-nature forest transformation on Larch and Chinese pine artificial forest will be developed.
- The construction of APFNet Multi-Functional Forest Experiment and Training Center will be finished to demonstrate integrated approaches of sustainable forest management and the arboretum garden.
- The capacity of local communities and forest farm on sustainable forest management will be improved.

What's achieved by 2017:

- 400 mu (26.6 ha) cut-over land reforested with *Acer mono* Maxim., *Betula platyphylla* Suk. *Pinus sylvestris*, etc.
- The construction of APFNet Multi-Functional Forest Experiment and Training Center and eco-tourism sites completed.



**Photo 19. Intermediate cuttings conducted to allow space for valuable timber trees
Activities & expected outputs in 2018**

- Thinning of 66.6 ha middle-aged forest will be completed;
- 33.3 ha mature plantations will be managed with close-to-nature forest management approach;
- Facility construction will be completed in forests for recreational use;
- Construction of an arboretum of local tree species will be completed.