APFNet annual report 2019

Asia-Pacific Network for Sustainable Forest Management and Rehabilitation

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About APFNet

Mission

The Asia-Pacific Network for Sustainable Forest Management and Rehabilitation (APFNet) is committed to helping the economies and people of the Asia-Pacific region by promoting and improving sustainable forest management (SFM) and rehabilitation.

Objectives

APFNet aims to:

- Contribute to the achievement of the aspirational goal of increasing forest cover in the region by at least 20 million hectares of all types of forests by 2020.
- Help enhance forest carbon stocks and improve forest quality and productivity by promoting the rehabilitation of existing degraded forests and the reforestation and afforestation of suitable cleared lands in the region.
- Help reduce forest loss and degradation and their associated emissions of greenhouse gases by strengthening SFM and enhancing biodiversity conservation.
- Help increase the socio-economic benefits of forests in the region.

Priorities

- Rehabilitating degraded forests and increasing forest cover.
- Promoting SFM to enhance the ecological functions and ecosystem security of forests.
- Enhancing the contributions of forests to socio-economic development and the improvement of local livelihoods.

Implementation tools

APFNet pursues its goals and priorities through:

- Capacity building
- Demonstration projects
- Policy dialogue
- Communication and information sharing.

APFNet in 2019

2019

Projects

- 5 Launched
- 7 Completed
- 26 Active
- USD 3.4M Disbursed

Scholarships

- 28 Master's intakes
- 6 PhD intakes
- 29 Graduated

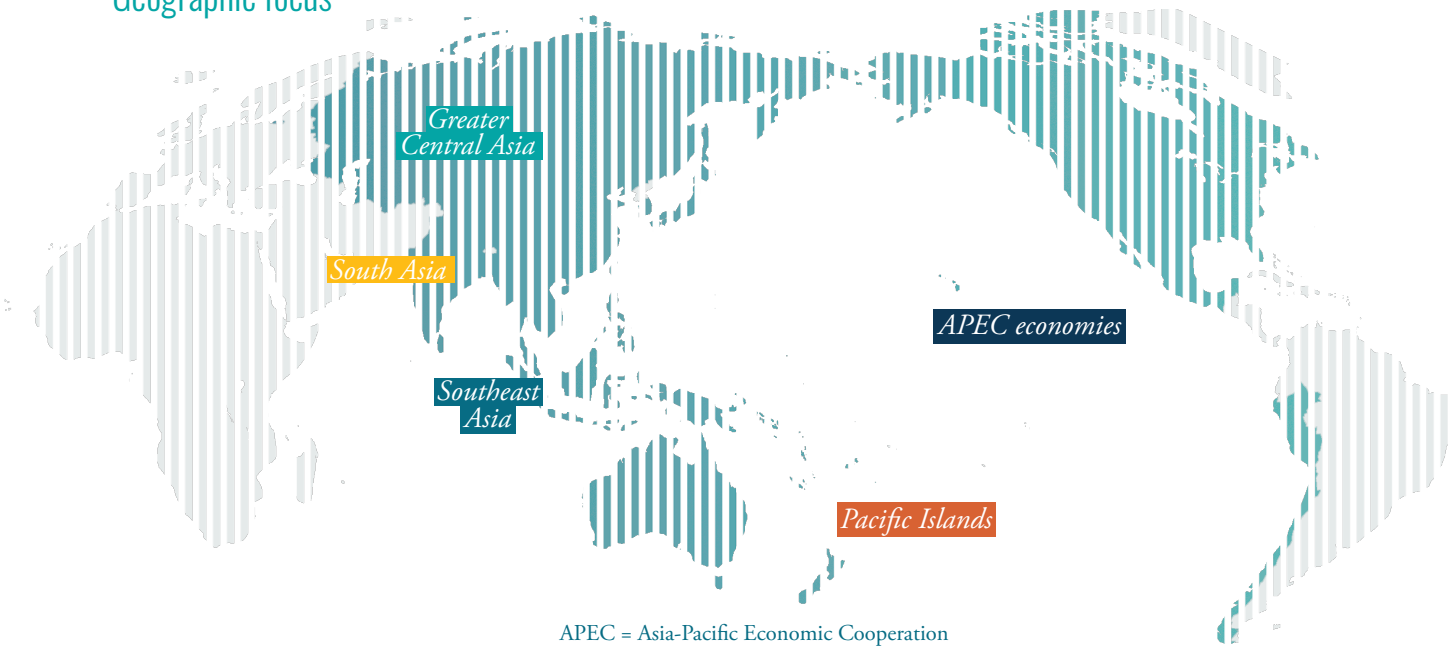
Thematic training

- 30 Trainees

IN TOTAL

- 43 Projects since 2010
- 158 Awardees since 2010
- 355 Trainees since 2009

Geographic focus



APEC = Asia-Pacific Economic Cooperation

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Acronyms and abbreviations

APFNet	Asia-Pacific Network for Sustainable Forest Management and Rehabilitation
ASEAN	Association of South East Asian Nations
ASP	APFNet Scholarship Program
CNY	Chinese yuan
GMS	Greater Mekong Subregion
ha	hectare(s)
SANFRI	Sino-ASEAN Network of Forestry Research Institutes
SDG	Sustainable Development Goal
SFM	sustainable forest management
USD	United States dollar(s)
@Wild	APFNet Transboundary Wildlife Conservation Initiative

Message from the Executive Director

The roles that forests can play in building a sustainable future were recognized in several ways globally in 2019. The United Nations designated 2021–2030 as the Decade on Ecosystem Restoration. The Intergovernmental Panel on Climate Change issued a special report on climate change and land, highlighting the potential for reforestation, afforestation and reduced deforestation and forest degradation to help stop the global temperature increase from exceeding 2 °C.

APFNet continued to contribute to the sustainable development agenda and climate-change mitigation in the Asia-Pacific region in 2019 by promoting the sustainable use of forest resources, the restoration of degraded land and the improvement of livelihoods in forest communities. It did this through the implementation of 26 projects (examples of which are described in these pages) and many capacity-building, policy-dialogue and information-sharing activities.

APFNet has created the Sino-ASEAN Network of Forestry Research Institutes to help young foresters contribute to forest restoration and sustainable forest management and to raise the voice of developing economies in the international forest community. As part of this initiative, in 2019 we and our partner institutions launched a fellowship programme targeted at young scholars. We also convened the first Early Career Academics Forum to enable talented young academics to share their research ideas and outcomes.

Following the path laid out in previous years, APFNet facilitated knowledge exchange on forest landscape restoration among forestry officials using its networks on forest policy planning and in Greater Central Asia, thereby encouraging mutual learning and synthesis in the region.

The newly launched @Wild initiative took steps to develop an action plan for the sustainable management of the forest landscape in Cambodia's Choam Ksan District. The aim is to balance protected-area management, local livelihood improvement and wildlife conservation in the area.

APFNet strengthened its visibility in 2019 by engaging actively in major regional and global events, especially Asia-Pacific Forestry Week, where we collaborated with two other bodies with regional mandates to address the need to greatly upscale forest landscape restoration in the region. APFNet also hosted a symposium aimed at strengthening international cooperation on the Sustainable Development Goals.

These and other APFNet achievements in 2019 are set out in this annual report. I take this opportunity to convey my sincere gratitude to our members, Council representatives, Board directors, partners and all others who were involved in and supported our activities in 2019.

Lu De
APFNet Executive Director

Building sustainable landscapes

Forests are not independent "islands" that can or should be managed without considering their context. Understanding this, APFNet emphasizes projects that address issues through a landscape lens. There is no single definition of "landscape approach", but the Global Landscapes Forum defines it as:

"*about balancing competing land use demands in a way that is best for human well-being and the environment. It means creating solutions that consider food and livelihoods, finance, rights, restoration and progress towards climate and development goals*".

The APFNet projects described below have taken the principles of a landscape approach to heart, seeking to balance demands by looking at entire landscapes and the needs of local people. A project

Photo: Pak Sngoun Pisey/APFNet

in Viet Nam's Tram Chim National Park carefully analysed baseline conditions before making management recommendations and introducing alternative livelihood options, such as beekeeping and lotus-growing. In Pu'er, China, a landscape approach means reconciling competing resource demands, both today and far into the future. In Cambodia, the involvement of diverse stakeholders was crucial for developing a watershed management plan. Finally, in Myanmar, the conservation of forest genetic resources is an important component of integrated watershed management planning in the face of climate change.

Helping a wetland national park soar in Viet Nam

Project title
Integrated forest ecosystem management planning and demonstration project (IFEMPDP) in the Greater Mekong Subregion (Tram Chim Project Site) [project ID: 2019P2-VNM]

Executing agency
Forest Inventory and Planning Institute

Implementing agency
Forest Resources and Environment Center

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

Duration
November 2019–October 2023

Location
Tram Chim National Park, Dong Thap Province, Viet Nam

In the Tram Chim National Park, a sarus crane, one of Viet Nam's most sacred birds and one of the few remaining individuals of this species in the park, rises from the ground to hunt insects and frogs. In recent decades, forest fires and declining water quality and management have led to a steady decrease in the sarus crane population in Tram Chim, with its food sources and habitat under threat.

APFNet launched a project in the park in September 2019 in cooperation with the Forestry Inventory and Planning Institute of Viet Nam and the Forest Resources and Environment Center. The aim was not only to help the sarus crane but also to improve the knowledge base and landscape-scale management of the Tram Chim National Park, using a data-driven approach to balance human and environmental needs.

A unique park

Because the Tram Chim National Park is entirely a wetland, the project partners must look beyond the trees at the factors affecting the wider landscape and its inhabitants. Illegal logging and poaching are less of an issue here than may be the case in other forests, but more information is needed to assess habitat threats and create ways for people and the national park to co-exist sustainably. A key role of the project

Photo: Anna Finke/APFNet

The Tram Chim National Park is a Ramsar site providing high-quality habitat for birds and other wetland-dependent species

is to contribute to the development of a sustainable management plan for the park, but it will also make many other contributions.

Establishing a protection baseline

Although relatively undisturbed itself, the Tram Chim National Park is surrounded by large canals bordered by local residential houses.

"Whatever local people throw into the canal can easily influence the park because it's the same water," says project coordinator Nguyen Huy Thang. "We don't know, however, what is currently in the water and how it influences its quality. That's why it's important to gather water-quality data from the surrounding canals so we can make tailored management recommendations." Thus, the project will monitor water quality in canals in both the dry and "floating" seasons, as well as soil quality and biodiversity. Based on the results, management recommendations will be made to balance the needs of the local people surrounding the park and those of the park itself.

Watching out for birds and fire

In addition to pollution, fire is a major (although perhaps surprising) threat to the Tram Chim wetland because it can destroy habitats, cause further water pollution and change ecosystems. The project will construct a 50-metre-high observation tower to help in monitoring fire and also to provide visitors with birdwatching opportunities. The park already has several observation towers, but most of these are low and give only limited views.

"When we use the other towers, our field of view is perhaps only a few kilometres in any direction," says project director Mr Pham Van Bay. "With the new tower, we will be able to monitor virtually the entire park from one spot and detect fires immediately."

Overall, the hope is that the project will enable local people and rare species such as the sarus crane to co-exist harmoniously

Alternative livelihoods for national park residents

The creation of the national park has posed difficulties for many local people, with the prohibition of practices such as agriculture, fishing and timber harvesting affecting their livelihoods. Recognizing this, the project will assist local people to develop other livelihood options. For example, selected households will learn how to grow and harvest water lilies and lotus, create local products from weaving, and raise bees for honey production. Synergies will also be sought: for example, lotus stalks can be used in weaving, with the resultant products in very high demand.

Overall, the hope is that the project will enable local people and rare species such as the sarus crane to co-exist harmoniously. Tram Chim can become a prime example of integrated wetland management with a landscape-scale view.

Strengthening integrated sustainable forest management and planning in Pu'er, China

Project title
Integrated forest ecosystem management planning and demonstration project in Greater Mekong Subregion (Pu'er project site)
[project ID: 2016P1-GMS-PE]

Supervisory agency
Forestry Bureau of Pu'er Prefecture, China

Executing agency
Wanzhangshan Forest Farm

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

Duration
January 2017–December 2021

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

The forest degradation and deforestation that occurred in China's Yunnan Province in the twentieth century has largely been addressed by government-financed reforestation programmes. The focus was on planting fast-growing and economically valuable species in monocultures, and not all ecosystem services have been restored because of the lack of a landscape approach. Now, there is a need to improve the ecological functioning of these forests while simultaneously increasing the diversity of products.

The aim of this project is to demonstrate that multifunctional forest ecosystems are both ecologically and economically viable. APFNet launched the project in 2017 in collaboration with Wanzhangshan Forest Farm, a state-owned forest farm in Pu'er, Yunnan Province. The project site lies in the upper reaches of the Mekong River; it is the biggest forest zone in southwest China and a major timber production area. The project will make a long-term plan and establish a demonstration model of integrated forest ecosystem management and planning at a landscape scale for the upstream regions of the Mekong River, thereby improving the quality of forest ecosystems and integrating ecological, economic and social functions in the Greater Mekong Subregion (GMS).

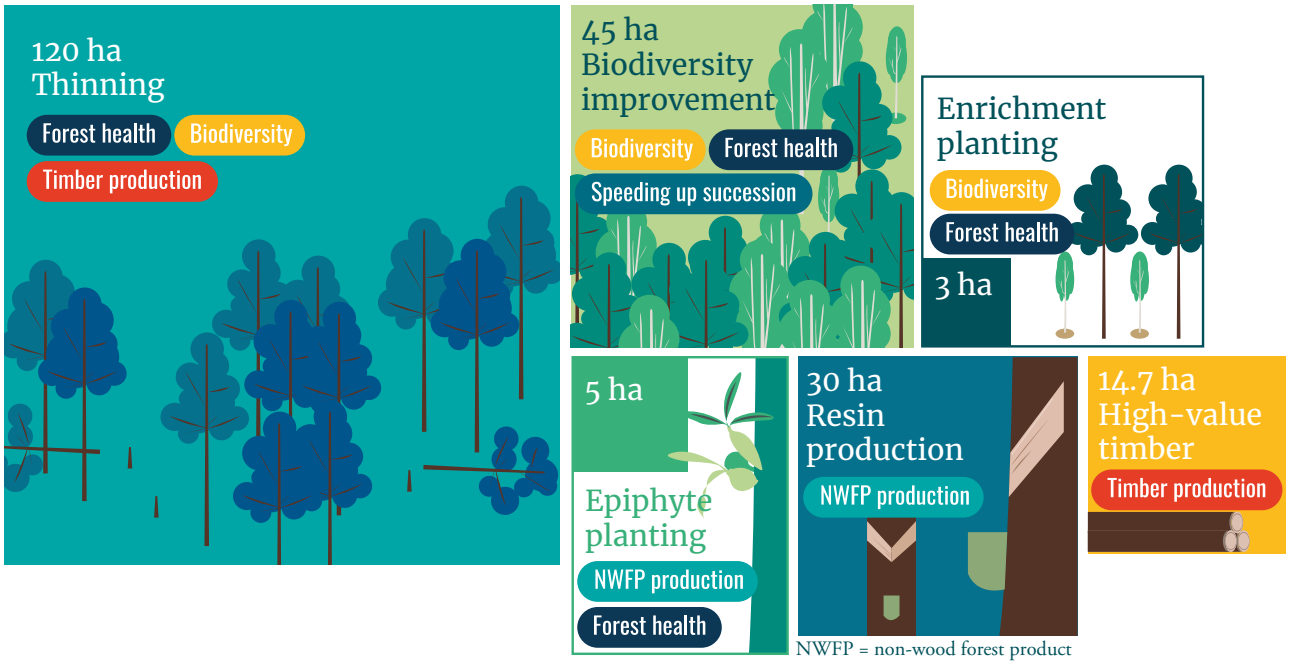
Planning for the next century

Most forest management plans in China and the GMS are relatively short-term, typically spanning 5–20 years. A forest, however, grows over a much longer timeframe, affecting entire landscapes, and it is crucial that long-term economic, social and environmental considerations are incorporated into its management. The project has taken an innovative approach, using the "Forest Simulation and Optimization System" (which has artificial intelligence at its core), in combination with cloud computing, big data and a geographic information system, to generate long-term management recommendations. Based on the recommendations, the project partners formulated a 90-year multifunctional SFM plan for Wanzhangshan Forest Farm, which will enable sustainable landscape-scale management into the next century.

Demonstrating integrated forest ecosystem management

What does it mean to manage a forest in an integrated manner? Forests are inherently subject to diverse demands, both from society (which might require, for example, timber, recreational opportunities, ecosystem services and other forest products) and from non-human beings for which forest is their habitat. The restored forests in the region often address only some of these demands.

Under the project, an area of 218 ha was treated using integrated silvicultural measures, such as thinning, enrichment planting, understorey planting, resin collection and large-diameter tree cultivation, to enable the forest to better meet multiple demands. This is also a demonstration site of a more flexible approach to forest management, allowing different



NWFP = non-wood forest product

Photos: Wanzhangshan Forest Farm

A young Pinus kesiya *forest, before (left) and after (right) thinning*

treatments based on the specific situation of a stand. Another objective is to conserve evergreen broadleaved plants such as *Fagaceae*, *Lauraceae*, *Magnoliaceae* and tea, thereby creating a mixed, stratified, uneven-aged stand structure while also serving other demands. As a state-owned farm, Wangzhanshan is not required to provide local livelihoods; nevertheless it is important to show how, at a landscape scale, people can combine forestry and alternative incomes. Epiphytes with medicinal uses have been planted on trees, creating further vertical stratification and offering another livelihood option. Over time, the forest will demonstrate that economic development and environmental improvement are compatible using an integrated forest ecosystem management approach.

Photos: Wanzhangshan Forest Farm

Dendrobe *species epiphytes were attached to standing trees to increase forest diversity*

Resin production

Collaborative landscape planning in Cambodia

Project title
Landscape approach to sustainable management of forests in Prek Thnot watersheds
[project ID: 2015P1-KHM]

Supervisory agency
Ministry of Agriculture, Forestry and Fisheries

Executing agency
Institute of Forest and Wildlife Research and Development

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

Duration
January 2015–December 2017, extended to June 2019

Location
Prek Thnot Watershed, Kampong Speu Province, Cambodia

Prek Thnot is an important watershed and one of the Mekong River's major tributaries in Cambodia. It covers an area of 666,764 ha in the provinces of Kampong Speu (78% of the watershed), Kandal and Phnom Penh. The watershed provides ecosystem goods and services and supports the livelihoods and production systems of many downstream communities. The upstream part of the watershed is mostly covered with forests that connect to the Cardamom Mountains, an important habitat for various endangered species of flora and fauna. The watershed is at a high risk of degradation, however, due to deforestation, agricultural encroachment and unsustainable agricultural and other practices. These activities have had negative environmental consequences, such as soil erosion, the depletion of soil nutrients, the sedimentation of reservoirs, a decrease in water quality and the flooding of low-lying downstream areas.

There is a crucial need, therefore, to conduct more landscape-scale forest management in Cambodia, particularly in upper watersheds, where the loss of forests can have highly negative impacts. Despite its importance, the Prek Thnot watershed has lacked a comprehensive management plan. This project addresses the need for a landscape approach to watershed management by developing a management plan designed to optimize benefits for humans and

nature; ensuring the adequate provision of ecosystem services based on scientific assessment, analysis and participatory land-use planning at the landscape scale; and improving community livelihoods by promoting agroforestry.

Helping people become stewards of the watershed

The concept of integrated watershed and landscape planning is relatively new to Cambodia, but it is a well-known approach in some other parts of Asia. The project conducted a series of training events and awareness-raising activities to help people understand the concept and enable them to participate in and benefit from it.

The project used a participatory approach to conduct consultations with stakeholders, which, among other things, helped develop criteria for land-use areas in the watershed; convey important aspects of watershed management; and increase understanding of the negative impacts that unsuitable land use has had on local communities. The outcomes of the consultations, combined with geographic information, were used to produce a land-allocation map and a draft watershed management plan.

To validate the management plan, the proposed land-allocation map was presented to stakeholders during further consultations in the two districts. In total, these consultations were attended by about 160 people from the Forestry Administration, district administrations, commune councils, district line offices, community forestry organizations, the private sector and non-governmental organizations. The consultations revealed certain conflicts between recommended land uses and the situation on the ground, and measures were negotiated to mitigate these.

Photos: Institute of Forest and Wildlife Development and Research

Local farmers received field-based agroforestry training

Ultimately, stakeholders finalized and adopted the integrated watershed management plan. The plan sets out land allocations for the watershed designed to meet the objectives of increasing economic development without impairing the environment and serving as a guide to decision-makers and resource managers in managing the watershed.

Farming techniques for soil conservation

Farming has long been identified as a major contributor to erosion and siltation in the Prek Thnot watershed. Land cultivation disturbs and exposes the soil to wind and rain, hastens topsoil erosion and results in soil-fertility losses. The project introduced agroforestry and measures for soil and water control and conservation to four farmers in the watershed and assisted them to adopt these. Under the agroforestry approach, the farmers planted fruit and timber trees interplanted with vegetables, using species such as *Dalbergia cochinchinensis*, *Dipterocarpus alatus*, *Hopea odorata*, soursop, jack fruit, mango, pineapple and moringa. The farmers were also involved in monitoring soil erosion and rainfall on their farms. Soil traps were installed along contour canals to prevent soils from washing away, and rain-collecting gauges were used to measure rainfall.

By adopting agroforestry techniques, the farmers have increased the availability of fruits and vegetables for consumption in their households and to sell in local markets. The soil and water control measures put in place on the farms have been used to demonstrate to other farmers and stakeholders at project workshops the benefits of on-farm soil and water conservation, both for those farms and for downstream water users.

Photos: Institute of Forest and Wildlife Development and Research

Agroforestry plots before and after the introduction of agroforestry

Photo: Pak Sngoun Pisey/APFNet

The agroforestry farm has provided me with a lot of benefits by increasing my income and I do not need to spend as much money on farming processes, for example fertilizer, because developing canals on farmland helps reduce soil erosion to the stream and retain natural soil fertility.

Mr Kim Chab,
owner of a farm
practising agroforestry

Forest ecosystem management and planning in Myanmar

Project title
Integrated forest ecosystem management planning and demonstration project in Greater Mekong Subregion (Myanmar) [project ID: 2018P4- MYR]

Supervisory agency
Forest Department

Executing agency
Forest Research Institute

Budget (USD) (total/APFNet grant)
1,412,477/1,120,807

Duration
October 2019–October 2024

Location
Paung Laung Reserved Forest, Pin Laung Township, Shan State and Forest Research Institute Compound, Yezin, Nay Pyi Taw, Myanmar

Myanmar's forest cover is among the highest in the GMS. The economy's forests are influenced by the tropical and subtropical monsoon mountainous climate, and they are home to many rare species of fauna and flora. They also provide valuable commercial wood and non-wood forest products, which support the livelihoods of many people. The forest resource is diminishing, however – for example, the annual rate of deforestation between 2010 and 2015 was 1.7%, the third-highest in the world. Forest genetic resources have also been eroded, and there have been widespread negative socio-economic and environmental impacts, such as land degradation, soil erosion, landslides and low water quality affecting entire landscapes. To comprehensively protect forests and help people, therefore, conservation must be combined with integrated watershed management planning and the provision of alternative livelihood options.

APFNet, in collaboration with Myanmar's Forest Research Institute (FRI), began implementing this project in 2019. The aim is to conserve forest genetic resources – both *ex situ* through the establishment of an arboretum and *in situ* by rehabilitating a forest ecosystem. The project will apply integrated watershed forest management in the Palaung watershed, provide livelihood alternatives and raise environmental awareness among the public.

Photo: Pak Sngoun Pisey/APFNet

Shifting cultivation and deforestation on stream banks has led to soil erosion and forest degradation in the watershed

Forest genetic conservation

The project will establish an arboretum inside the grounds of the FRI in Yezin, Nay Pyi Taw, in central Myanmar. It will be Myanmar's first arboretum, and it will be established by upgrading an existing medicinal garden and a secondary natural forest. The arboretum will help conserve forest biodiversity through the collection and improvement of tree species and forest genetic resources in general. Moreover, the arboretum will become a centre for education on forestry and raising environmental awareness, and it will serve as a demonstration site for several of Myanmar's forest ecosystems. It will have two zones – a nature conservation zone, comprising secondary natural forest, and a thematic garden.

The improved management of the 9-ha conservation zone will enhance natural forest succession towards a climax community by promoting natural regeneration and carrying out enrichment planting using key native species. The seedlings will be sourced from an upgraded nursery in the FRI compound.

The thematic garden, which covers 16 ha, is subdivided into several zones: an aquatic garden; a medicinal garden and bamboo zone; a precious tree zone; an economic species zone; a rare and endangered tree zone; and an ornamental tree zone.

The arboretum will be modernized, with plans including the construction of a road system, an irrigation system and a tree identification system (labelling and barcoding), and the establishment of a forest-fire control line.

The project will demonstrate best management practices for conserving plant species and ecosystems and raise environmental awareness among the public.

Integrated watershed management planning

Leinli village is one of ten villages in the Paunglaung watershed suffering from land degradation.

"Local people here normally clear the forest and grow their crops on the sloping area along the stream, which causes serious problems, such as soil erosion, landslides and low water quality," says project coordinator Dr Ei Ei Swe Hlaing. "Hence, we

need to have consultations with villagers to achieve a consensus on how to protect the functions of the watershed."

The project will lead the formulation of an integrated watershed management plan aimed at addressing these and other problems, including by improving farm productivity through agroforestry.

The process to develop the plan will involve a participatory approach in which villagers and stakeholders discuss possible strategies and solutions for conserving environmental values and promoting sustainable watershed management. The plan will serve as a sustainable management showcase for other villages in the watershed.

The project will create alternative livelihood opportunities for local villagers, particularly those practising shifting cultivation on stream banks and in adjacent areas.

Thirty-six hectares of intercropping systems will be demonstrated using locally preferred timber tree species, fruit trees and bamboo. These trees will help control and prevent soil erosion and degradation on river banks, and villagers can obtain early benefits from the direct consumption of the fruit and their sale in the market. Watershed management planning and rehabilitation combined with activities to boost livelihoods will reduce the negative impacts of soil erosion and degradation and contribute to SFM in the watershed.

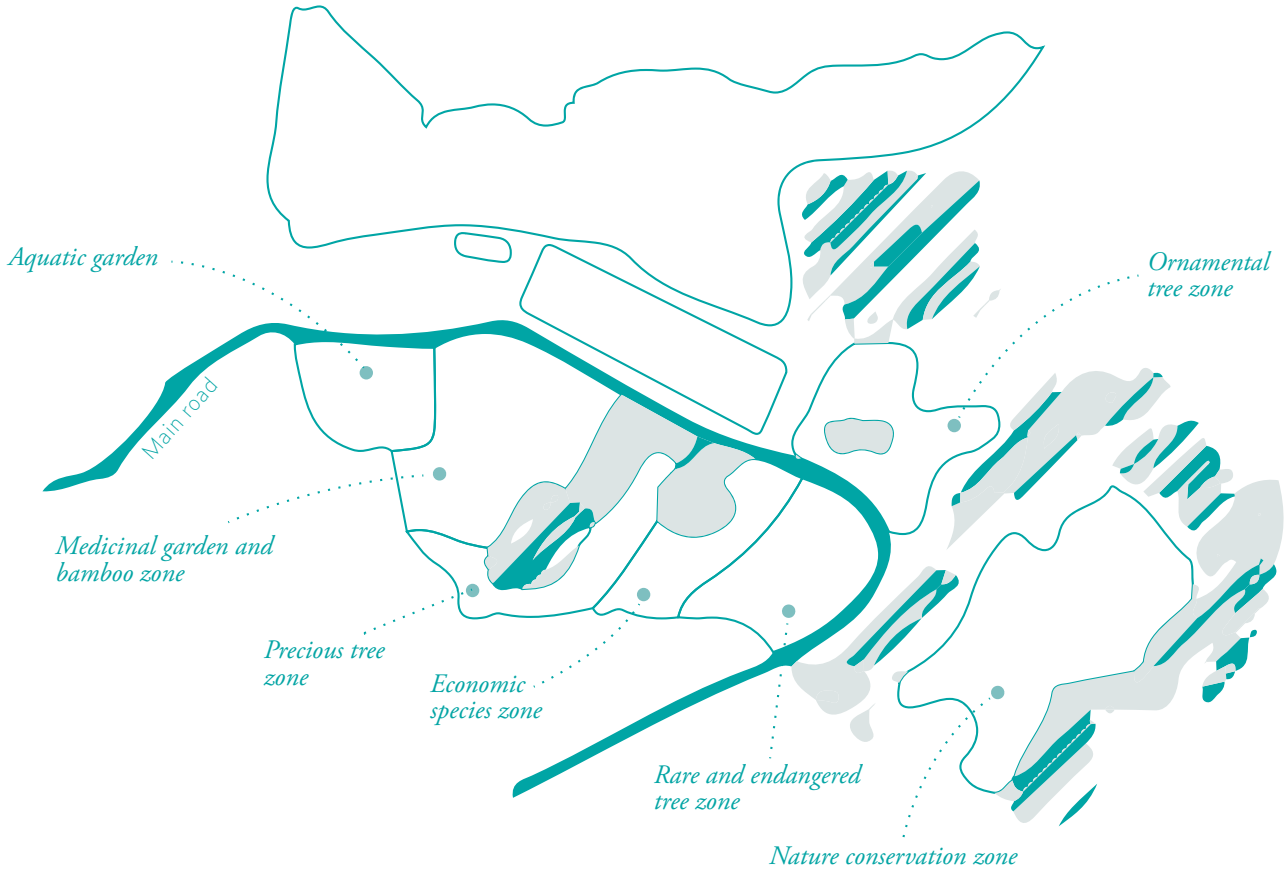


Photo: Watershed Management Technology Center

Engaging local people in forest restoration

Local people may contribute to forest degradation and deforestation through woodfuel collection, logging and agriculture, but they are also highly vulnerable to the impacts of forest loss. Contrary to common understanding, forest restoration does not necessarily only benefit forests. APFNet projects, including those described below, enable local people to benefit from forest restoration efforts and thus keep them engaged and invested in projects over the long term.

In some cases, forest restoration can be encouraged by reducing degradation pressures. In Myanmar, one of the greatest threats to mangrove forests is illegal deforestation, often caused by a lack of livelihood options. Providing alternative

incomes, such as through the raising of mud crabs, and combining this with restoration in the vicinity of the ponds, is a potential way to achieve both restoration and livelihood objectives.

In Indonesia, a similar benefit was created through the adoption of agroforestry, which produces both wood and non-wood forest products that will be available for harvesting in the short and long term.

In Papua New Guinea (PNG), tree planting has been coupled with free training and seedlings for an agricultural cash crop, creating a strong incentive for involvement.

In summary, understanding that well-managed forests can deliver local socio-economic benefits, and putting people and their needs at the centre of restoration efforts, are key for effectively engaging people in forest restoration in APFNet projects.

Water, mud and trees – combining mangrove restoration and sustainable aquaculture

Project title
Integrated planning and practices for mangrove management associated with agriculture and aquaculture in Myanmar
[project ID: 2018P1-MYR]

Supervisory agency
Forest Department of Myanmar and Department of Agriculture and Water Resources, Australia

Executing agency
University of Queensland, Australia

Budget (USD) (total/APFNet grant)
564,570/327,170

Duration
January 2018–December 2020

Location
Pyindaye Mangrove Forest Reserve, Myanmar

The sun sets on a traditional fishing boat in Haung Gyi Tan village at the mouth of the Ayeyarwady Delta, and a man on a motorbike drives by. This quiet village, in a region still largely isolated from Myanmar's network of major roads, is where APFNet, the University of Queensland and the Watershed Division of the Forest Department of Myanmar started a three-year project in 2017 aimed at improving local livelihoods and restoring the area's valuable mangrove forests.

Photo: Anna Finke/APFNet

Mangroves are crucial but under threat

Mangroves perform important roles in the Ayeyarwady Delta. Mangrove trees have evolved complex salt-filtration and root systems to cope with saltwater and the low oxygen conditions of waterlogged soils. They are uniquely adapted to tidal areas, such as river deltas and marine shorelines, and they form crucial natural barriers against floods and storm surges, such as that caused by Cyclone Nargis, which hit the region in 2008 and caused 138,000 deaths. Mangroves not only provide physical protection, they also produce soil and thereby raise the height of the shore. A 2-metre-wide strip of mangroves along a shore can reduce wave height by 90%, and research has shown that mangrove barriers can reduce the economic impacts of intense storms, enabling the more rapid recovery of communities.

Mangroves are not just protectors against storms, they also provide livelihoods. In an area without electricity or gas, mangroves help people meet essential energy needs, and they are widely used in the delta as woodfuel for smoking fish and cooking food. With the population continuing to increase, demand for woodfuel is rising. Desperation driven by market demand and poverty drives people to cut mangroves anywhere they can, even though, in the long term, this reduces resilience against storms. Moreover, historical government incentives in the delta previously accelerated the conversion of mangroves to rice paddies, exacerbated by a lack of tenure protection for community-owned mangrove forests. Shrimp and fish ponds used in aquaculture often exclude mangroves.

Mangroves or development – the search for a third path

Under the project, Professor Catherine Lovelock, one of the world's leading researchers on mangroves and the project director, supported by project coordinator Dr Sang Phan, developed a mangrove-friendly aquaculture model by combining mangrove protection and the production of mud crabs. In this model, small mud crabs are fattened in ponds in the mangroves and sold for local and international consumption.

Crucially, the establishment of such ponds provides a viable alternative for those driven to cut wood illegally in the delta. A team of two people engaged in this trade earns as little as USD 40 per month, while mud-crab fattening promises far higher and more sustainable profits. The approach, therefore, reduces pressure on existing mangrove forests, thereby enabling natural regeneration.

Burn it, plant it, weed it?

Mangrove restoration is not easy: variations in elevation, salinity and tree species mean there is no

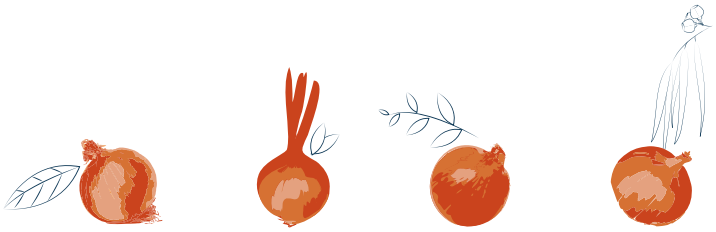
Photo: Anna Finke/APFNet

This collected mangrove wood is worth USD 40

one-size-fits-all solution. To find suitable restoration techniques for the delta, four restoration trials (with three replicates each) were established to test various combinations of species, weed control and site preparation. Attention to detail is essential.

A common practice among local people is to prepare sites by burning. The project's restoration trials, however, show that this may be unnecessary and potentially environmentally harmful. Findings such as this will provide the Myanmar Forest Department and local people engaged in restoration with better tools for effective restoration.

To date, 66 ha of mangroves have received enrichment planting under the project, and a nursery has been established for other tree species (*Casuarina* and *Melaleuca*) for planting as a woodfuel resource. The project will continue striving to engage local people even more effectively in restoration through a range of methods.



Using onions and potatoes to encourage trees

Project title
Community tree planting project
[project ID: 2017P3-PNG]

Supervisory agency
Papua New Guinea Forest Authority

Executing agency
Voice of Yongos

Implementing agency
Papua New Guinea Forest Authority
Simbu Farmers Marketing Ltd

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

Duration
2017-2019

Location
Yongomugl Subdistrict, Simbu Province, Papua New Guinea

The highlands of PNG are a veritable Garden of Eden. Lush grasslands are dotted with small houses and large trees and interspersed with woodlands. Beyond the grasslands, primary rainforests cover the hills and valleys, hinting at a vast jungle stretching to far horizons.

The people of the PNG highlands have been practising agriculture for more than 7,000 years; they were likely one the world's first agricultural peoples. Despite this long history, however, agriculture in the highlands is under pressure. As PNG has become more integrated into the globalized world, the population – and demand for food – has escalated, leading to a steady reduction in tree cover as agriculture has expanded and changed. Given the steepness of the highlands, this loss of tree cover has led to a dramatic increase in landslides and erosion and a reduction in the area of land suitable for cultivation.

In the Yongomugl Subdistrict, Jimbu Province, in the middle of the eastern highlands, a small non-governmental organization called Voice of Yongos has been working for years to reverse the degradation trend. In 2017, Voice of Yongos teamed up with APFNet to expand its work and address one of the biggest stumbling blocks to effective action: the unwillingness of farmers to plant trees because of the lack of immediate income from the practice.

There are other problems, too. For example, many areas in need of restoration are far from the main road, and farmers lack the time to travel to the closest nursery – which is more than 1.5 hours away – to obtain seedlings. The average rotation length for forest plantations in the highlands and in PNG more generally is 15–30 years for most trees, which is far longer than in many other tropical economies (5–10 years) due to a combination of ecological constraints, a lack of market demand and social customs. On the upside, longer rotations mean larger trees and less erosion caused by constant cutting, with benefits for the landscape. On the downside, the longer timeframe means that earning income from trees is more a legacy business – in which the next generation will reap the benefits – than an investment with rapid returns, and other means are needed to earn money in the short to medium term.

Voice of Yongos developed this project to tackle such obstacles to forest landscape restoration. To address the issue of a lack of accessibility to seedlings, the project built four nurseries in the area and purchased a jeep for delivering seedlings to the doorsteps of farmers. For those farmers living in the most remote areas, "mini-nurseries" – that is, nurseries with a capacity to raise 10,000 seedlings per year (compared with 40,000 seedlings in the larger nurseries) – were established on mountain tops for ease of distribution to downslope farmers.

It was clear from the start that ways had to be found for farmers to obtain early benefits from planting trees. As the project kicked off, new crops like the English potato and the bulb onion were establishing new, lucrative markets in PNG, but these were crops that many farmers in the area did not know how to grow. A strategy was created whereby farmers willing to plant trees on part of their land would be eligible for training on (and starter seedlings for) these agricultural crops, thus providing an immediate incentive to participate in reforestation efforts. Voice of Yongos teamed up with Simbu Farmers Market Limited (SFML) to provide training on the cultivation of bulb onions and English potatoes to farmers who participated in the tree-planting training workshop and subsequent planting. This proved a huge success, with each workshop attracting 40–50 farmers. Farmers can earn about USD 450 of immediate additional income from the new agricultural crops, which take only a few months to grow. They sell their products to SFML and other buyers in the area.

Photo: Anna Finke/APFNet

The highlands of PNG are a tropical paradise

Many eucalypt and white and patula pine trees now dot the valley on both sides.

"Every small tree you see around here has been supplied by one of our nurseries – we are really changing the landscape here," says Joe Kelly Bik, the director of Voice of Yongos.

The trees are helping stabilize the soils and restore degraded areas.

"If you think about it, each tree is a bioengineering project," says a teacher at a local high school, where, through the project, students are being taught the importance of trees for reducing erosion at the local scale and climate change at the global scale. Trees, the teacher tells his students, are the cheapest and most ecologically sound tool for restoring the landscape.

PNG is only beginning its efforts to restore its degraded lands. The national government and the PNG Forest Authority, which is overseeing the project, have committed to increasing reforestation in coming years. The APFNet project, spearheaded by Voice of Yongos, is a model for how communities can be encouraged to participate in and benefit from reforestation using both short- and long-term incentives.

The mini-nurseries created by the project are located high up on mountainsides

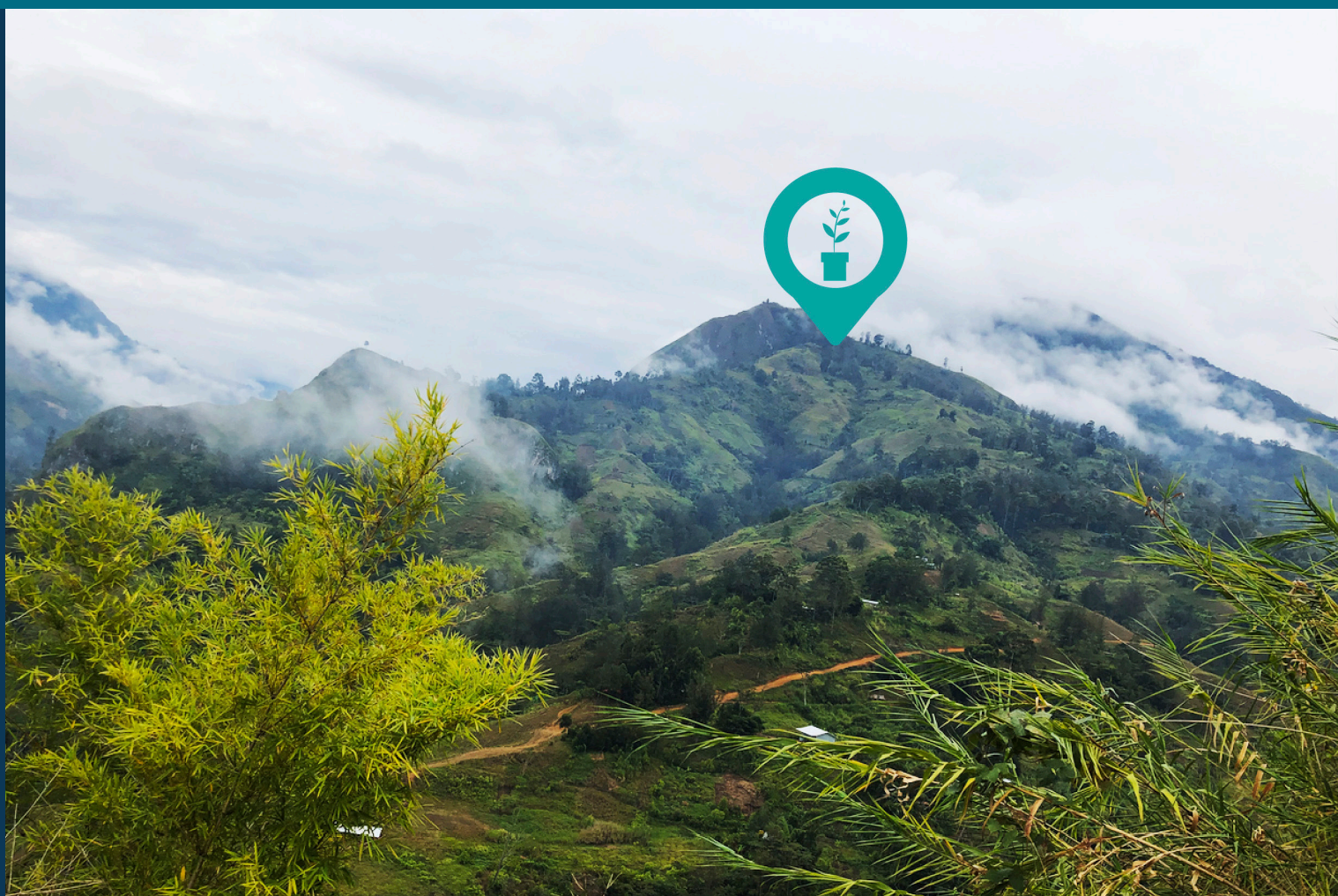


Photo: Anna Finke/APFNet

Supporting better watershed management in Indonesia

Project title
Development of participatory management of a microcatchment at the Bengawan Solo upper watershed [project ID: 2017P6-INA]

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

Executing agency
Watershed Management Technology Center

Budget (USD) (total/APFNet grant)
144,856/97,928

Duration
August 2017–July 2019

Location
Bengawan Solo Upper Watershed, Central Java, Indonesia

Situated in the "Ring of Fire", Indonesia is one of the world's most geologically active regions. More than 2,000 serious disasters are reported each year, 90 percent of which are weather-related – mostly the result of flooding rains, cyclones, fires and mudslides. Poor watershed management means that many areas are prone to soil erosion and sedimentation, causing upstream flooding and negatively influencing farming, especially in the monsoon season.

Sedimentation is a major concern in the multipurpose reservoir in the Naruan microcatchment in the Upper Bengawan Solo River Basin, Java, Indonesia.

"The issue has become a national one," says project coordinator Dr Agung Budi Supangat. "The reservoir has a strategic function in flood control in the Upper Solo watershed as a supplier of agricultural water in many districts downstream and as a source of electricity through hydropower."

The area's growing population is putting increasing strain on the watershed, with overuse exacerbating land degradation. Thus, the watershed is vulnerable to landslides, water pollution and declining livelihoods.

Against this background, APFNet, in collaboration with the Watershed Management Technology Center (WMTC) in Indonesia's Ministry of Environment

and Forestry, launched a project in 2017 to support the participatory management of the Naruan microcatchment while adhering to the principles of soil and water conservation and improving local livelihoods.

Improving watershed management

Gully erosion is common on the boundaries of farmlands in the microcatchment, channelling water across unprotected land and eroding soils along drainage lines; ultimately, this reduces agricultural productivity and causes environmental damage.

The project engaged people to put in place gully-erosion control measures such as dams and gully plugs. These not only prevent gully enlargement and control sedimentation, they also serve to demonstrate to the community a methodology for dealing with gully erosion.

"The gully reclamation techniques with bamboo can be disseminated to other locations because they are easy to imitate, and the material is easy to obtain at a low cost," says Dr Nining Wahyuningrum, a soil and water conservation expert at WMTC.

This ultimately makes an enormous difference for local farmers, who are the first to suffer from erosion, and it helps keeps them engaged in watershed restoration and conservation measures.

To further provide benefits and show sustainable alternatives to traditional farming on steep slopes, various agroforestry models have been established on 30 ha of demonstration plots using trees such as albizia and limpaga, fruit crops such as avocado, durian and parkia, and some seasonal crops.

"I am happy to use agroforestry on my land because my family now has more land and less labour," says Mr Sadigo, a farmer in Bubakan village, one of three demonstration villages in the project. "Agroforestry allows me to reduce the labour input and, in the future, to gain more income from the added value of wood and fruit crops. The project provided me with seedlings and technical support; more importantly, through the project I also realized that this model is more beneficial to the environment of our homeland."

Photo: Huang Kebiao/APFNet

Bamboo gully control at the project site

Photo: Huang Kebiao/APFNet

Agroforestry site

Enhancing community management of the microcatchment

Aiming to increase stakeholder willingness to improve land management in the microcatchment, the project gathered farmers, community leaders, officials from the provincial and central governments, and representatives of non-governmental organizations to discuss and formulate a participatory management plan for the Naruan microcatchment based on community participation and stakeholder collaboration.

"We have invested a lot of effort in field group discussions to find out about field partners' expectations of the project, build common understanding of the importance of integrated watershed management, and confirm the role of parties in the coordination," says Dr Dewi Retna Indrawati, a key project team member at WMTC with expertise in community development. The project helped local communities realize the importance of soil and water conservation and how to contribute to better catchment management and to soil and water conservation.

Field-group discussions involved tenants, community leaders and project managers

Photo: Watershed Management Technology Center

Photo: Chen Yijue/APFNet

Strengthening capacity and building synergies

APFNet is uniquely placed to facilitate the development of a common understanding and commitment on forests and sustainable development in the Asia-Pacific and Greater Central Asia regions and thereby to influence other global forest-related processes. It does this through, for example, policy dialogues, capacity-building programmes and participation in international conferences.

In 2019, APFNet brought forest officials together to exchange experiences on forest restoration planning, combating desertification, wildlife conservation and human resource development. The organization's capacity-building programmes continued to improve skills and knowledge at the grassroots level among those stakeholders responsible for implementing policies and actions on the ground. APFNet also assisted young foresters and students in their studies in forestry and other related fields with the aim of developing a network of talented young professionals committed to ensuring that forests and forestry benefit future generations and human well-being.

Fostering forest cooperation towards a common goal

Despite strong commitments and action to conserve and sustainably manage forests in the Asia-Pacific region, deforestation and forest degradation continue. There is a need, therefore, to strengthen regional collaboration and cooperation among economies, international organizations and institutions.

The Symposium on Forest Cooperation in the Asia-Pacific Region was convened on 22–24 July 2019 in Chifeng, Inner Mongolia Autonomous Region of China, as a joint undertaking by APFNet, the Regional Office for Asia and the Pacific of the Food and Agriculture Organization of the United Nations, the International Tropical Timber Organization and China's National Forestry and Grassland Administration. The symposium brought together 180 participants to discuss three aspects where international cooperation can provide significant benefits: forestry planning, project implementation, and capacity building. There was consensus that increased regional cooperation is needed:

- for information and knowledge sharing, and the demonstration of best practices;
- to create strong partnerships between sectors to ensure a well-functioning education–research–innovation "knowledge triangle";
- for a dynamic transformation to fill gaps in forest-related research and development; and
- to strengthen connections between people and forests and link SFM and forest restoration practices with livelihood development in local communities.

Participants agreed on the need to further enhance the contributions of forests to social development, livelihoods and poverty eradication. Moreover, applying a "people-oriented" principle to the forest management process will be vital, and all parties should continue to take advantage of multilateral and bilateral channels to increase forest cooperation, exchange best practices on SFM, and work together to promote sustainable development in the region and beyond.

Photo: APFNet

A panel of speakers at the Symposium on Forest Cooperation in the Asia-Pacific Region, which was held in Chifeng in July 2019

Call for action to upscale forest landscape restoration

With the immense opportunity offered by the upcoming United Nations Decade on Ecosystem Restoration, increased awareness of the importance of forest landscape restoration (FLR), accumulated knowledge on FLR practice, and emerging funding streams, economies in the Asia-Pacific region should scale up their forest restoration efforts as a means to significantly enhance human well-being. They can do this by encouraging the private sector to adopt FLR principles and practices in their reforestation and by mainstreaming FLR into ongoing national development and environmental policy processes.

This was the key message to emerge from Stream 1, "Restoring our forests and landscapes", which APFNet organized in collaboration with the Asian Forest Cooperation Organization and the Pacific Community during Asia-Pacific Forestry Week on 17–21 June 2019 in Incheon, Republic of Korea.

Speakers at the stream's opening plenary agreed there is an urgent need in the region to massively upscale FLR as a means for addressing the loss of ecosystem functions and as one of the most cost-effective ways of reducing greenhouse-gas emissions. The private sector is an underexploited – and often underappreciated – resource in the financing and implementation of large-scale FLR. Creating an enabling environment for a profitable forest-based private sector will be crucial for the widespread adoption of FLR, including by providing fiscal and other incentives; increasing transparency in policies and laws affecting land use; developing and disseminating FLR tools and knowledge; ensuring a level playing field among land uses; and resolving conflicts over land.

As part of the stream, APFNet co-organized four events to promote best practices and advance understanding of FLR in the Asia-Pacific region.

This panel of experts, moderated by Patrick Durst (far right), was part of the Stream 1 opening plenary at Asia-Pacific Forestry Week, Incheon

Photo: Luo Xi/APFNet

Building a supportive mechanism for young researchers

Guidelines for two key actions under the Sino-ASEAN Network of Forestry Research Institutes (SANFRI) – support for attending scientific conferences, and the provision of small research grants for young forest researchers – were discussed and adopted at SANFRI's second steering committee meeting held in October 2019. The two programmes will be launched in 2020.

SANFRI was created in 2018 with the aim of advancing forest research by facilitating collaboration among forest research institutes in ASEAN economies and China. The steering committee meeting and the first Early Career Academics Forum were jointly convened by APFNet and the Yunnan Academy of Forestry and Grassland in Pu'er City, Yunnan Province, China. The steering committee also reviewed the progress made in 2019 and adopted a work plan for 2020.

Held back-to-back with the SANFRI steering committee meeting, the first Early Career Academics Forum focused on strengthening scientific and technological exchanges on tropical forest restoration. Twenty-two young scholars from eight APFNet member economies attended the forum to share research ideas and outcomes covering forest cultivation, forest management, social forestry and forestry policy.

The forum was a first step in building a cohort of young forestry scholars with excellent scientific research ability, who, it is hoped, will make substantial contributions in coming years to forest restoration and SFM in the region.

Photo: Fang Xiansheng/Yunnan Academy of Forestry

Khamphoumi Bounpasakxay from the National Agriculture and Forestry Research Institute of Lao PDR speaks at the Early Career Academics Forum

Working together to conserve transboundary wildlife in the Greater Mekong Subregion

Responding to the vision of the APFNet Transboundary Wildlife Conservation Initiative (known as "@Wild") to promote nature-reserve management, livelihood improvement and wildlife protection in transboundary areas, APFNet held a study tour in the Choam Ksan Forest Landscape, Cambodia, on 28–30 May 2019 to explore the needs of transboundary wildlife protection in the area and identify opportunities for collaboration.

Twelve officers and managers involved in wildlife conservation in the economies of the GMS took part in the study tour to share experiences and exchange insights on wildlife protection in transboundary areas. Based on the inputs of participants and the inspiration generated from the field visit, APFNet will support a research project in the Choam Ksan Forest Landscape to conduct a comprehensive baseline review of the distribution of key wild fauna species, the state of the landscape's forests, and the socio-economic status of local communities.

Sharing best practices on forest restoration planning

APFNet organized the 2019 Forestry Planning Network Workshop on 24–25 July in Chifeng, Inner Mongolia Autonomous Region of China, as part of its contribution to international commitments on reversing forest degradation. Officers and managers responsible for strategic planning in the forest

Forest officers and managers from around the region participated in a field visit to the Choam Ksan Forest Landscape, Cambodia

Photo: Chen Yijue/APFNet

authorities of participating economies shared their experiences on translating economy-level restoration plans into action on the ground.

After meeting indoors, participants visited a desertification control and treatment site in Wengniute Banner[1] near Chifeng. This provided participants with an understanding of one of China's economy-level afforestation programmes, "Desertification Control Programme for Areas around Beijing and Tianjin". After the workshop, APFNet summarized some of the experiences gained in the programme and will publish success stories and lessons learned on forest restoration planning at the economy level.

Photo: APFNet

The 2019 Forestry Planning Network Workshop in Chifeng

Holding back the desert in Greater Central Asia

To further translate the Astana Declaration[2] into action and in response to the consensus reached at the Second Meeting of Ministers Responsible for Forestry in Greater Central Asia, APFNet and the Northwest Agriculture and Forestry University jointly convened the International Workshop on Vegetation Restoration in Greater Central Asia on 27–29 August 2019 in Yangling, Shaanxi Province, China. The workshop, which was held under the auspices of the Greater Central Asia Forestry Cooperation Mechanism, gathered about 40 officials and researchers from forestry authorities, research institutes and universities in China, Kazakhstan, Kyrgyzstan, Mongolia, Tajikistan, Turkmenistan and Uzbekistan to share experiences in forest and vegetation restoration in their respective economies.

Overgrazing and mining are still major causes of severe forest and grassland degradation in Greater Central Asia. Moreover, the subregion's generally cold, dry environment limits the pace of vegetation restoration. Nevertheless, after decades of effort to combat desertification and restore landscapes, encouraging signs can be seen. The workshop provided an opportunity for economies in the subregion to discuss not only vegetation restoration policies but also practical restoration models and techniques.

[1] A banner is a county-level administrative division in the Inner Mongolia Autonomous Region of China.

[2] The Astana Declaration was adopted at the First Meeting of Ministers Responsible for Forestry in Greater Central Asia, held on 30–31 May 2016.

Study tour for trainers on community forestry

Responding to the needs of Trainers-in-Forestry Network members and in collaboration with the Vietnamese Academy of Forest Sciences, APFNet held a study tour for network members on community forestry in Hanoi, Viet Nam, on 7–13 January 2019. The Trainers-in-Forestry Network was initiated by APFNet in 2014 with the aim of strengthening the effectiveness and efficiency of in-service forestry training efforts in the Asia-Pacific region.

The three-day field trip to several villages and provinces provided the 11 participants from around the region with opportunities to observe and better understand Viet Nam's approach to community forestry. An indoor session examined the legal framework and institutional arrangements, and participants also shared the in-service training policies and arrangements of their own economies.

The following key findings emerged:

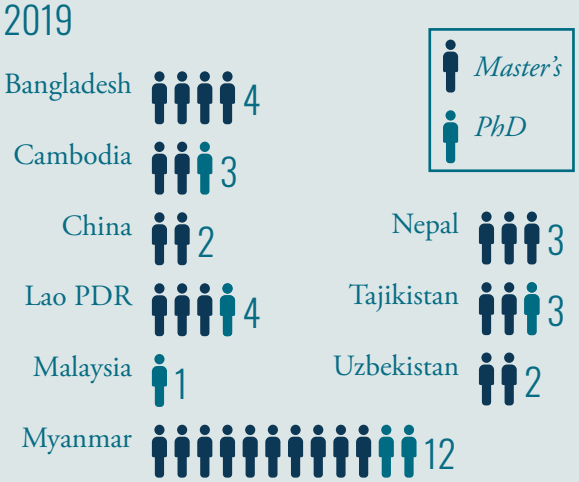
- Community forestry development faces common challenges in many economies in the region, such as limited access to the forest resource, insufficient technical support and relevant training, and a lack of information on the production and marketing of non-wood forest products.
- The poor quality of forests allocated to communities has limited the impacts of community forestry on improving livelihoods, with households often obtaining few direct benefits from forests.
- In some cases, a focus on timber production has limited the potential of community forestry to make a major contribution to community development, and non-wood forest products have played an important role in such development.
- More efforts are needed to empower local communities in managing and protecting their natural resources, such as through the training of staff working in community extension and for local people.

Taking big strides in the APFNet Scholarship Program

The APFNet Scholarship Program (ASP) continues to provide forestry practitioners and researchers with support and opportunities to pursue higher academic qualifications in SFM and the rehabilitation of degraded lands. A total of 34 students from eight economies were awarded APFNet scholarships in 2019. Of these, 28 students are taking their master's degrees and six are undertaking doctoral programmes.

The ASP expanded significantly in 2019 with the launch of a collaborative arrangement with Chulalongkorn University in Bangkok, Thailand. The university and APFNet agreed to cooperate in the fields of forestry and ecological conservation and to contribute jointly to developing academic talent in the forest sector; the first two ASP students attended the university in 2019. The highly rated Chulalongkorn University is the oldest institute of higher education in Thailand.

APFNet Scholarship Program awardees, 2019



These ASP students graduated from Beijing Forestry University in 2019

Photo: Beijing Forestry University

Field study to Guangxi, China

APFNet scholarship awardees from three host universities took part in a study visit in Piangxiang, Guangxi Province, China, on 18–24 November 2019 to learn about sustainable forest practices in southern China. The visit also provided an opportunity for the students to exchange ideas and experiences on forest management strategies in their respective economies.

Launch of the APFNet Alumni Network

APFNet launched the APFNet Alumni Network in 2019 with the aim of strengthening ties and communication among ASP alumni and current students. The Alumni Network was introduced at the first Asia-Pacific Forestry Youth Forum, which was held on 8–11 December 2019 at Beijing Forestry University and attended by APFNet alumni and students. The APFNet Alumni Network has four strategies: 1) building linkages among alumni; 2) a culture of engagement; 3) information sharing; and 4) awards and recognition.

Photo: Ricmar P. Magarin

Siti Fatimah Binti Ramli, APFNet Alumni cohort 2016, Malaysia

> *I would say the APFNet Scholarship Program helped me in my personal development, where I get new friends from various economies, wider networking and increase my self-confidence through various activities.*

Training on major themes

The APFNet–Kunming Training Center organized two thematic training workshops in 2019: Degraded Forest Rehabilitation and Management, and Forestry and Rural Livelihood Development. A total of 30 participants from 15 member economies in the Asia-Pacific region were involved in the two workshops.

Over two weeks of lectures, participant presentations, group work, discussions and a field trip, the workshops offered opportunities for participants to learn from experiences in the region and from their peers, gain a deeper understanding of concepts, policies and technical aspects, and improve their skills in developing project concept notes.

Number of forestry officials receiving thematic training, 2019

Bangladesh	2	Myanmar	2
Cambodia	2	Nepal	2
China	1	Philippines	1
Fiji	2	Papua New Guinea	2
Indonesia	3	Sri Lanka	2
Lao PDR	2	Thailand	2
Malaysia	3	Viet Nam	2
Mongolia	2		

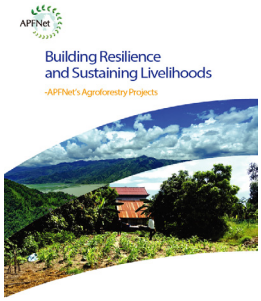
APFNet convened its first thematic training workshop in 2009. Overall, 355 forestry officials have benefited from a total of 23 workshops to date.

Publications

Fragmentation of forest governance in the Asia-Pacific region

This study traces the emergence of theories of governance fragmentation, which have run in parallel with major processes of sociopolitical restructuring since the 1970s. Such restructuring has often been in response to economic movements emanating from dominant economies and the institutions formed after the Second World War to promote the global coordination of finance, trade, economic development and, ultimately, broad social and environmental interests. The theories of fragmentation relate to forest governance fragmentation as they pertain to the allocation of duties and powers across spatial delineations, sectoral jurisdictions, political and administrative scales, governance functions and systems, higher-level norms, and institutions and regimes. Based on a survey of forestry experts and researchers in five Asian economies (China, Indonesia, Malaysia, Nepal and Viet Nam), this work attempts to better define the issues of forest governance fragmentation as they relate to real-world outcomes and concerns.

Building resilience and sustaining livelihoods: APFNet's agroforestry projects



Agroforestry has been applied in ten APFNet projects since 2011 as an important tool for improving people's livelihoods and the environment in the Asia-Pacific region. This report examines three aspects of APFNet agroforestry projects: their contributions to local livelihoods; improvement in ecological functions; and research.

In the socio-economic dimension, four projects have focused on the use of agroforestry to provide solutions for livelihood improvement and enterprise development. Among them are projects that have empowered local women, intercropped woody crops in traditional landscapes, and addressed poverty by improving traditional homegarden systems.

Agroforestry has also been used in projects to fight desertification, prevent erosion in hilly areas and watersheds and, through multistrata agroforestry, increase the ecological functioning of forests while producing important medicinal herbs.

Two of the projects have been research-focused. One, in Chinese Taipei, tested a new system of land classification for agroforestry based on zoning and slope properties. The other, in Cambodia, investigated the soil and water conservation functions of several agroforestry models.

Institutional development

Updates on the Board and Council

The fifth meetings of the APFNet Council and the APFNet Board of Directors were held on 18–23 March 2019 in Ulaanbaatar, Mongolia, hosted by APFNet, Mongolia's Ministry of Environment and Tourism, and the National University of Mongolia. The APFNet Council is APFNet's consultation body and the APFNet Board of Directors is its decision-making body. Both were established in 2014 and hold annual meetings to review and approve APFNet annual work reports and plan, discuss and decide on major issues related to APFNet. The decisions taken at the fifth meetings are shown below.

Decisions of the Fifth Meeting of the APFNet Board of Directors

1. The Board approved the proposed APFNet work plan and budget for 2019, also the APFNet ten-year review plan.
2. In 2020, two seats of Board Directors will be open to the member economies. Besides, the Board's efficiency and effectiveness would be significantly enhanced if it had representation from women and younger forest practitioners.
3. The Board noted that under Rule 37 of the Rules of Procedure for the Board of Directors, its Rules of Procedure must be reviewed at least once every five years and reaffirmed or amended as required during that review. The Board requested the Secretariat to present a succinct issues paper to the sixth meeting of the Board on possible revisions to the Rules of Procedure, taking into account any relevant findings of the ten-year review and previous discussions on how to better engage the Board and the Council in the work of APFNet.

Decisions of the Fifth Meeting of the APFNet Council

1. The Council noted the proposal to review the function of the Council and the Board under their Rules of Procedures based on the APFNet ten-year review results.
2. The Council decided with appreciation to accept the offer from the Philippines to host the sixth Council meeting in March 2020.
3. The Council noted the decision of the Board of Directors to invite one representative from the Council on the Advisory Group for the APFNet ten-year review.
4. The Council discussed the membership application from Ecuador, it was decided that members should discuss the membership application by Ecuador with appropriate authorities in their home economy and convey the position of their economy.

Monitoring and evaluation

Monitoring and evaluation in APFNet was further strengthened in 2019 through specific activities and a comprehensive organization-wide review.

As a follow-up to decisions made at the Fifth Meeting of the APFNet Board of Directors, a ten-year review of the overall performance and impact of APFNet was initiated in March 2019. In line with the approved review framework and workplan, an independent three-person team visited six member economies (China, Cambodia, Mongolia, Myanmar, Nepal and Thailand) to view the initial impacts of key projects in those economies and to interview key partners and stakeholders. The review report, which will be finalized in March 2020, will provide a reference for the development of the APFNet Strategic Plan for 2021–2025.

APFNet further explored ways in 2019 to optimize the evaluation of demonstration projects to better reflect project performance. Nine projects were evaluated in 2019, and the evaluations will be used to support the monitoring of project implementation and the dissemination of project outcomes.

Partnerships

Strategic partnerships

APFNet extended its partnerships with two international organizations in 2019 – the International Union for Conservation of Nature (IUCN) and the European Forest Institute (EFI).

APFNet and IUCN signed a memorandum of understanding (MOU) in March 2019 for the joint implementation of activities to promote SFM, forest rehabilitation and landscape restoration and to improve forest ecosystems and policy development and implement processes.

The APFNet–EFI MOU sets a framework for collaboration on SFM and rehabilitation through joint policy research, human resource development, information exchange and projects.

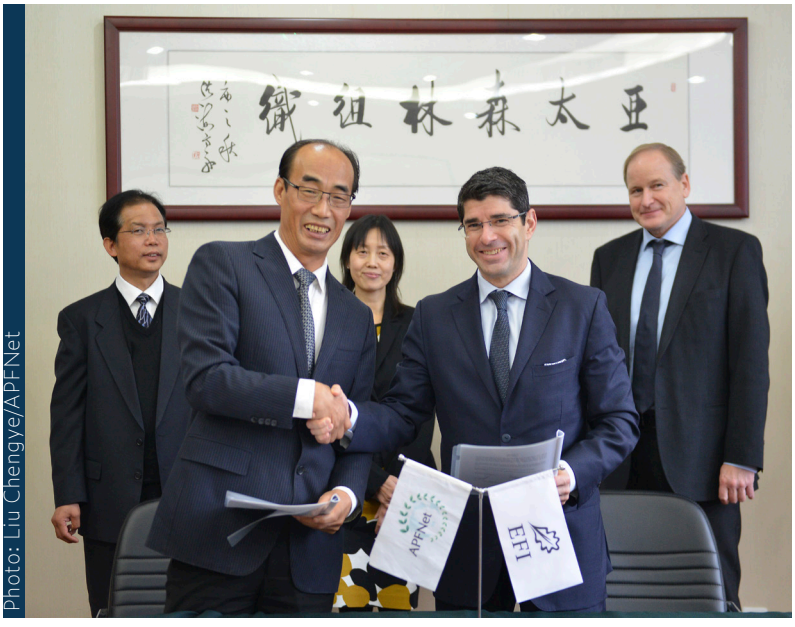


Photo: Liu Chengye/APFNet

Partnership established for promoting multifunctional forest management

China's National Academy of Forestry and Grassland (NAFG) designated the APFNet Multifunctional Experiment and Training Base as one of its on-site learning bases on the signing of a tripartite agreement between APFNet, NAFG and the Government of Kalaqin Banner, Inner Mongolia Autonomous Region of China, on 20 September 2019.

The training base is the output of an APFNet project, "Wangyedian Forest Experience Base Project", which is situated in the same area as another project, "Construction of Multifunctional Forest Management Demonstration", which began in 2011. The training base will host training events and workshops to showcase the project's successful experiences in multifunctional forestry, including SFM, ecotourism, forest therapy, the sustainable use of non-wood forest products, and community forestry.

APFNet Executive Director Dr Lu De and EFI Director Dr Marc Palahí signed an MOU on 15 November 2019 at the APFNet office in Beijing

Financial information

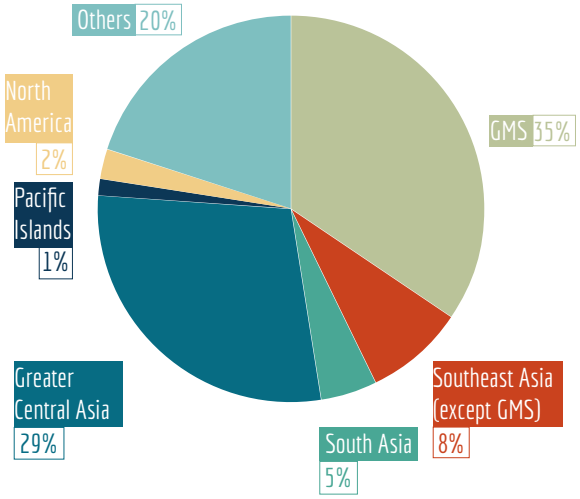
	CNY		USD[3]	
International Financial Reporting Standards	2019	2018	2019	2018
ITEMS				
1. Income				
Contributions	(20,683,500.00)	(19,261,800.00)	(3,000,000.00)	(3,000,000.00)
Grants	(27,864,000.00)	(34,895,700.00)	(4,041,482.34)	(5,434,959.35)
Fund donation	-	(200,000.00)	-	(31,149.74)
Other income (interest)	(83,429.21)	(87,569.48)	(12,100.84)	(13,638.83)
Total income	**(48,630,929.21)**	**(54,445,069.48)**	**(7,053,583.18)**	**(8,479,747.92)**
2. Expenses				
Programmes	36,713,476.37	45,435,331.57	5,325,038.27	7,076,493.10
Operations	15,318,303.17	14,027,282.62	2,221,814.95	2,184,730.81
Financing expenses	(8,260.33)	(24,855.56)	58,388.39	184,593.87
Total expenses	**52,023,519.21**	**59,437,758.63**	**7,605,241.61**	**9,445,817.78**
Surplus (deficit) for the year	**3,392,590.00**	**4,992,689.15**	**551,658.43**	**966,069.86**

[3] The average annual exchange rate for USD 1 was CNY 6.4206 for 2018 and CNY 6.8945 for 2019.

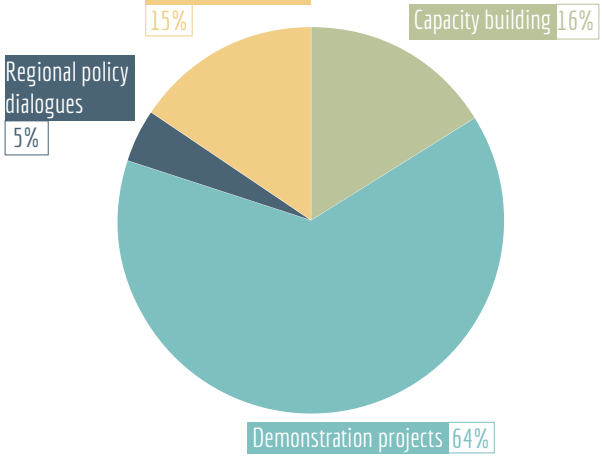
Expenses by subregion (USD)	2019	2018
Greater Central Asia	1,524,392.01	2,628,393.72
Greater Mekong Subregion (GMS)	1,841,036.94	2,181,872.71
Southeast Asia (except GMS)	439,449.29	594,491.99
South Asia	255,823.23	135,454.70
Pacific Islands	75,497.92	180,864.95
North America	133,713.52	339,187.61
Latin America	0	22,754.46
Others	1,055,125.36	993,472.96
Total	**5,325,038.27**	**7,076,493.10**

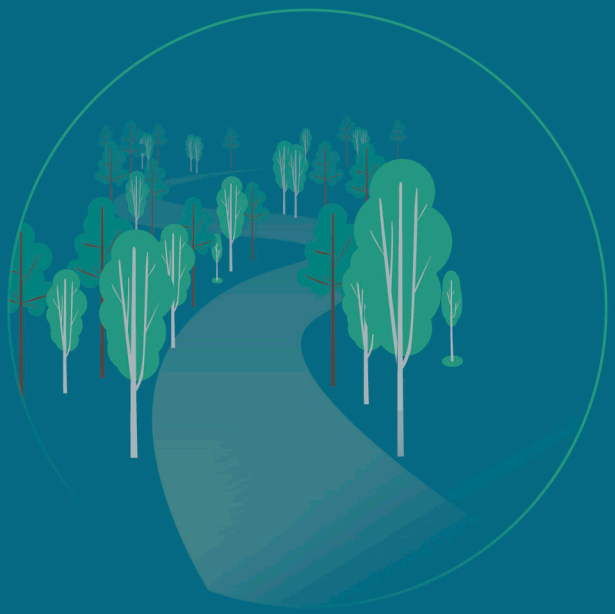
Expenses by programme (USD)	2019	2018
Capacity building	858,316.36	945,054.13
Demonstration projects	3,406,322.54	4,522,189.99
Regional policy dialogues	242,405.05	631,664.94
Communication and information sharing	817,994.32	977,584.04
Total	**5,325,038.27**	**7,076,493.10**

Expenses by subregion in 2019



Expenses by programme in 2019





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