



Seventh Meeting of the APFNet Council

26–27 April 2023 | Manila, the Philippines

Summary report 2022

1 Introduction

The APFNet Secretariat has prepared this document to summarize the implementation of the 2022 annual work plan, which was reviewed by the Council and approved by the Board of Directors.

In the context of the globally increasing focus on sustainable forest management and the impacts of the COVID-19 pandemic, the Secretariat overcame various difficulties to ensure APFNet’s active involvement in regional and global forestry issues in 2022 and strove to build synergies between activities and across the organization’s four pillars. A combination of online and offline approaches ensured that most activities progressed and expected outcomes were achieved.

2 Moving forward on activities under four interlinked pillars to achieve annual targets

2.1 Conduct online capacity-building activities to adapt to the pandemic

In line with the *APFNet Strategic Plan 2021–2025*, the Secretariat conducted capacity-building activities online in 2022 in response to the impacts of COVID-19 pandemic restrictions.

1) Strengthen communication and collaboration with host universities to ensure the consistency of the scholarship programme

Despite the ongoing pandemic in the 2021–2022 academic year, APFNet strengthened communication and collaboration with the APFNet Scholarship Program (ASP)’s four host universities – Beijing Forestry University (BFU), Nanjing Forestry University (NFU), Northwest Agriculture and Forestry University (NWFU) and Chulalongkorn University (CU). These universities provided online courses and mentorships for 29 APFNet scholarship

students, including 21 in master's programmes and eight PhD candidates. Of these, six students from Bangladesh, Indonesia, Lao PDR, Myanmar (two students) and Viet Nam completed their studies successfully (five at NFU and one at BFU) and obtained their master's degrees in 2022.

With the easing of entry restrictions for scholars in 2022, ASP awardees began returning to their host universities in China. Campus life gradually returned to normal. Apart from in-person lectures, host universities organized lab research sessions, networking events, field trips and other activities to enrich the scholars' study.

The Secretariat communicated with ASP scholars through the APFNet Alumni Network to better understand their situations and requests. Graduates shared their work, academic research and events via the Network's platform. All graduates in 2022 returned to their original workforces, well equipped to make greater contributions to sustainable forest management in their home economies.

2) AP-FECM provided new platforms for its members to discuss forestry education issues and to practise research skills through online activities

Affected by the COVID-19 pandemic, the activities of the Asia-Pacific Forestry Education Coordination Mechanism (AP-FECM) were all conducted online in 2022. In collaboration with the University of British Columbia (UBC)'s Faculty of Forestry's Asia-Pacific Young Scientists Association, AP-FECM organized the Weekly Online Teaching/Learning Lecture Series and a "3-minute thesis" competition. These activities were launched for members of AP-FECM and other young foresters and researchers in the Asia-Pacific region.

The online events provided participants with fantastic opportunities to increase their forestry knowledge. Participants also learnt online teaching techniques and discussed their learning experiences during the pandemic. The events served as platforms for discussing challenges, opportunities and solutions in forestry education in the "new normal" learning environment.

2.2 Regulating project planning, management and evaluation to maximize efficiency and effectiveness

1) Formulating project proposals and updating the APFNet project appraisal criteria and indicators

Four project concept notes were received in 2022 from Canada, China, Mongolia and Nepal. Project appraisals were delayed due to the pandemic, however, and will now take place in 2023, when all project concept notes received will be reviewed and appraised together.

Progress was made on revising and approving two projects (see table below) via remote communication.

Recommended proposal	Expected project duration	Target area	Status
Rehabilitation of arid ecosystems and wastelands through agroforestry systems in the southern coast of Peru	24 months	Arid ecosystems in the southern coastal region of Peru	Project proposal approved and launched in December 2022
Development of a business model for enrichment planting, including carbon values, in Viet Nam	36 months	Bao Yen district, Lao Cai Province, Viet Nam	Project proposal approved and recommended for funding consideration

The *APFNet Project Appraisal Criteria and Indicators* and the project appraisal processes were reviewed and updated in 2022. The indicators for project selection were revised to reflect the different focuses of the various appraisal stages and to increase coherence between project planning, implementation and evaluation. Future proposals will be ranked based on a scoring system, and those with the highest scores will be funded, subject to the availability of finance. The templates for concept notes and proposals have been updated and made available on the APFNet website. All new submissions are required to use the new templates.

2) Strengthening project management and implementation to enhance project impacts

According to project annual work plans, USD 2.6 million was to be granted to executing agencies in 2022. APFNet faced a significant reduction in project funding, however, and ultimately only USD 969,376 was allocated to executing agencies. This amount was sufficient to ensure the continuation of existing projects and to carry out the key activities necessary for ensuring that the projects continued to progress towards their respective objectives. A total of 20 projects in 12 economies were implemented in 2022, comprising one newly launched project, five projects that were completed during the year, and 14 ongoing projects. Information on these projects is presented below.

a The new project

- **Rehabilitation of arid ecosystems and barren lands through agroforestry systems in the southern coast of Peru**

This two-year project is APFNet's first project in South America. It is being implemented by a local non-governmental organization, COSTA VERDE, under the supervision of the Peruvian National Forest and Wildlife Service. The aim of the project is to demonstrate the restoration of degraded and barren areas on the southern coast of Peru using agroforestry. A total of 100 ha of demonstration sites have been established for conservation and reforestation purposes, to improve the livelihoods of poor rural families, and to mitigate the negative impacts of climate change in the area. The total budget for the project is USD 520,294, of which APFNet is providing USD 348,540.

b Completed projects

Overall, five projects in Cambodia, China and Indonesia were completed in 2022. The main achievements of these completed projects are as follows:

- **Improving science-based estimates of emissions from peatland fires in Indonesia**

To improve the accuracy of estimates of greenhouse-gas emissions from burnt peatlands in Indonesia, APFNet supported the project, "Improving capacities towards reducing greenhouse gas emissions from peat swamp forests in Indonesia" between 2019 and 2022. The project developed a new science-based methodology with improved parameters for estimating emissions and providing empirical data on peatland fires. The project can be considered a significant success, and it has already led to a change in Indonesia's reporting on its forest reference emission levels to the United Nations Framework Convention on Climate Change (UNFCCC). Not only has the project helped improve climate-related reporting in Indonesia, it has also improved the methodology, which can be extended to other economies with peat fires, thereby filling important knowledge gaps.

- **Demonstrating new models for the planning and management of commercial and public welfare forests in Pu'er, China**

Starting in 2017, APFNet initiated a series of projects in economies in the Greater Mekong Subregion titled, "Integrated forest ecosystem management planning and demonstration project in the Greater Mekong Subregion". One of these, the Pu'er sub-project, located at Wanzhangshan Forest Farm (WFF) in Yunnan Province, China, demonstrated how to combine strategic multifunctional forestry planning with on-site demonstrations of best practices for the integrated and sustainable management of commercial and public welfare forests in China. It helped the WFF develop science-based forest management plans and established a network of site-specific demonstration sites to showcase various forest

management models and practices for both public welfare forests and commercial forests of *Pinus kesiya* and *Betula alnoides*. Understorey planting and sustainable resin-tapping technologies were also demonstrated for local livelihood improvement. The project set up long-term management objectives and principles for the WFF and changed the farm's traditional ideas about how forests can and should be managed sustainably. The project's demonstration sites are part of the wider, newly established *APFNet Pu'er Sustainable Forest Management Demonstration and Training Base*.

- **Supporting forest management and rehabilitation in Cambodia's community forests**

Another sub-project in the "Integrated forest ecosystem management planning and demonstration project in the Greater Mekong Subregion" was in the Damrey Chak Thlork Community Forest, Kampong Speu Province, Cambodia. The aim of this project was to enhance community forest management capacities, increase forest ecosystem services, and contribute overall to sustainable forest management. The project strengthened community forest management by developing an integrated community forest management plan and demonstrating effective restoration models and silvicultural techniques. It reduced the dependence of local communities on forests by improving the agroforestry farming system and increasing the efficiency of traditional home gardens. It strengthened forest fire monitoring and the protection of state-owned forests through the installation of a state-of-the-art forest monitoring system.

- **Restoring degraded forests by planting nitrogen-fixing tree species in Cambodia**

The project, "Restoration and sustainable management of degraded forests based on the combination of interplanting nitrogen-fixing rare tree species and thinning" was completed in 2022, with technical support from and experience provided by the Experimental Center of Tropical Forestry, China, and the Institute of Forest and Wildlife Research and Development, Cambodia. The project developed restoration models for different degrees of degradation using high-value nitrogen-fixing tree species such as *Dalbergia cochinchinensis* and *Senna siamea* to improve soil health. Principles from close-to-nature forest management were applied, such as the removal of inferior trees competing with target trees and group-interplanting in forest gaps. In community forests, the approach has promoted resilient, uneven-aged mixed forests and enhanced productivity, stand quality, stand stability and ecological functioning. It has also accelerated forest succession and provided timber through the thinning of non-target trees.

- **Supporting participatory agroforestry and integrated watershed management in Bengawan Solo Watershed, Indonesia**

Starting in 2017, APFNet has funded two phases of the project, “Development of participatory management of a micro-catchment in the Bengawan Solo upper watershed” in Indonesia, with the second phase completed in 2022. The project used the Naruan micro-catchment in the upper reaches of Java’s longest river, the Bengawan Solo River, as a pilot site for showcasing participatory management, tackling soil erosion and rehabilitating fragile ecosystems. The project demonstrated an integrated approach using green and grey infrastructure – that is, agroforestry demonstration plots and civil engineering – in the micro-catchment, with the participation of local farmers in decision-making during planning, implementation and subsequent monitoring. Moving forward, the approach used in the Naruan micro-catchment will serve as a model of participatory watershed management elsewhere in Indonesia. The approach of combining agroforestry with physical erosion barriers will provide long-term erosion control and reduce sediment loads in rivers, thus benefiting downstream areas.

c Ongoing projects

By the end of 2022, 14 projects (not including the new project in Peru) were ongoing in ten APFNet member economies – the six GMS economies, Canada, Malaysia, Papua New Guinea and the United States. Although several projects experienced delays or had to be modified due to an overall reduction in project funding, good progress was made in most. These projects are contributing to forest restoration, reducing forest degradation, and enhancing forest ecosystem management, in line with APFNet priorities. In addition to on-site demonstrations, special attention is being paid to the establishment, maintenance and operation of the two APFNet training bases in China and the High-value Tree Species Breeding Center in Cambodia. Key progress is described below.

- **Demonstration of forest restoration and reducing forest degradation**

APFNet continued to align its work with existing international, regional and national commitments on advancing forest restoration and reducing forest degradation, with a view to improving forest health and the capacity of forests to provide ecosystem services while also benefiting local livelihoods. For example, “Demonstration project of vegetation restoration and management and utilization of forest resources in Greater Central Asia, phase II (Chifeng sites)” continued to demonstrate models for the restoration of desertified and arid land in Greater Central Asia. A report synthesizing successful examples of forest restoration models in sandy areas with demonstrative value across Greater Central Asia was under preparation in 2022. When completed, the report is expected to become a key

reference for foresters and policymakers in the subregion. In addition, with multifunctional forest management and restoration a stronger focus of APFNet projects in 2022, several projects, such as those in Pu'er and Wangyedian, developed or adopted multifunctional forest management plans and continued to maintain demonstration sites developed using multifunctional forest restoration and management principles.

- **Supporting community forestry and improving livelihoods**

APFNet projects continued to support community forestry and improve local people's livelihoods. For example, "Integrated forest ecosystem management planning and demonstration project in the Greater Mekong Subregion (Myanmar sub-project)" boosted local livelihoods in the Paung Laung Forest Reserve by supporting agroforestry in the villages of Lein Li and Chaungmange. The project nursery produced 8,000 seedlings in 2022 and distributed these to villagers for agroforestry development. The project maintained and monitored 37 ha of agroforestry demonstration plots and established a 25-ha arboretum at the Forest Research Institute in Yezin, Myanmar, with the aim of collecting and conserving forest germplasm. The project, "Construction of multifunctional forest management demonstration sites at Wangyedian, China" demonstrated high-value edible-mushroom farming and provided local communities with technical support for planting mushrooms in forest understoreys, greatly benefiting local livelihoods.

- **Supporting forest resource monitoring and combating climate change**

APFNet has sponsored research projects in several economies in the region to improve the monitoring of forest resources and to detect forest-cover change. For example, the project "Regional forest observations for sustainable forest management" compiled state-of-the-art baseline maps of current and previous (2005, 2010) forest cover for the entire Greater Mekong Subregion (plus Malaysia). In 2022, the project conducted a six-week training course with scholars from all implementing agencies on the analysis of forest-change drivers using remote sensing data. The project developed a method for lidar-based carbon estimation, which was demonstrated at the Gaofeng Forest Farm in Nanning, China. To assist efforts to adapt to climate change, APFNet has partnered with the University of British Columbia in conducting the project, "Adaptation of Asia-Pacific forestry to climate change (phase III)". In 2022, this project developed a new niche model with soil variables and integrated it with the climate niche models developed in previous phases, thereby enabling predictions of trees species distributions representing combined habitat suitability in terms of both climate and soil conditions. The integrated projections are more realistic and applicable in forest resource management for climate-change adaptation. Four online consultations were conducted to discuss and identify major applications of the climate-

change models in China, Chinese Taipei, Malaysia and Myanmar. Google’s mapping system was replaced with the ArcGIS mapping system to improve access for all users.

- **Establishment of the first high-value tree species breeding center in Cambodia**

Although progress slowed due to limited funds, this project in Cambodia still made significant progress in 2022. Basic construction was completed of the three main components: 1) the High-Value Tree Species Breeding Center; 2) the forest genetic conservation garden; and 3) the eco forest farm. The project also finished procuring tissue-culture equipment for the breeding center. In addition, the project team collected specimens of 46 valuable tree species – such as *Azelia xylocarpa*, *Dalbergia oliveri*, *D. cochinchinensis* and *Sindora cochinchinensis* – from seven provinces in Cambodia to serve as genetic resources. The project also completed land preparation at the eco-forest farm. Twelve species of fruit trees, such as durian, longan and coconut, and seven species of valuable trees, including *Barringtonia acutangular*, *Dalbergia cochinchinensis* and *Pterocarpus macrocarpus*, were planted.

- **Improving the integrated APFNet training and demonstration bases in Inner Mongolia and Yunnan, China**

APFNet is developing two training and demonstration bases as international platforms for forestry policy dialogue and information exchange and also as physical knowledge hubs for demonstrating best practices in sustainable forest management in the Asia-Pacific region. After their official launches in 2019 (Inner Mongolia) and 2021 (Yunnan), special attention was paid in 2022 to improving the two demonstration sites and standardizing their management, and improving base operations. All the demonstration sites established in previous years were monitored. The forest management models deployed for both commercial and public welfare forests were summarized and are now ready to be promoted in similar areas as means for inspiring improved forestry practices among practitioners and policymakers. The bases offer many opportunities for conducting scientific research related to forests and forestry, convening forestry training workshops and conferences, and providing environmental education and forest experiences.

d Project publications

The following knowledge products were published in 2022 based on the achievements of APFNet projects:

- **“Holding forests accountable: APFNet and forest carbon accounting”**

This book gives a comprehensive introduction to APFNet’s carbon-related projects. It

provides readers with new insights into carbon accounting and shows APFNet's involvement in this area. The book covers mechanisms of international reporting on forest carbon and methodologies with which carbon can be measured, and it introduces methodologies that were trialled and demonstrated in various APFNet projects. To date, APFNet has launched five projects on carbon accounting in China, the Greater Mekong Subregion and Southeast Asia; they measure carbon stocks and emissions through ground measurements and remote sensing, and they apply the most effective and efficient measures for specific site conditions and economies. Readers will gain deep insights into different ways of measuring and accounting for carbon.

- **“Exploring sustainable forest management with APFNet in Pu'er”**

This book describes all APFNet activities conducted at Pu'er, where the APFNet Pu'er Sustainable Forest Management Demonstration and Training Base is located, offering readers a comprehensive understanding of the knowledge and insights gained so far. It introduces forestry in China overall and in Yunnan Province, examines APFNet's work in the Greater Mekong Subregion, and describes sustainable forest management and APFNet's related demonstration projects in Pu'er. The book discusses the short- and long-term forest management plans developed under the project, as well as demonstration activities designed to compare and contrast various forest management models. The book introduces APFNet's work on forest fire monitoring, especially the installation of the Forest Fire Monitoring and Early Alarming System, and the new APFNet Pu'er Base, including its goals and facilities for supporting regional forestry information-sharing and training, environmental education and research. It give readers a comprehensive understanding of APFNet's work in Pu'er and shows how an integrated demonstration site can be designed.

- **“Empowering women in community-based sustainable forest management in Nepal”**

This publication introduces the APFNet-funded project, “Supporting community-based sustainable forest management and economic empowerment of women in central Nepal”, which was implemented between 2014 and 2018 in three districts in Nepal – Kathmandu, Makwanpur and Sarlahi. The project focused on developing new income sources for those people most dependent on community forests, who are mainly women and poor households. By providing training, the project empowered women to start mini-enterprises based on ecotourism, handicrafts and essential oils. At the same time, capitalizing on the existing concept of community forest user groups, the project provided training in forest management and good governance. The book summarizes the project's outcomes to enable forestry professionals, practitioners and the public to share this success story and the lessons

learnt from it on community-based sustainable forest management.

3) Strengthening regular project evaluation management to improve its effectiveness

Three APFNet-funded projects – one in China and two in Cambodia – received terminal evaluations in 2022. Before, during and after the project evaluation missions, APFNet explored measures to enhance their effectiveness, in line with its plan to improve its project evaluation guidelines. For example, the consultants were briefed on APFNet’s concerns before each mission, which increased their effectiveness; in each evaluation, the consultants were required to determine and summarize the project’s achievements and impacts, which improved the quality and utility of evaluation outputs; and, after each mission, a results feedback procedure was conducted to inform project executing agencies of the evaluation results.

The projects evaluated in 2022 covered the areas of forest rehabilitation and sustainable forest management. Through desk reviews, field visits and discussions with stakeholders (ranging from provincial forestry authorities to local communities), all external evaluators found that the evaluated projects had multiple positive impacts and that some of the demonstration models were worth promoting in the region. Details of the evaluations are presented below.

i “The multifunctional forest planning concept and demonstration models in Wanzhangshan Forest Farm (WFF), Yunnan Province, China, are worth promoting”

The terminal evaluation of the WFF-implemented project, “Integrated forest ecosystem management planning and demonstration project in the Greater Mekong Subregion (Pu’er Project Site, China)” was carried out by an independent evaluation team in July 2022. The evaluation found that all project objectives had been achieved and that the project had enhanced both the delivery of multiple forest ecosystem services and the management capacities of the state-owned forest farm. The following good practices are worth promoting, according to the evaluation team:

- models for monoculture plantation management with differing site types, age classes, stands and utilization, which helped improve timber productivity and provided ecological benefits;
- the concept of systematic medium-term and long-term integrated forest management planning; and
- the practice of planting medicinal herbs in the understoreys of secondary forests to generate income.

The evaluation team suggested that the forest farm use the targets and goals set out in the forest

management plan to guide management, and conduct long-term field monitoring.

ii “Satisfactory environmental-social-economic impacts were generated in forest communities in Cambodia”

Terminal evaluations were carried out in September–October 2022 for the following two APFNet-funded projects in Cambodia – “Integrated forest ecosystem management planning and demonstration project in Greater Mekong Subregion (Cambodia)”, and “Reconstruction and sustainable management of degraded forests based on the combination of inter-planting nitrogen fixation rare tree species and thinning”. The former project was implemented by the Experimental Centre of Tropical Forestry, the Chinese Academy of Forestry and the Institute of Forest and Wildlife Research and Development (IRD), and the latter was implemented by IRD.

The evaluation found that the projects had prominent economic, social and environmental impacts. They enhanced forest ecosystem services by demonstrating various forest rehabilitation models, improved local livelihoods and forest management capacities, and strengthened forest protection by installing a high-tech forest fire monitoring and early-warning system installed on a tower that automatically tracks and detects forest fires using cameras and infrared technologies as well as roof-top solar equipment.

The evaluation team suggested continuously motivating local farmers to participate in agroforestry and home-garden activities, and further strengthening technical guidance for local forest practitioners.

4) *Updating APFNet project management guidelines*

In 2022, the Secretariat updated the *Manual for Project Identification, Implementation and Management* (PIIM), first issued in 2013, to further guide the management of APFNet-funded projects. The updated PIIM is more closely aligned with the APFNet Strategic Plan and the organization’s overall priorities. The criteria and indicators for project appraisal were also updated. The revised PIIM incorporates changes made in project management on the ground, based on the insights gained and lessons learnt through project implementation. Also, the project accounting and budget system was fully updated and partially automated. Templates for audit reports, project documents, project annual work plans, project progress reports and others were developed or updated. In addition, the *APFNet Project Visual Identity and Communications Guide* was launched – this document outlines how to design a project’s communication strategy, describes various available tools, details requirements for the visibility of APFNet in APFNet-funded products, and provides instructions for proper project documentation.

2.3 Strengthening regional forestry policy dialogue in response to international forest-related commitments

APFNet hosted the *Pu'er Workshop on Forest Restoration and Sustainable Forest Management in Response to International Commitments on Climate Change* on 20 January 2022. The aim was to call on its members to act on the *Glasgow Leaders' Declaration on Forests and Land Use* made at the 26th session of the Conference of the Parties to the UNFCCC in November 2021. A total of 73 participants from 17 APFNet member economies joined the event. APFNet emphasized that it would continue to support member economies by promoting and improving forest restoration and sustainable forest management.

The APFNet Forestry Planning Network held its sixth meeting (virtually) on 12 July 2022 to explore new developments in forest planning and policies in response to the *Glasgow Leaders' Declaration on Forests and Land Use*, which included a strong endorsement of forest restoration. In the meeting, APFNet emphasized the tremendous value of information-sharing and networking among forestry planners and policymakers in the Asia-Pacific region as means for reaching consensus on concrete actions to halt and reverse deforestation and forest degradation.

The Third Steering Committee Meeting of the Sino–ASEAN Network of Forestry Research Institutes (SANFRI) and the Second Early Career Academics Forum were convened successfully in January 2022. Moreover, by the end of 2022, four sponsored APFNet Small Research Grants projects had been formulated, reviewed and approved by the expert panel and successfully put into practice. The project outcomes have added to the technical and scientific knowledge base for the sustainable management and restoration of forests in the Asia-Pacific region.

2.4 Strengthening communication and information-sharing for synergetic development of forestry

APFNet continued to support regional efforts to collect, update and share information and data on experiences, lessons learnt and best practices in sustainable forest management and forest restoration, and to raise awareness of “ecological civilization”. The communication outputs generated in 2022 are described below.

1) APFNet proposal adopted as an outcome of the High-level Dialogue on Global Development

The High-level Dialogue on Global Development convened by the Government of China on 24 June 2022 addressed the theme, “Foster a global development partnership for the new era

to jointly implement the 2030 Agenda for Sustainable Development”. Consensus was achieved on several issues. APFNet proposed the establishment of the Global Network for Sustainable Forest Management in response to the serious challenges facing global development, such as ecosystem degradation, food insecurity, poverty and uneven development. The Dialogue adopted the proposal as an early-harvest project, which was welcomed by participating leaders.

2) *APFNet initiative called on teenagers to be ambassadors for ecological civilization*

Ecological civilization is a new development paradigm practised in China with great potential to promote equality, sustainable development and harmonious coexistence between humans and nature. On the occasion of the inauguration of the China National Botanical Garden in 2022, APFNet launched the initiative, “Focus on Forests, Build a Green Homeland Together”, in collaboration with the Chinese Society of Forestry, the General School of Natural Education in China and the Hainan Nature Foundation. The initiative called on teenagers to go into forests, cultivate a love of nature, practise “green” lifestyles, and strive to be ambassadors for ecological civilization. APFNet will collaborate with its partners to popularize forest-related science and environmental education as a means for promoting the harmonious coexistence of people and nature.

3) *Disseminated outcomes of the completion assessment of the APEC 2020 Forest Cover Goal by multiple media*

In collaboration with the Food and Agriculture Organization of the United Nations (FAO), APFNet conducted the completion assessment of the Asia-Pacific Economic Cooperation (APEC) 2020 Forest Cover Goal, releasing *Achieving the APEC 2020 Forest Cover Goal: a synthesis of economy reports* (English version) in 2021. The publication reported on changes in forest area and other relevant indicators in the APEC region between 2007 and 2020 and the measures that APEC economies undertook that contributed to the achievement of the 2020 Forest Cover Goal. APFNet released the Chinese version of the assessment report in 2022 and produced videos in Chinese and English presenting the assessment’s major findings. The videos were posted on the APFNet website and social media platforms.

4) *Thematic paper on forests for the resilience of the Pacific Islands in climate change finalized*

APFNet revised and finalized the thematic paper, “Increasing the resilience of people and landscapes in Pacific Small Island Developing States: the role of forests and trees in the context of climate change”, as part of the FAO Pacific Forest Sector Outlook Study, in light of comments received from FAO reviewers and the editor. The paper summarizes climate projections for the Pacific Small Island Developing States, based on reports of the

Intergovernmental Panel on Climate Change and other literature, the potential impacts of climate change on forests and people, and the existing and potential roles of forests in climate-change adaptation and mitigation. The paper describes three possible scenarios for the future, lists recent regional climate-related programmes and interventions, and makes recommendations for the forest sector to improve the resilience of people and forests in the subregion.

5) *Sharing of national park laws to contribute to the establishment of a national park administrative system in China*

National parks play important roles in conserving natural heritage, such as stunning landscapes, extraordinary wildlife and majestic forests. China is developing its administrative system for national parks, including laws, policies and regulations, and APFNet is playing a constructive role in this process. The Secretariat translated into Chinese the following ten national park laws in eight economies in 2022: the Yellowstone National Park Protection Act 1872 (the United States); National Park Service and Related Programs (the United States); the National Park Service Centennial Act (the United States); the National Parks Act (Canada); the National Parks Act 2000 (Scotland); the National Parks Act 1980 (New Zealand); the National Parks and Wildlife Act 1972 (South Australia); the Natural Parks Act (Japan); Statutes of the Republic of Singapore Parks and Trees Act (Singapore); and the National Park Act (Thailand). These translations constitute valuable reference materials that add to the knowledge and experience base of forest administrative agencies, researchers and other stakeholders in China.

6) *Launch webinar of “Restoring the Earth: the next decade”, Unasylya 252, Chinese version*

A webinar was convened jointly by APFNet, FAO and the United Nations Environment Programme on 29 March 2022 to launch the Chinese-language version of the journal *Unasylya* 252, “Restoring the Earth: the next decade”. More than 100 participants from China and other economies attended the webinar, which presented key topics featured in *Unasylya* 252 relevant to China, including new restoration initiatives and the UN Decade on Ecosystem Restoration 2021–2030.

3 Strengthening governance and operations

3.1 The sixth meetings of the APFNet Board and Council convened successfully

The Sixth Meeting of the APFNet Board of Directors was conducted online on 25 August 2022.

Thirteen APFNet Board Directors and two observers – the APFNet Council Chair and Vice-chair – attended the meeting. The Board of Directors, which is APFNet’s decision-making body, selected (by consensus) Dr Guan Zhi’ou as its new Chair and approved the renewal of the term of the current Executive Director. Through active discussion, Board members also reached consensus on APFNet’s 2022 work plan and budget and other agenda items. The meeting completed all its agenda items, and the Board made several decisions.

The Sixth Meeting of the APFNet Council was held virtually on 25 May 2022, attended by about 40 representatives of 19 member economies and organizations, one observer and the Secretariat. All agenda items were completed. Two officers were elected to the APFNet Council: Dr Sokh Heng, Director of the Institute of Forest and Wildlife Research and Development in Cambodia, was elected as Chair, and Mr Tirso Parian Jr, Director of the Forest Management Bureau in the Philippines, was elected as Vice-Chair. Five nominees – from Cambodia, Canada, China, Malaysia and Nepal – were selected as new APFNet Board directors. The Council reviewed reports of APFNet’s work in 2021 and adopted APFNet’s proposed work plan for 2022, and members were invited to comment on the progress of APFNet-funded projects. The Council approved Chile’s membership application – with this new addition, the APFNet membership now comprises 27 economies.

To enable the Board and Council to better fulfil their responsibilities, the Secretariat maintained regular contact with Board directors, Council members and partners in 2022 via online communication and by organizing or co-organizing virtual events and circulating letters from officials of the Board and Council. Members of the Board of Directors and Council were provided with quarterly updates on the progress of APFNet activities.

3.2 Active engagement with APFNet members and partners in 2022

APFNet diligently continued its close collaboration with members, the Board, observers and partners in 2022 by inviting them to attend the annual meetings of the Council and Board and other relevant events, sharing regular APFNet updates, and implementing ongoing memoranda of understanding (MOUs). APFNet also renewed MOUs with RECOFTC and the Center for International Forestry Research.

APFNet participated in about ten virtual or hybrid meetings and workshops in 2022 as part of its efforts to ensure smooth communication with partners and stakeholders during the pandemic. These include the 29th Session of the Asia-Pacific Forestry Commission; the Post-COP 26 Synthesis of Key Outcomes for Land Use Sector in Asia-Pacific; the International Day of

Forests 2022; Forestry Education in the New Normal: Challenges, Opportunities and Solutions; FLR Days advancing forest and landscape restoration in Asia; and the annual meetings of APFNet partners the International Union of Forest Research Organizations and the International Tropical Timber Organization. At these meetings, APFNet provided support, conveyed APFNet concepts, and explored potential opportunities to collaborate with partners.

3.3 Monitoring and evaluation further enhanced

The Secretariat continued to improve its monitoring and evaluation to provide an objective basis for future decisions and improvement.

- Monitoring and evaluation (M&E) regulations were updated. APFNet developed its first overall *Monitoring and Evaluation Policy* to establish general concepts and standards and updated its specific *Guidelines for Project Monitoring and Evaluation* (2013) to further refine project M&E criteria, frequency, priorities, procedures and relevant formats.
- The project evaluation process was redesigned, and APFNet explored measures and strategies to further improve the effectiveness of project evaluations in 2022. These included discussing project concerns with evaluators before their missions; requiring evaluators to put more emphasis on project outcomes and impacts; and adding a procedure for providing project executing agencies with feedback on evaluation findings and requiring them to make plans for improvement.
- The management of M&E consultants was further improved. A database of M&E consultants was established containing information on their expertise and region. Criteria for the selection of evaluators were established, addressing required expertise, familiarity with APFNet, previous experience, and communication and interpersonal skills. The evaluation consultant contract template was updated.

3.4 Stable and efficient operation ensured

The Secretariat continued to strengthen its comprehensive management and coordination to ensure stable and efficient operations.

- Rules and regulations were reviewed and improved. The *APFNet Salary and Subsidy Scheme* was revised to increase its competitiveness in attracting international talent and approved by the Board. In accordance with the *APFNet Accounting Policies*, a detailed rule was developed to standardize the management and use of activity costs. To enhance

guidance on project financial regulations for project partners as part of the revision of the PIIM, and to help project officers manage projects more effectively, templates were developed (in English and Chinese) for project budgets and standardized project audit reports.

- In-house capacity was further enhanced as a priority to support the organization's development. One staff member was supported to visit the University of British Columbia for about one year to enrich her international experience and professional capacity; another staff member sent to the same university in 2021 completed her master's programme in International Forestry in 2022. Training sessions were held at APFNet headquarters to help staff improve their English skills. All staff members were encouraged to conduct small research projects, join field studies and summarize APFNet's practices on sustainable forest management.
- Good progress was made in the internationalization of staffing. A new international staff member joined APFNet in 2022, with international experience in project management and a good command of English and Chinese. She is expected to play an active role and to bring innovative ideas to project management. An APFNet PhD Scholarship student at BFU with a forestry-related educational background and work experience in Myanmar's Forest Department assisted APFNet's project management as an intern.
- Financial operations were managed and supervised in accordance with APFNet's financial rules and procedures. An independent accounting firm audited the 2022 financial statements and provided an unqualified audit report for the current-year financial position and performance. The Secretariat received about RMB 25.4 million (USD 3.87 million) in 2022 from the Government of China for its operation and activities, and partners – that is, local forestry departments, forestry universities, research institutes and foundations – contributed about RMB 7.10 million (about USD 1.09 million) in cash or in kind to support the implementation of key projects (Annex 2). In total, 40 activities were implemented in 2022 with a reasonable allocation of funds.

Annexes:

1. Implementation of the APFNet Work Plan 2022
2. Partner contributions in 2022

Annex 1. Implementation of the APFNet Work Plan 2022

I. Capacity building			
No.	Activity/task	Status	Results/outcomes
1	APFNet Scholarship Program	Completed	Supported 29 scholarship students (21 master's degrees and 8 doctoral degrees) to study in host universities, of whom 6 scholars completed their studies and obtained master's degrees
2	Online activities organized by the Asia Pacific Forestry Education Coordination Mechanism (AP-FECM)	Completed	1) Weekly Online Teaching/Learning Lecture Series held 2) "3-minute thesis" competition held
3	The project "Innovative sustainable forest management open online courses in fall 2020" (project ID: 2020P2-CA-PA)	Completed	The project offered 5 open sustainable forest management online courses to universities in the Asia-Pacific region. More than 1,000 students registered for the courses at forestry universities, and institutions in Myanmar, Cambodia, Chile, China, Indonesia, Japan, Lao PDR, Malaysia, Mongolia, Philippines, Viet Nam and Thailand participated in the project. A completion report was prepared
II. Projects			
No.	Activity/task	Status	Results/outcomes
4	Launch 1 new project	Completed	1 new project was launched – "Rehabilitation of arid ecosystems and barren lands through agroforestry systems in the southern coast of Peru" [ID: 2022P1-PER]

5	Complete 5 projects	Completed	<p>Five projects in Cambodia, China and Indonesia were completed:</p> <ol style="list-style-type: none"> 1) “Development of participatory management of a micro catchment in the Bengawan Solo upper watershed (Phase II)” [ID: 2020P1-INA] 2) “Integrated forest ecosystem management planning and demonstration project in the Greater Mekong Subregion (Cambodia)” [ID: 2017P2-CAM] 3) “Integrated forest ecosystem management planning and demonstration project in the Greater Mekong Subregion (Pu’er)” [ID: 2016P1-GMS-PE] 4) “Improving capacities towards reducing greenhouse gas emissions from peat swamp forest fires in Indonesia” [ID: 2018P5-IND] 5) “Restoration and sustainable management of degraded forests based on the combination of interplanting nitrogen-fixing rare tree species and thinning” [ID: 2018P4-CAF]
6	Successfully implement 14 ongoing projects	Completed	<ol style="list-style-type: none"> 1) “Adaptation of Asia-Pacific forestry to climate change (phase III)” [ID: 2020P4-UBC] 2) “Study on forest carbon storage and carbon sink potential of Wangyedian Forest Farm” [ID: 2021P2-INM] 3) “Construction of multi-functional forest management demonstration sites (Phase III)” [ID: 2020P2-INM] 4) “Community tree-planting project in Papua New Guinea” [ID: 2017P3-PNG] 5) “Demonstration of vegetation restoration and management and utilization of forest resources in the Greater Central Asia (Chifeng site)

			<p>(Phase II and added activities)” [ID: 2019P4-INM]</p> <p>6) “Sustainable forest management in the northern provinces of Lao PDR” [ID: 2014P1-ASEM]</p> <p>7) “Integrated planning and practices for mangrove management associated with agriculture and aquaculture in Myanmar” [ID: 2018P1-MYR]</p> <p>8) “Integrated forest ecosystem management planning and demonstration project in the Greater Mekong Subregion (Myanmar)” [ID: 2018P4-MYR]</p> <p>9) “Regional forest observations for sustainable forest management” [ID:2018P2-CAF]</p> <p>10) “Empirical synthesis and capacity building on forestry” [ID:2019P1-APFNet/MSU]</p> <p>11) “Integrated forest ecosystem management planning and demonstration project in the Greater Mekong Subregion (Viet Nam)” [ID: 2019P2-VNM]</p> <p>12) “Establishment of a high-value tree species breeding center in Cambodia” [ID: 2019P3-CAM]</p> <p>13) “APFNet Sustainable Forest Management Training Center project” [ID: 2020P1-PE]</p> <p>14) “Innovative sustainable forest management education in the Asia-Pacific region (Phase II)” [ID: 2018P3-UBC]</p>
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7	Evaluate APFNet-funded projects	Completed	<p>The following 3 projects received terminal evaluations, the findings, results and recommendations of which were shared with stakeholders in a timely manner:</p> <ol style="list-style-type: none"> 1) “Integrated forest ecosystem management planning and demonstration project in Greater Mekong Subregion (Cambodia)” [ID: 2017P2-CAM] 2) “Reconstruction and sustainable management of degraded forests based on the combination of interplanting nitrogen fixation rare tree species and thinning” [2018P4-CAF] 3) “Integrated forest ecosystem management planning and demonstration project in Greater Mekong Subregion (Pu’er project site)” [ID: 2016P1-GMS-PE]
III. Regional policy dialogues			
No.	Activity/task	Status	Results/outcomes
8	Support the Pu’er Forum to increase synergies and contributions to forestry-related goals and international commitments	Completed	Organized the Pu’er Workshop on Forest Restoration and Sustainable Forest Management in Response to International Commitments on Climate Change and called for APFNet members to react to the <i>Glasgow Leaders’ Declaration on Forests and Land Use</i> made at the 26th Conference of the Parties to the UNFCCC
9	Support the Forestry Planning Network to strengthen strategic capabilities, improve planning processes and increase the effectiveness of strategic forestry plans	Completed	Organized the Sixth Meeting of the Forest Planning Network and explored new developments in forest planning and policies in response to the <i>Glasgow Leaders’ Declaration on Forests and Land Use</i>
10	Advance forestry research by strengthening cooperation and facilitating collaborative actions among forestry research institutions through the Sino-ASEAN	Completed	<ol style="list-style-type: none"> 1) Organized the Third Steering Committee Meeting and the Second Early Career Academics Forum 2) Four Small Research Grants projects formulated, reviewed and approved by the expert panel

	Network of Forestry Research Institutes (SANFRI)		
11	Support high-level forestry dialogues and exchanges in Greater Central Asia to share experiences and develop common strategic priorities	Postponed	Due to the COVID-19 pandemic, the Third Meeting of Ministers Responsible for Forestry in Greater Central Asia was postponed to the second half of 2023
IV. Communication and information-sharing			
No.	Activity/task	Status	Results/outcomes
12	Develop a proposal on global sustainable forest management	Completed	The Global Network for Sustainable Forest Management was adopted as an early-harvest project of the High-Level Dialogue on Global Development and welcomed by participating leaders
13	Develop an initiative on raising awareness of ecological civilization	Completed	The initiative, “Focus on Forests, Build a Green Homeland Together” was issued by APFNet and partners in China. Teenagers were called on to take part in forest-related activities and to be ambassadors for ecological civilization
14	Disseminate outcomes of the completion assessment of the APEC 2020 Forest Cover Goal by multiple media	Completed	Developed and issued the Chinese version of <i>Achieving the APEC 2020 Forest Cover Goal: a synthesis of economy reports</i> and videos in Chinese and English presenting major outcomes from the assessment of the APEC 2020 Forest Cover Goal
15	Revised the thematic paper titled “Increasing the resilience of people and landscapes in Pacific Small Island Developing States – the role of forests and trees in the context of climate change”	Completed	Finalized the thematic paper for the FAO Pacific Forest Sector Outlook Study
16	Translate national park laws developed by eight economies into Chinese	Completed	Developed and share the compilation in China

17	Study of forest management and forestry development in the Asia-Pacific region	Completed	The book was published in Chinese and welcomed by forest officers and researchers in China
18	Launch webinar of “Restoring the Earth: the next decade”, <i>Unasylva</i> 252, Chinese version	Completed	More than 100 participants from China and other economies joined the launch. Shared key topics of <i>Unasylva</i> 252 relevant to China, such as new restoration initiatives and opportunities associated with restoration and the UN Decade on Ecosystem Restoration 2021–2030
19	Run APFNet and social media accounts	Completed	Information-sharing platforms ran smoothly, with higher-quality content
20	APFNet 2022 annual report, newsletters and periodical reports for Board and Council members	Completed	The APFNet 2022 annual report, newsletters and periodical reports for Board and Council members published and disseminated

V. Partnerships, networking, and outreach events

No.	Activity/task	Status	Results/outcomes
21	MOU renewal with partners	Completed	Two MOUs renewed – with RECOFTC (2022–2027) and the Center for International Forestry Research (2022–2027)
22	Raise public awareness of the importance of forests and nature education	Completed	Promotional activities organized in Chaoyang, Liao Ning Province, Chifeng, Inner Mongolia Autonomous Region of China, and Jianfeng, Hainan Province

VI. Governance, institutional work

No.	Activity/task	Status	Results/outcomes
23	Conduct the Sixth Meeting of the APFNet Board of Directors online		<ol style="list-style-type: none"> 1) Dr Guan Zhi’ou selected as the new Chair of the Board of Directors 2) Renewal of the term of the current Executive Director approved 3) 2022 work plan and budget, and other agenda items, approved through active discussion
24	Hold the Sixth Meeting of the APFNet Council		<ol style="list-style-type: none"> 1) Two officers of the APFNet Council elected – Dr Sokh Heng and Mr Tirso

	virtually		<p>Parian Jr</p> <p>2) Five nominees from Cambodia, Canada, China, Malaysia and Nepal selected as new Board Directors</p> <p>3) Reports of APFNet's work in 2021 reviewed and APFNet's proposed work plan for 2022 approved</p> <p>4) Chile's membership application approved</p>
25	Maintain contact with the Board and Council	Completed	<p>1) The Secretariat communicated regularly with Board and Council members</p> <p>2) Four quarterly updates circulated</p>
VII. Monitoring and evaluation			
No.	Activity/task	Status	Results/outcomes
26	Regular project evaluation	Completed	<p>1) Terminal evaluations conducted for 3 projects</p> <p>2) Effectiveness of project evaluation explored</p>
27	Improve regulation of monitoring and evaluation	completed	<p>1) First overall <i>APFNet Monitoring and Evaluation Policy (2022)</i> developed and approved by Executive Director</p> <p>2) The <i>APFNet Guidelines for Project Monitoring and Evaluation (2013)</i> updated and approved by the Executive Director</p>
28	Improve monitoring and evaluation consultant management	completed	<p>1) Monitoring and evaluation consultant database established</p> <p>2) Criteria for evaluator selection explored</p> <p>3) Evaluation consultant contract updated</p>
VIII. Secretariat operations: administration, human resources, finance			
No.	Activity/task	Status	Results/outcomes
29	Administration	Completed	<p>1) Normal operations ensured</p> <p>2) Annual work plan developed</p> <p>3) Policies and regulations implemented and improved</p>
30	Finance	Completed	<p>1) APFNet financial operations monitored regularly and efficiency enhanced</p> <p>2) Independent audit report produced</p>
31	Development and management of human resources	Ongoing	<p>Capacity of Secretariat staff enhanced, as follows:</p> <p>1) 1 staff member completed master's programme and returned to APFNet</p>

			<p>office</p> <ol style="list-style-type: none">2) 1 staff supported to visit University of British Columbia for about 1 year to enrich international experience and professional capacity3) Regular training organized on Fridays4) International meetings attended5) Research and case studies produced
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Annex 2. APFNet partner contributions in 2022

No.	Activity	Partner	Contributions in kind or cash (USD)
1	APFNet-UBC Americas Office	University of British Columbia	13,500.00
2	APFNet Sustainable Forest Management Training Center Project	Wanzhangshan Forest Farm	206,106.87
3	Scholarships in the Asia-Pacific region	Beijing Forestry University	19,480.92
		Nanjing Forestry University	31,755.73
4	Demonstration on integrated planning and management of forest ecosystem in Greater Mekong Subregion – Cambodia site	Institute of Forest and Wildlife Research and Development	66,074.50
5	Demonstration on integrated planning and management of forest ecosystem in Greater Mekong Subregion – Pu'er site	Wanzhangshan Forest Farm	12,450.00
6	Demonstration of vegetation restoration and management and utilization of forest resources in the Greater Central Asia (Chifeng site) Phase II	Sanyijing Forest Farm	82,569.47
7	Development of criteria for rehabilitating degraded tropical forests in the Lancang–Mekong subregion	University of British Columbia	49,500.00
8	Natural education activity	Chaoyang Forestry and Ecological Conservation Association	2,800.00
		Jian Feng Test Station, Research Institute of Tropical Forestry	177.55
9	Sino-ASEAN Network of Forestry Research Institutes (SANFRI)	Yunnan Academy of Forestry and Grassland	12,427.48
10	Construction of multifunctional forest management demonstration sites – phase III	Wangyedian Forest Farm	22,900.76
		Hainan Nature Foundation (HANAF)	36,363.63
11	Sustainable forest management in northern provinces of Lao PDR	Ministry of Agricultural and Forestry	22,133.00
12	Forest cover and carbon mapping in the Greater Mekong Subregion and Malaysia	Institute of Forest Resource Information	33,600.00

		Techniques, Chinese Academy of Forestry	
13	Development of participatory management of micro catchment at the Bengawan Solo upper watershed – phase II	Watershed Management Technology Center	74,282.00
14	Demonstration on integrated planning and management of forest ecosystem in Greater Mekong Subregion – Myanmar site	Forest Research Institute	23,855.00
15	Integrated forest ecosystem management planning and demonstration project in Greater Mekong Subregion (Tram Chim Project Site, Viet Nam)	Forest Inventory and Planning Institute	40,138.52
16	Reconstruction and sustainable management of degraded forest based on the combination of interplanting nitrogen fixation rare tree species and thinning	Experimental Center of Tropical Forestry, Chinese Academy of Forestry	36,200.00
17	Establishment of a high-value tree species breeding center in Cambodia	Institute of Forest and Wildlife Research and Development	60,591.00
18	Demonstration project of forest experience and nature education (Wanzhangshan, Pu'er)	Hainan Nature Foundation	13,740.45
19	Rehabilitation of arid ecosystems and barren lands through agroforestry systems in the southern coast of Peru	Costa Verde	43,940.00
20	APFNet & HANAF demonstration project of nature education demonstration and functions upgrading	Hainan Nature Foundation	141,984.73
21	Artificial intelligence technology and big data application in national park planning and tourism management	University of British Columbia	41,000.00
	Total		1,087,571.60

USD 1 = RMB 6.55.