AFoCO
Asian Forest Cooperation Organization

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Agenda Item 7

Update on the Progress of Activities under the AFoCO Climate Action Plan

I. Background

1. The AFoCO Strategic Plan (2024-2030) and Climate Action Plan (2025-2034) *(hereinafter referred to as 'CAP')* were adopted at the Ninth Session of the Assembly (Decisions 51-IX-23R and 52-IX-23R). Following the adoption, new projects have been developed to enhance carbon removals and reduce emissions from deforestation in partnership with private corporations.
2. Considering that the scope of cooperation for addressing and adapting to climate change through forests is extensive, it is necessary to establish organizational directions of program and project development for enhancing the effectiveness of climate-related forest cooperation of AFoCO.
3. AFoCO's unique action-oriented cooperation with its member countries includes close networks with forestry sector officials, expertise in on-site activities, and the experience necessary to address these significant, interconnected challenges. However, given their immense scale, it is imperative to refine the cooperation approach. In this context, the Secretariat proposes the Climate-forest Cooperation Framework as attached (Annex-x).
4. There are four (4) initiatives which will support the achievement of the CAP: (1) Research and Development Initiative: Asian Forest Living Lab., (2) Forest Fire Management in Asia Initiative, (3) REDD+ Readiness Initiative and (4) AFoCO Mangrove Initiative.

II. Proposal on Framework Development for Climate Action Plan Implementation

A. Purpose of the Framework

5. This Framework serves as a flexible guide for aligning AFoCO's projects and programs with the AFoCO Strategic Plan (2024-2030) and Climate Action Plan (2025-2034), aim for a vision of climate-resilient forests and communities, ensuring that strategic goals translate into effective projects and fostering collaboration and accountability among members and partners.
6. The Framework involves clarifying the objectives and strategic directions of AFoCO's Climate-Forest Cooperation, internally linking project and program development to enable scalable and measurable efforts, and realizing blended financing of the programs and projects through strategic partnerships with public and private sector partners who share goals and direction. Details regarding the scope and approaches of the Framework are provided in the attached document.

B. Preparation of the Framework in 2025

7. To develop and finalize the Climate-forest Cooperation Framework in 2024, the Secretariat will form AFoCO Technical Working Group, composed of national experts nominated by the Member Countries. The Technical Working Group will provide comments to improve and finalize the Framework to seek its approval at the 12th Session of the Assembly.
8. After development of the Framework, the Secretariat will consult with national experts nominated by the Member Countries to develop intiatives and tentative country-specific programs, including their sub-projects, based on the Framework.
9. The concept note is in **Annex-1**.

III. New Initiatives under the Climate Action Plan

A. Research and Development Initiative: Asian Forest Living Lab.

10. The AFoCO R&D Initiative: Asian Forest Living Lab (*hereinafter referred to as 'R&D Initiative'*) is a collaborative platform designed to support sustainable forest management and human resource development across the Asian region. This initiative arises from the growing environmental challenges facing forests in Asia, such as climate change and biodiversity loss, which demand innovative, science-driven solutions. It brings together diverse stakeholders, including local communities, researchers, governments, local entrepreneurs, impact investors,, and among others, to jointly develop practical solutions that address the urgent issues of climate change, deforestation, and biodiversity decline.
11. A key aspect of this initiative is integrating the living labs within AFoCO's existing project sites, ensuring that research outcomes are directly applied to real-world forest management practices, thereby enhancing both the project's impact and sustainability. Upcoming actions include the development of pilot living lab projects in member countries. These actions will ensure that forest restoration, sustainable livelihoods, and ecosystem resilience remain at the forefront of regional environmental policy.
12. The timeline of the initiative is set by 10 years, aligning with the target period of the CAP:
    a. 2024-2025: Develop pilot Living Lab projects in the Member Countries *(potential fund: AFoCO-NIFoS research fund)*
    b. 2025-2026: Develop a project targeted ASEAN region, including Timor-Leste *(potential target source: ASEAN-Korea Cooperation Fund)*
    c. 2026-2027: Develop a project targeted Central Asian region, including Bhutan and Mongolia *(target source: to be identified)*
    d. 2033-2034: Evaluation and preparation for the next living lab phase
13. The concept note is in **Annex-2**.

B. Forest Fire Management in Asia Initiative

14. The AFoCO Forest Fire Management in Asia Initiative (*hereinafter referred to as 'FFMA Initiative'*) is a comprehensive program focused on strengthening regional capacities and integrating advanced technologies to enhance the prevention, management, and mitigation of

forest fires across Asia.

15. A key aspect of the FFMA Initiative is its emphasis on capacity building at multiple levels. This includes training programs for forest rangers, government officials, and policymakers to enhance their ability to prevent, detect, and manage forest fires effectively. Another crucial component is the integration of advanced technologies, such as ICT tools and early warning systems, which are designed to improve fire detection, monitoring, and response. Additionally, the initiative promotes community engagement, encouraging local communities to participate in fire prevention activities and adopt sustainable livelihood practices to reduce fire-prone behaviors.

16. The timeline of the initiative is set by 10 years, aligning with the target period of the CAP:

    a. 2024-2025: Pilot capacity-building programs and technology deployment *(potential source of fund: AFoCO RETC, France, etc.)*
    b. 2026-2030: Training programs and strengthen governance frameworks across AFoCO member countries *(potential source of fund: ROK-France joint fund for Forest Fire Management in Asia)*
    c. 2030-2034: Evaluate the outcomes of Phase-1 and prepare for further scaling *(potential fund: to be identified)*

17. The concept note is in **Annex-3**.

C. REDD + Readiness Initiative

18. This initiative is to support AFoCO member countries in establishing the four key elements of the UNFCCC Warsaw Framework for REDD+: National REDD+ Strategy or Action Plan; National Forest Monitoring System; Forest Reference/Forest Reference Emission Level; and, Safeguard Information System. This will be achieved by fostering partnerships between AFoCO member countries and partners to mobilize resources and collaboration for technology development and transfer, capacity building, and by focusing on research, technical assistance, and policy advice.

19. The initiative will provide overall support for the REDD+ readiness of AFoCO member countries, and while not limited to, the specific activities include the following:

    a. Identification of AFoCO members and partners interested in participating in the initiative, followed by confirming cooperation needs and willingness to support among entities to establish partnerships.
    b. Development and implementation of detailed collaborative activities to complete the REDD+ Readiness of the REDD+ countries.
    c. Development and implementation of sub-national (provincial or regional) REDD+ Readiness to ensure consistent implementation of national REDD+ between central and local governments.
    d. Support for the submission of national REDD+ documents to the UNFCCC and registration on the REDD+ Web Platform.

20. The concept note is in **Annex-4**.

D. AFoCO Mangrove Initiative

21. The AFoCO Mangrove Initiative is a strategic effort to address the critical needs of coastal ecosystem restoration and climate resilience in Asia. By focusing on the restoration and sustainable management of mangroves, it aligns with AFoCO's Strategic Plan (2024-2030) and Climate Action Plan (2025-2034), bridging terrestrial and marine conservation.

22. Key objectives are as follows:

a. Mangrove Restoration: Implement large-scale restoration projects across AFoCO member countries to enhance ecosystem resilience and carbon sequestration.
b. Research and Innovation: Partner with local communities, universities, and organizations to develop innovative mangrove management practices.
c. Climate Resilience and Livelihoods: Integrate restoration efforts with sustainable livelihoods, such as eco-tourism and fisheries management.
d. Ecosystem Services: Highlight mangroves' role in carbon storage, coastal protection, and biodiversity conservation, ensuring recognition in climate policies.

23. The AFoCO Mangrove Initiative will be developed with member countries and partners like ASEAN, the Global Mangrove Alliance, and potential donor countries.

IV. Points for Consideration

24. The Assembly may wish to:

a. Take note of the information regarding the proposal for development of the Climate Forest Cooperation Framework;

b. Task the Secretariat with developing the Climate-Forest Cooperation Framework and tailoring tentative programs based on the Framework; and,

c. Endorse the initiatives to support the Climate Action Plan.

Queries on the content of the document may be addressed to:

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Annex -1 (A-24-11-6, Agenda Item 7)

Draft Document

AFoCO Climate-Forest Cooperation Framework

Last Draft Date: September 24, 2024

Executive Summary

Since its establishment in 2018, the Asian Forest Cooperation Organization (AFoCO) has led regional forest cooperation to combat climate change through sustainable forest management. With the successful execution of 34 projects focusing on reforestation, climate adaptation, and livelihood enhancement under the AFoCO Strategic Plan (2019-2023), the organization adopted the AFoCO Strategic Plan (2024-2030) and the Climate Action Plan (2025-2034).

This Framework, a policy document, serves as a flexible guide for aligning AFoCO's activities with the AFoCO's plans aim for a vision of climate-resilient forests and communities, ensuring that strategic goals translate into effective projects and fostering collaboration and accountability among members and partners.

Chapter 2 outlines the scope of AFoCO's Climate-Forest Cooperation into three phases: Readiness, On-site/In-forest Action, and Valuation & Marketization. This phased approach addresses the full spectrum of forest management from policy development to on-the-ground actions and market engagement. The phases aim to ensure continuity and scalability of projects, tailored to the unique needs of member countries. The scope of this cooperation aligns with AFoCO's strategic goals, focusing on forest restoration, community bioeconomy, and disaster risk management, to support both national and international climate goals.

Chapter 3 details AFoCO's strategies include contributing to the SDGs and global climate goals, scaling up projects for greater impact with their MRV (Measurement, Reporting, and Verification), and commercializing outcomes to attract diverse funding. These approaches ensure that AFoCO's efforts support SDGs and Paris Agreement, and deliver tangible local benefits. Collaboration with member countries, stakeholders, and the private sector is emphasized to maximize effectiveness.

Chapter 4 focuses on how AFoCO will Implement the policy and strategies outlined in the previous chapters. Key actions include amending the AFoCO Project Manual, developing new guidelines, and creating mechanisms for project scalability. Investing in organizational capacities, such as staff training and strategic partnerships, is crucial. These actions ensure alignment with the AFoCO's plans and prepare AFoCO to address climate challenges through sustainable forest management.

This document is intended as a living guide, adaptable to changing circumstances, and focused on continuous learning and improvement. This approach ensures that AFoCO remains effective in promoting sustainable forest management and climate resilience in Asia.

1. Background

Since its inauguration in 2018, the Asian Forest Cooperation Organization (AFoCO) has enhanced regional forest cooperation by applying proven technologies and policies in practical actions based on the AFoCO Strategic Plan (2019-2023). Since 2018, AFoCO has been dedicated to sustainable forest management and enhancement of carbon removals, including on restoring degraded forests in member countries. Over the past five years (2019-2023), AFoCO has rehabilitated significant forest areas through 19 projects with priority on restoration and reforestation. AFoCO also supports capacity building, providing 91 training courses targeting local communities, SMEs, and government officials to strengthen sustainable forest management. AFoCO strengthened regional cooperation and partnerships through high-level meetings with ministers and senior officials, discussing strategic directions for forestry cooperation in Asia and hosting Annual Thematic Dialogues on climate change and green recovery. The organization has implemented 34 projects valued at USD 77.60 million in areas like reforestation, climate adaptation, and livelihood enhancement, and participated in six research projects to advance technology in forest management..AFoCO has formed partnerships with 25 organizations and engaged in key global forums to promote the role of Asian forests in achieving international goals.

At the Ninth Session of the Assembly in 2023, the AFoCO Strategic Plan (2024-2030) and the Climate Action Plan (2025-2034) were adopted. The second strategic framework document of the organization, the AFoCO Strategic Plan (2024-2030), delineates the organizational vision of "*A Greener Asia with climate-resilient and sustainable forests, landscapes, and communities*" and the mission to "*Promote action-oriented international cooperation for creating enabling policies, building capacities, and fostering inclusive multi-level partnerships to drive Asian forests onto a climate-resilient and sustainable path.*" To fully realize this vision, AFoCO will focus on three Program Priority Areas—Forest Land Restoration and Conservation; Community and Circular Bioeconomy; and Climate–Forest Disaster Risk Management—and cross-cutting themes such as Policy, Capacity, Knowledge, and Technology. The Climate Action Plan (2025-2034) accelerates efforts among AFoCO Member Countries to sequester atmospheric carbon, thereby mitigating global warming while promoting economic prosperity. The plan emphasizes three major climate actions: Forest land restoration and rehabilitation, community solutions, and digital innovations. Following these plans, new projects have been developed to enhance carbon sequestration and reduce emissions from deforestation in collaboration with private corporations.

AFoCO's unique action-oriented cooperation with its member countries includes close networks with forestry sector officials, expertise in on-site activities, and the experience necessary to address these significant, interconnected challenges. However, given their immense scale, it is imperative to refine the cooperation approach. This involves clarifying the objectives and strategic directions of AFoCO's Climate-Forest Cooperation, internally linking project and program development to enable scalable efforts, and realizing strategic partnerships with public and private sector partners who share goals and direction.

This Policy document serves as AFoCO's guiding document, providing the brief background needed to conduct the Climate-Forest Cooperation and achieve its organizational vision. It articulates a collective vision and approaches for forest-based climate actions, translates organizational vision into tangible projects and programs, ensures coherence among these initiatives, and guides the implementation of our strategic efforts. This policy document is a vital resource for AFoCO staff serving as a foundation for strategy, project and program planning, budgeting, and operations. For Members and Partners, it clarifies our objectives and methods for achieving them, fostering collaboration and mutual accountability among AFoCO, our partners, and the forests and communities we serve.

2. Scope of the Cooperation

2.1. Phases of the Cooperation Activities

Aligned with AFoCO's strategic plans (2019-2023; 2024-2030), AFoCO's projects and programs have been developed in response to requests from member countries, focusing on the priority areas outlined in the Strategic Plans. These priority areas include 'reforestation and restoration of degraded forests', 'climate change adaptation', 'forest disaster management', 'enhancement of local livelihoods', and 'strengthening of institutional capacities', including resource mobilization. However, to effectively contribute to global and national objectives related to climate change and forests, a long-term perspective is critical. This requires enhancements in the coherence and continuity among AFoCO projects and programs. Additionally, considering the different in-country circumstances and contexts of each AFoCO member country in addressing and adapting to climate change, there is a need to identify and expand cooperation tailored to the specific demands and capacities of each country. **Therefore, it is proposed to categorize AFoCO's Climate-Forest Cooperation activities into three phases: 'readiness', 'on-site/in-forest Action', and 'valuation & marketization', to address the interconnections and facilitate the expansion of these activities.**

AFoCO's Climate-Forest Cooperation activities will be strategically organized into three interconnected phases. For example, the **Readiness Phase (Phase I)**, support is provided for the development of policies, institutions, and plans essential for implementing national and/or sub-national forest-based climate actions or REDD+ (Reducing emissions from deforestation and forest degradation, and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries), which includes Program Priority Areas (PPAs) and Cross Cutting Themes (CCT) of AFoCO Strategic Plan (2024-2030). This phase also focuses on capacity building and research and development to bolster these foundational efforts, alongside forming partnerships with relevant stakeholders.

The **On-site/In-forest Action Phase (Phase II)** involves direct actions to enhance and conserve forest resources and ecosystem services, and to improve livelihoods, including the measurement and monitoring of these actions. It emphasizes capacity building and technology transfer specific to on-site and in-forest activities.

Lastly, the **Valuation & Marketization Phase (Phase III)** aims to enhance knowledge management, including the management of data and information for the valuation and marketization of forest resources and ecosystem services. This phase seeks to increase access to financing from both public and private sectors and includes marketization of ecosystem services, supporting national and international reporting, and publication of accomplishments. These structured phases ensure a comprehensive approach to sustainable forest management and climate action across the AFoCO Member Countries.

Table 1. Phases of the Climate-Forest Cooperation activities

Readiness	On-site/In-forest actions	Valuation & Marketization
• **Support development of policies, institutions and plans** to implement national and sub-national REDD+, or forest activities, which includes PPAs and CCT • **Capacity building and research and development** to support the development of policies, institutions, and plans • **Partnerships** with relevant stakeholders and partners	• **On-site/in-forest actions of the PPAs**, including **measurement and monitoring** of the actions • **Capacity building and technology transfer** for the on-site/in-forest actions	• Enhancing **knowledge management** including management of **data and information** • Support national and international **reporting and publication** of the accomplishments • **Increase access to finance** from public and private sector, including **marketization of ecosystem services**

2.2. Scope alignment with AFoCO Strategic Plan and Climate Action Plan

The AFoCO Strategic Plan (2024-2030) and the Climate Action Plan (2025-2034) serve

as guiding frameworks for all activities undertaken by AFoCO to realize its vision, and the scope of cooperation outlined in this policy document is based on their contents. The AFoCO Strategic Plan (2024-2030) articulates the organizational vision of "A Greener Asia with climate-resilient and sustainable forests, landscapes, and communities" and sets forth three PPAs —Forest Land Restoration and Conservation; Community and Circular Bioeconomy; and Climate–Forest Disaster Risk Management— that contribute to the goals of the UNFCCC Paris Agreement and the Sustainable Development Goals (SDGs). These PPAs are supported by cross-cutting themes, such as Policy, Capacity, Knowledge, and Technology, that permeate each area (Figure 1).

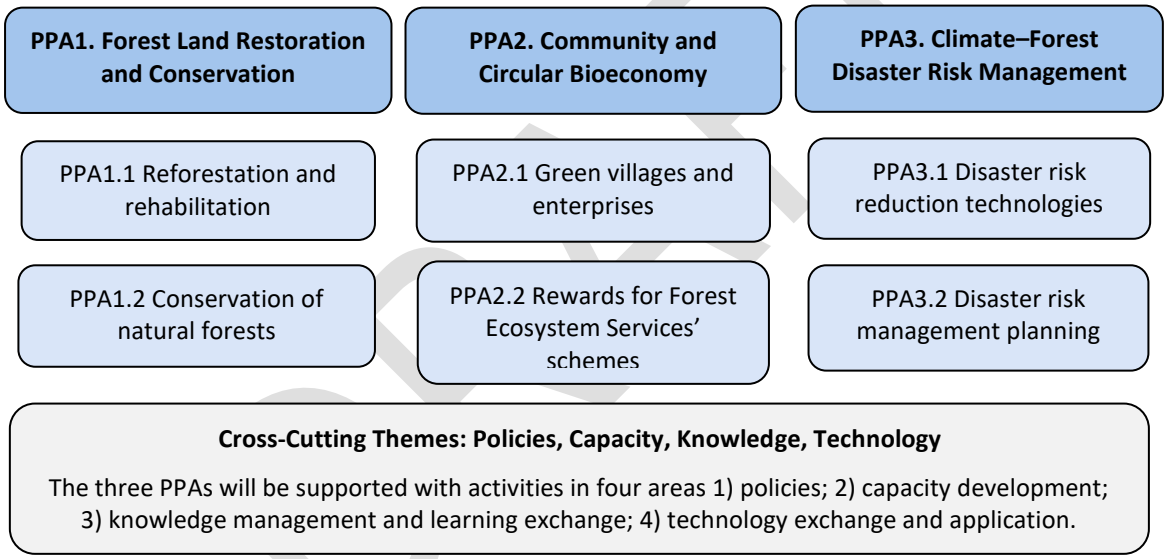

Figure 1. Program Priority Areas and Cross-Cutting Themes of AFoCO Strategic Plan (2024-2030)

The AFoCO Climate Action Plan (2025-2034) proposes specific Climate Actions linked to each PPA of the AFoCO Strategic Plan (2024-2030), including the rehabilitation and restoration of 10,000 hectares of forest land, the establishment of 100 nature-based community forestry businesses and 20 green villages, and the adoption of ICT-based technology exchanges and data management systems for climate-forest disaster risk management.

The scope of the Climate-Forest Cooperation activities is prepared to ensure consistency with the PPAs, cross-cutting themes, and the proposed Climate Actions, applying a phased framework to consider the interconnectivity and expansibility of cooperation efforts.

2.3 Phases and Scope of the Climate-Forest Cooperation

The proposed Climate-Forest Cooperation in this Policy document covers all collaborative efforts that affect the conservation and enhancement of forest carbon stocks in AFoCO Member Countries. It is based on the PPAs and CCT detailed in the AFoCO Strategic Plan (2024-2030) and the Climate Actions outlined in the Climate Action Plan (2025-2034). By applying the three (3) phases of the Cooperation activities, this scope of the Climate-Forest Cooperation aims to support the identification, development, implementation, and expand the cooperation with AFoCO Member Countries in consideration of their different national circumstances and contexts, and to improve alignment among the cooperative efforts.

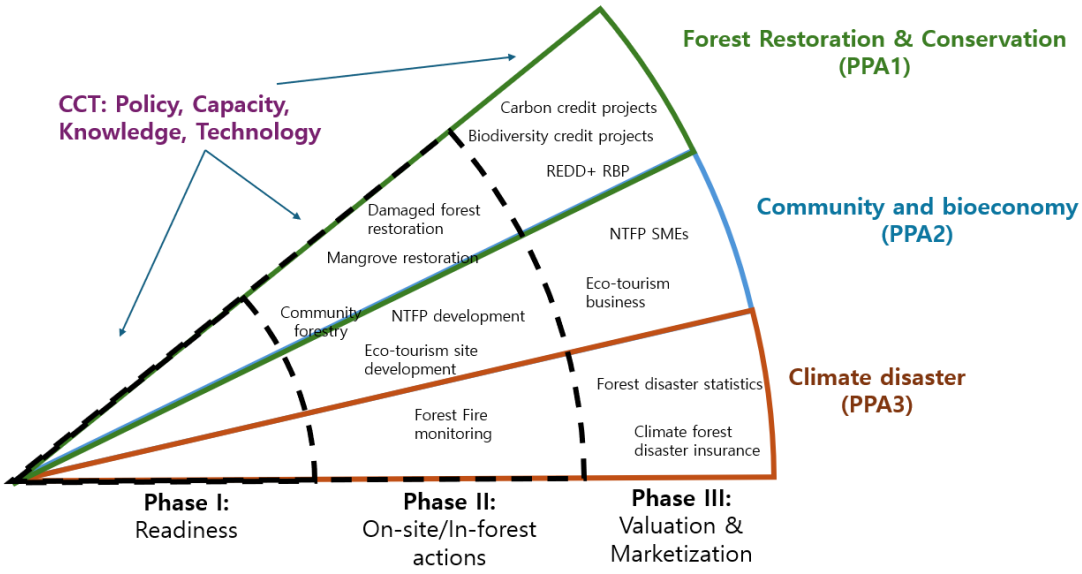

Figure 2. Phase and scope of the Climate-Forest Cooperation with provisional activities

3. Strategic Approaches

3.1. Measurable and Reportable Contribution to SDGs and Climate Goal

AFoCO's Climate-Forest Cooperation aims to promote collaboration that aligns with international norms and can be reported and aggregated at national and international levels to support the achievement of the global common objectives. This includes but is not limited to, the SDGs and the climate goal of the UNFCCC.

The forestry sector notably contributes to several SDGs, and the AFoCO Strategic Plan (2024-2030) identifies the three most relevant goals as SDG 13 (Climate Action), SDG 15 (Life on Land), and SDG 17 (Partnerships for the Goals). These three goals are proposed as the primary SDG targets of the Climate-Forest Cooperation. Additionally, SDG 1 (No Poverty), SDG 2 (Zero Hunger), and SDG 7 (Affordable and Clean Energy) are considered secondary targets due to their deep relevance to the three PPAs and their expected impact on the primary SDG targets mentioned above.

In the context of the UNFCCC, AFoCO's Climate-Forest Cooperation will contribute to the achievement of Member Countries' Nationally Determined Contributions (NDCs) and support national REDD+ initiatives based on the UNFCCC Warsaw Framework for REDD+. More specifically, this cooperation aims to support to plan, implement, and enhance activities related to forest carbon removals and emissions reduction in the Land Use, Land-Use Change, and Forestry (LULUCF) category of national greenhouse gas inventories of the Member Countries, facilitating cooperation for measuring, reporting, and verification (MRV) of these actions. Forest carbon projects in the voluntary international carbon market can be pursued to engage public-private partnerships and utilize private climate finance, following the member countries' requests and adhering to international norms and principles including environmental integrity and safeguards.

The performance of AFoCO's Climate-Forest Cooperation, in supporting the achievement of the related SDGs and UNFCCC objectives, ultimately aims to be utilized and submitted in relevant international reports (e.g., Voluntary National Review, Nationally Determined Contributions, Biannual Transparency Report, Technical Annex on REDD+, etc). This effort includes supporting capacity building for Measurement, Reporting, and Verification (MRV) and management of knowledge and information systems (e.g., administrative statistics) to facilitate these processes.

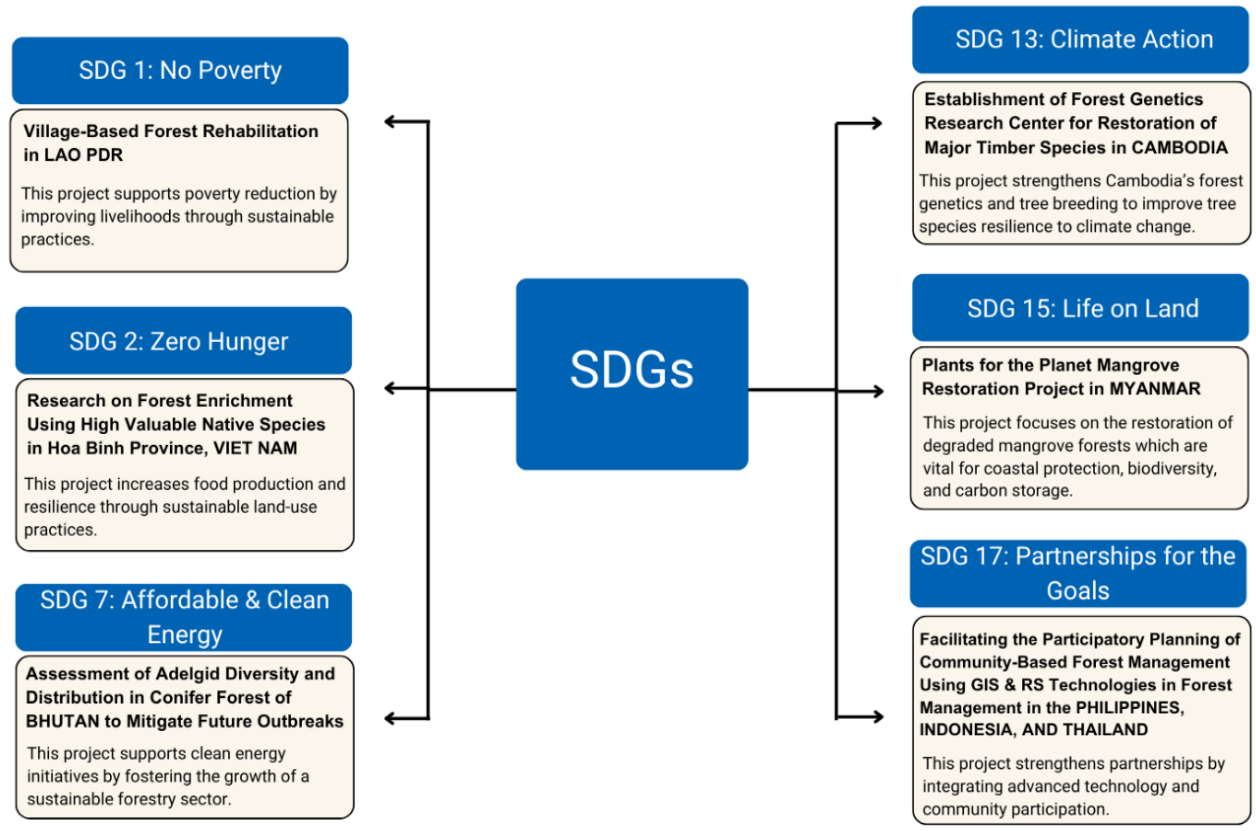

Figure 3. AFoCO's Projects that Align with SDGs

3.2. Scale-up and Integration of the efforts

AFoCO's Climate-Forest Cooperation will actively pursue scaling up and integration to

enhance the effectiveness and sustainability of its projects and programs. These efforts are crucial from both an environmental-social perspective and a practical standpoint for cooperation. From an environmental-social viewpoint, targeting large areas (such as an administrative jurisdictional unit encompassing a province) is essential for addressing leakage and non-permanence in terms of the effects of forest carbon sequestration and emissions reduction. It is also vital for ensuring the minimum area for wildlife habitats and the minimum viable population for biodiversity conservation. Linked with these efforts to conserve and enhance forest ecosystem services, a virtuous cycle will be possible that contributes to the activation of the local bioeconomy and livelihood improvement.

From a practical perspective, securing project sites and ensuring sustainable operations are critical, as well as achieving a minimum MRV scale that can be reflected in administrative statistics, which are essential for tracking the subsequent impacts and performance of projects at the national level. **This scaling up and integration can be achieved through the linkage or programmatization of projects belonging to different phases and PPAs. For example, a reforestation project funded by grants (PPA1 at Phase II) could be scaled up to a large-scale reforestation carbon credit project using private partner funds (PPA1 at Phase III). Alternatively, integration is achievable through the development of forest ecotourism programs (PPA2 at Phase II & III), themed around post-wildfire ecosystem restoration at project sites (PPA1 at Phase II).**

Such scaling up and integration will require proactive engagement of AFoCO staff and considerate involvement by the responsible parties and will be feasible through close cooperation among internal and external stakeholders.

3.3. Valuation and Marketization

AFoCO will actively valorize and commercialize the outcomes of the Climate-Forest Cooperation to mobilize financial resources. Forests and the ecosystem services they provide offer significant benefits and are crucial for achieving the SDGs and the overarching global climate goal. The conservation and sustainable management of forests often require substantial effort and cost. However, due to externalities, these efforts and benefits frequently fail to receive proper compensation or remuneration. Furthermore, public funding for the Climate-Forest Cooperation is limited in terms of scaling up its impact and reach. Therefore, it is essential to actively valorize and commercialize the outcomes of the Climate-Forest Cooperation to attract funding from diverse sources of resources.

Enhancing the accessibility of private sector funding requires preliminary efforts such as revising national institutions, policies and developing business models (Phase I & Phase II). These efforts use public funds and set the stage for pilot projects and the commercialization of projects, where private funding can be actively utilized (Phase II & III). Such consideration to mobilize and utilize private finance is becoming increasingly important, reflecting a trend towards including such criteria in attracting grants and other official development assistance (ODA) as funding sources.

This approach necessitates robust partnerships between AFoCO Member Countries and local stakeholders, based on the provision of credible data and information to support private funding decisions.

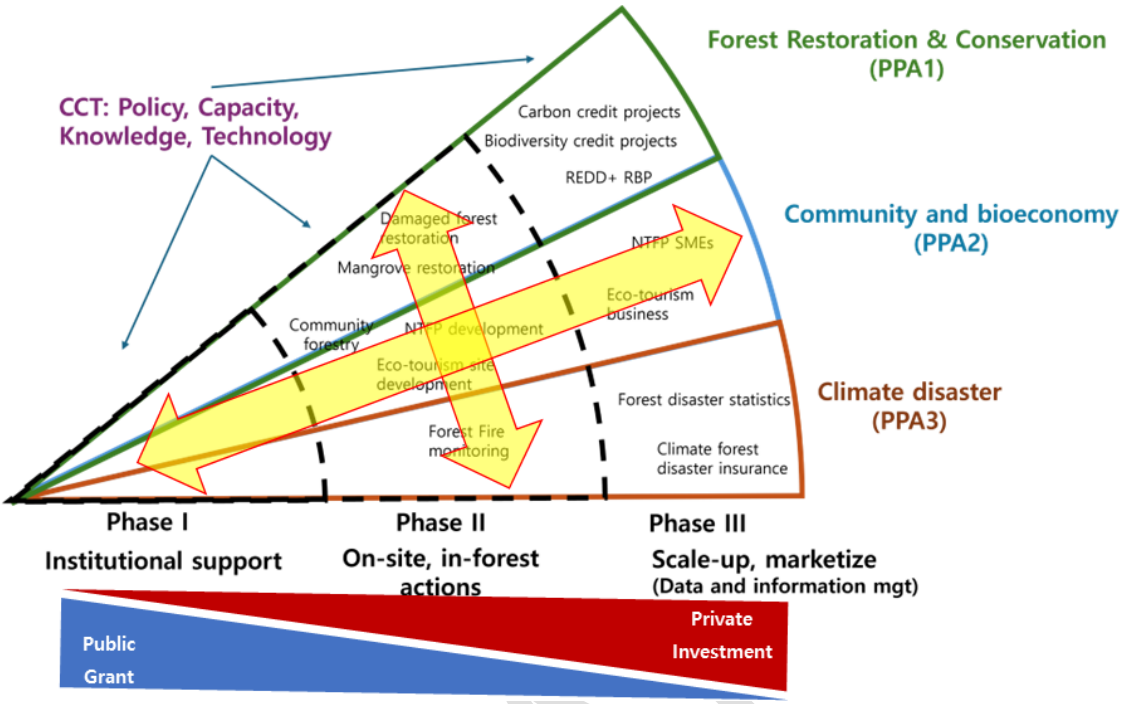

Figure 4. Scale-up and integration of efforts under the Framework

4. Implementing the Framework

4.1. Amendment of AFoCO Project Manual and new Guidelines

At the Tenth Session of the Assembly (2024), the Plan for the Amendment of the AFoCO Project Manual was reported. With the amendment of the AFoCO Project Manual, revisions necessary for the development and operation of actual projects and programs will be provided, taking into consideration each approach outlined in the proposed Scope of Climate Forest Cooperation. Additionally, as tools for conducting feasibility studies, including procedures for valorization and marketization of forest cooperation efforts and cost-benefit analysis, new guidelines for phase III projects, including the Forest Carbon Project Guideline, will be developed. These updates aim to align the manual more closely with the current needs and strategies for effective and sustainable forest management and cooperation.

4.2 Protocol for scale-up and integration of the projects and programs

The core of the AFoCO Climate-Forest Cooperation, as proposed in this document, is to facilitate the alignment and expansion of projects over a long-term horizon. Achieving this requires the identification and matching of cooperation opportunities that reflect the needs and circumstances of Member Countries as well as the interests of partners. To operationalize the approach, a protocol will be developed. This protocol will encompass periodic analyses of the cooperation needs and conditions of both Member Countries and partners, and the identification of opportunities based on these analyses. Additionally, it will involve program design and regular communication among stakeholders. This protocol is intended to serve as rules and procedures to develop programs and sub-projects and mobilize funds from public and private sector by applying the Framework. It aims to ensure effective alignment and expansion of collaborative efforts within the forestry sector to robustly address climate challenges.

4.3 Investment to enhance organizational capacities

To effectively implement the Framework described in this document, enhancing AFoCO's organizational capacities is essential. Strengthening these capacities will involve training and mentoring staff to ensure they are equipped with the necessary knowledge and skills to manage and execute projects and integrated programs effectively. This capacity building will not only increase staff expertise but also enhance their ability to address operational challenges. Moreover, it is critical to expand and diversify the workforce to meet the growing demands and complexities of climate-related forest cooperation. By bringing in professionals with varied backgrounds and specializations, AFoCO can foster more dynamic and innovative ways of cooperation.

Investing in these areas will ensure that the organization is well-prepared to meet the objectives outlined in the AFoCO Strategic Plan (2024-2030) and Climate Action Plan (2025-2034) to address the challenges of climate change through sustainable forest management and cooperation.

4.4 Leveraging Strategic Partnerships for Technology and Resource Acquisition

Leveraging strategic partnerships to attract technology and resources is critical for the achievement of AFoCO's objectives. Engaging with international organizations, academic institutions, private corporations, and indigenous communities will be instrumental in accessing cutting-edge technologies and means that can enhance forest conservation and management practices. This collaboration will also open avenues for additional funding sources that are essential for the extensive and sustained execution of the Climate-Forest Cooperation.

By forging these strategic partnerships, AFoCO will not only gain access to innovative technologies and substantial financial resources but also enhance its credibility and influence

on the global stage. These relationships will facilitate the sharing of best practices, allow for the cross-pollination of ideas, and provide opportunities for capacity building among member countries. Ultimately, these partnerships will empower AFoCO to effectively implement the projects and programs, utilize the operational mechanisms developed for project scaling and integration, and achieve its long-term climate action goals as set forth in the AFoCO Strategic Plan (2024-2030) and Climate Action Plan (2025-2034).

Table 2. Implementing Framework Overview Table

Section	Key Components	Expected Outcomes
4.1 Amendment of AFoCO Project Manual	- Revisions for project development - New guidelines for feasibility studies & Phase III projects	- Enhanced project effectiveness and sustainability
4.2 Protocal for Scale-up and Integration	- Periodic analyses of needs - Program design and stakeholder communication	- Effective long-term alignment of projects - Expanded and sustained cooperative efforts
4.3 Investment in Organizational Capacities	- Staff training and mentoring - Workforce expansion and diversification	- Increased expertise and operational efficiency - Enhanced ability to manage complex climate-related challenges
4.4 Strategic Partnerships for Technology	- Engagement with international bodies, academia, and private sector	- Access to cutting-edge technologies - Additional funding sources - Strengthened global influence and credibility

5. Moving Forward

It is important to recognize that any policy document reflects the current perspectives and strategies. While there is an effort to create a vision that will remain robust despite future changes, the volatile and dynamic nature of this era is acknowledged. Consequently, new challenges and opportunities will undoubtedly emerge that this document does not currently address. Moreover, as the challenges of addressing climate change will be more likely to be complicated and intertwined in the future. AFoCO realize that strengthening policies about cooperation and maintaining close collaboration among forestry stakeholder and across other relevant stakeholder is pivotal to address climate change issue.

The staff of AFoCO and diverse partners should consider this Policy document as a flexible guideline intended to steer collective efforts toward meaningful progress. There is a commitment to continuously learn from experiences—identifying which strategies succeed and which do not, and adjusting and refining approaches to meet the evolving demands of the Climate-Forest Cooperation. This adaptive approach will ensure that actions remain effective and relevant, enabling the achievement of the vision of AFoCO effectively.

Annex 1. Principles of the AFoCO Climate Forest Cooperation

1. Forest Climate Cooperation aligns with global and national objectives.

The cooperation is designed to contribute to the achievement of global objectives such as the Sustainable Development Goals (SDGs) and the climate goals of the UNFCCC. It supports member countries in aligning their national strategies with these international commitments, particularly in the areas of forest carbon sequestration and emissions reduction.

2. Forest Climate Cooperation emphasizes action-oriented international collaboration.

The cooperation emphasizes practical and actionable international collaboration, engaging multiple levels of partnerships to implement policies, build capacities, and foster inclusive initiatives. This approach ensures that efforts are grounded in real-world impacts and are adaptable to the varying contexts of member countries.

3. Forest Climate Cooperation prioritizes the sustainability of Asian forests and their communities.

The Forest Climate Cooperation initiative prioritizes the development of climate-resilient and sustainable forests, landscapes, and communities. This principle ensures that all actions are aligned with the overarching vision of a greener Asia, focusing on long-term environmental sustainability and the resilience of ecosystems and human communities to climate change.

4. Forest Climate Cooperation is implemented through phased and strategic approaches.

Activities under the cooperation are organized into three interconnected phases: Readiness, On-site/In-forest Action, and Valuation & Marketization. This phased approach ensures that projects are strategically developed, implemented, and scaled up, with each phase building on the achievements of the previous ones, enhancing coherence and continuity.

5. Forest Climate Cooperation focuses on scaling up and integration for maximum impact.

A key principle is the scaling up and integration of projects to maximize their environmental, social, and economic impacts. By identifying linkage and projects across different phases and priority areas, the cooperation aims to address challenges like leakage, non-permanence, and biodiversity conservation, while also contributing to the local bioeconomy and livelihood improvement.

6. Forest Climate Cooperation promotes valorization and marketization of forest ecosystem services.

The cooperation actively promotes the valorization and commercialization of forest ecosystem services to attract diverse financial resources. This principle recognizes the need to secure funding beyond public sources by engaging the private sector and developing business models that enhance the financial sustainability of forest conservation and management efforts.

7. Forest Climate Cooperation leverages strategic partnerships and resource mobilization.

Leveraging strategic partnerships is critical for accessing technology, expertise, and financial resources. This principle encourages collaboration with international organizations, academic institutions, private corporations, and indigenous communities to enhance the effectiveness and reach of the cooperation.

8. Forest Climate Cooperation emphasizes capacity building and organizational enhancement.

Strengthening the capacities of AFoCO and its partners is essential for the successful implementation of projects. This principle highlights the importance of continuous learning, skill development, and organizational growth to address the increasing complexity and demands of climate-related forest cooperation.

9. Forest Climate Cooperation ensures transparency and accountability in all processes.

Ensuring transparency in processes and accountability in outcomes is fundamental to the cooperation. This principle underscores the importance of clear communication, robust monitoring, reporting, and verification (MRV) systems, and the active engagement of stakeholders in decision-making processes.

10. Forest Climate Cooperation adopts an adaptive and flexible approach to address emerging challenges.

Recognizing the dynamic nature of global challenges, the cooperation is guided by an adaptive approach that allows for continuous learning and refinement of strategies. This principle ensures that the initiative remains responsive to emerging challenges and opportunities, maintaining its relevance and effectiveness over time.

Annex 00. Provisional list of programs and sub-projects of the AFoCO's Climate Forest Cooperation – to be developed with AFoCO Member Countries

AFoCO Research and Development Initiative: Asian Forest Living Lab.

A Cooperative Platform for Sustainable Forest Management and Human Resource Development in Forest and Forestry Sector

1. BACKGROUND

Forests in the Asia region are facing challenges such as climate change, deforestation, and biodiversity loss. Addressing these issues requires innovative approaches and collaborative efforts from local communities, researchers, governments, and international organizations to seek sustainable solutions. The "Asian Forest Living Lab" is an research and development (R&D) initiative born from this need, aimed at promoting the restoration and conservation of Asia's forests through research and development in real-world environments. In line with AFoCO's Climate Action Plan (2025-2034), the initiative seeks to accelerate forest conservation and restoration, while simultaneously addressing climate change and revitalizing local economies.

This initiative supports the role of forests as key elements in climate change mitigation beyond the Post-SDG 2030 era through climate impact analysis and carbon management activities. Specifically, it aims to strengthen the research capacities of member countries by developing living labs within AFoCO project sites, laying the groundwork for sustainable forest resource utilization through diverse means such as biodiversity conservation, enhancing carbon sequestration capabilities, and promoting the development, commercialization of Non-Timber Forest Products (NTFPs), and among others. Furthermore, by utilizing the Republic of Korea's Agricultural and Forestry Satellites for precision forest management and data-driven policy development, the initiative seeks to maximize the efficiency of forest management across Asia.

2. RATIONALE

2.1 Global agenda

The United Nations **Pact for the Future**, a comprehensive framework developed by the United Nations to address key global challenges, with a focus on sustainable development, climate change, biodiversity conservation, and social equity is rooted in the goals of the 2030 Agenda for Sustainable Development and the Paris Agreement, emphasizing the need for international cooperation and multi-stakeholder partnerships to create a more resilient, equitable, and sustainable world. In the framework document, future Parties to the United Nations view forests and the environment as critical components of sustainable development and climate resilience[1].

[1] For instance, in **paragraph 25 under Action 6**, the document highlights the need for sustainable forest management, recognizing forests as natural sinks for greenhouse gasses and biodiversity reservoirs that reduce

The future Parties emphasize the importance of conserving biodiversity, sustainably managing forests, and addressing the adverse impacts of deforestation and climate change.

2.2 R&D in the frame of AFoCO

In the Agreement on the Establishment of AFoCO, R&D is regarded as a key element for achieving sustainable forest management and addressing climate change. Article 3 explicitly mentions that AFoCO promotes and undertakes action-oriented cooperation programs, including capacity building through R&D, sharing of experiences, and technology transfer. This highlights the organization's commitment to fostering innovation and technical progress in forest management, biodiversity conservation, and forest restoration.

R&D in AFoCO Strategic Plan 2024-2030 and Capacity-Building Roadmap 2030

Pursuant to **AFoCO Strategic Plan 2024-2030**, R&D is regarded as a crucial tool for advancing sustainable forest management, addressing climate change, and promoting economic development in member countries. AFoCO prioritizes applied research aimed at overcoming pressing challenges such as forest restoration, biodiversity conservation, and climate adaptation. Through R&D projects, AFoCO facilitates the transfer of proven technologies and practices to its members, tackling issues like forest pest outbreaks, preserving plant biodiversity, and restoring degraded landscapes. R&D is also key to enhancing member countries' capacities by supporting knowledge exchange, technology transfer, and the development of innovative forestry solutions. These efforts contribute to AFoCO's mission of fostering international cooperation and building forestry expertise, while aligning with global targets such as the Paris Agreement and the Sustainable Development Goals (SDGs). AFoCO’s focus on R&D underscores its commitment to ensuring that scientific advancements drive the sustainable and resilient management of forests across the region.

In the **AFoCO Capacity-Building Roadmap 2030**, R&D is viewed as a critical mechanism for advancing sustainable forest management and addressing global challenges such as climate change, biodiversity loss, and deforestation. AFoCO places a strong emphasis on R&D as a cornerstone for building the capacities of its member countries, particularly through the transfer of proven technologies and knowledge to foster sustainable forest ecosystems. Through R&D, AFoCO seeks to promote evidence-based decision-making, support climate change adaptation, and enhance forest restoration efforts across Asia.

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vulnerability to climate change impacts. Moreover, **paragraph 26 under Action 7** stresses the importance of protecting and restoring mountain ecosystems to enhance their capacity to provide benefits essential for human well-being, economic activities, and sustainable development. It recognizes the need for innovative means of implementation to achieve these goals. Additionally, **paragraph 31 under Action 12** encourages Member States to consider ecosystem-based approaches and transboundary collaborations to implement the post-2020 global biodiversity framework, which is crucial for safeguarding natural ecosystems, including forests.

R&D is integrated into various strategic areas of the roadmap, including the development of competency-based frameworks for professionalizing forest management, enhancing cooperation between public and private sectors, and supporting the implementation of innovative approaches to forest conservation. By advancing R&D, AFoCO aims to increase the capacity of its members to implement context-appropriate forest policies and adapt to emerging environmental challenges through collaboration with academic institutions, research organizations, and international partners

R&D in AFoCO Climate Action Plan

According to the AFoCO Climate Action Plan (2025–2034), the 10-year initiative to enhance the member countries' climate resilience, R&D is seen as a critical pillar in achieving it and addressing the global climate crisis. AFoCO highlights the importance of R&D in developing innovative and scalable forest-based solutions, particularly for forest restoration, climate change mitigation, and disaster risk management. By investing in R&D, AFoCO aims to provide Member Countries with the necessary knowledge and technologies to increase carbon sequestration, enhance biodiversity, and support sustainable forest management practices. The Climate Action Plan emphasizes that R&D efforts should focus on improving technical capacities, fostering partnerships between the public and private sectors, and promoting the exchange of proven technologies across member nations. These efforts include developing integrated forest data management systems, advancing monitoring and reporting systems, and leveraging digital innovations like ICT-based technologies for forest disaster risk reduction.

In summary, AFoCO views R&D as an essential driver for the development of practical, evidence-based solutions to combat the climate crisis, enhance forest management, and contribute to the broader global efforts to meet the Paris Agreement targets and SDGs.

2.3. Rising concept of 'Living Lab.'

The Living Lab is an open, collaborative environment where multiple stakeholders—such as researchers, policymakers, local communities, private sector actors, and NGOs—come together to co-create, test, and refine innovative solutions in real-life settings. In the context of AFoCO, a living lab would focus on sustainable forest management and conservation practices, allowing for continuous observation, experimentation, and adaptation of forest-related solutions while generating valuable data and socio-economic insights.

The concept emphasizes user-driven research and development, where the actual users of the forest resources (e.g., local communities or forest managers) actively participate in the innovation process. This allows for practical, scalable solutions that are not only theoretically sound but also contextually relevant and directly applicable to real-world challenges.

Living labs serve as a dynamic platform for integrating cross-sectoral evidence, such as socio-economic, environmental, and policy-related factors, into forest management strategies. They enable stakeholders to experiment with and validate new approaches to forest conservation, climate resilience, and biodiversity restoration while simultaneously producing scientific outputs that can inform both domestic and regional policies.

In summary, Living Labs act as practical innovation hubs for R&D, ensuring that research is grounded in real-world applications, while R&D provides the scientific foundation and technological tools that fuel the experiments and solutions tested within living labs. Together, they create a continuous cycle of innovation, validation, and improvement in sustainable forest management and beyond.

Here's how the Living Labs and Research & Development (R&D) are connected and complement each other:

1. Real-World Testing Ground for R&D Outputs

Living Labs serve as real-world environments where R&D-generated innovations can be tested, refined, and validated. They provide a space for applying theoretical knowledge and scientific results from R&D into practical, on-the-ground solutions. For instance, forest management techniques or new technologies developed through R&D can be piloted in a living lab to observe their real-world efficacy.

2. Feedback Loop to Improve R&D

Living Labs provide a continuous feedback loop for R&D. By engaging stakeholders—such as local communities, policymakers, and private sector actors—in the living lab environment, researchers can gather immediate practical insights and adjust their approaches. This provides immediate practical insights to adjust R&D approaches and ensure outputs are contextually relevant and scalable.

3. Co-Creation and Collaborative Innovation

Both Living Labs and R&D emphasize collaboration and co-creation. In a Living Lab, multiple stakeholders actively participate in the research process, from defining the problems to testing solutions. This user-driven approach ensures that R&D efforts are aligned with real-world needs and challenges, particularly in areas like forest management and socio-economic development.

4. Data Generation and Evidence Building

Living Labs generate valuable socio-economic and environmental data that feed into ongoing R&D projects (Mukherjee et al., 2023). These data points help validate scientific theories, providing evidence that can be used to improve forest management practices, conservation strategies, or climate adaptation measures. Additionally, the cross-sectoral data from living labs enrich R&D with multi-dimensional insights beyond purely technical results.

5. Scaling and Policy Influence

Through the connection between Living Labs and R&D, successful innovations can be scaled up and adapted to wider contexts. R&D outputs, once validated in a living lab setting, can influence policy decisions and forest management frameworks, as they are proven to work in practical, localized environments. This integration of Living Lab findings into R&D ensures that innovations are not only scientifically sound but also policy-relevant and community-accepted.

References

1. https://sustainabilitymethods.org/index.php/Living_Labs_%26_Real_World_Laboratories
2. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10441214/
3. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10995383/
4. https://www.rndtoday.co.uk/latest-news/promoting-innovation-through-living-labs/

2.4 Needs and Opportunities

AFoCO is currently engaged in over 40 projects, yet there remain many untapped scientific outputs that need to be fully explored and disseminated. A shortage of researchers combined with growing needs for enhanced human resource development and capacity-building has hindered the ability to maximize the scientific impact of these projects. While the potential for generating robust data and insights exists, the R&D sector can play a pivotal role in amplifying these project results at both the domestic and regional levels across Asia.

Currently, the number of scientific studies and experiments arising from these projects remains relatively low. By bolstering the R&D sector, AFoCO can better promote the findings and methodologies developed through its projects, fostering collaboration and enabling wider dissemination of knowledge. Such efforts will support the growth of scientific inquiry and innovation, which are vital to addressing forest management and sustainability challenges in the region.

Moreover, the need for socio-economic and cross-sectoral evidence is becoming increasingly critical. This type of data is necessary to demonstrate the broader impacts of forest-related initiatives, particularly regarding community livelihoods, biodiversity, and climate resilience. One promising approach to generate this evidence is the adoption of the **Living Lab concept**, which can provide an alternative method for observing and proving the multifaceted role of forests in Asia. These living labs can act as real-world platforms where researchers, policymakers, and local communities collaborate to experiment, monitor, and refine sustainable forest practices while simultaneously generating socio-economic and environmental data.

By integrating R&D more deeply into its projects and fostering collaborative platforms like living labs, AFoCO can enhance the scientific, environmental, and socio-economic contributions of its work, ensuring that the role of forests in Asia is fully understood, appreciated, and leveraged for sustainable development.

3. GOAL and MISSIONS

- **Goal**
    - By fostering cooperation among international organizations, businesses, research institutions, and local communities, sustainable forest management and human resource development will generate economic, environmental, and social value.
- **Missions**
    - **Sustainable Forest Management:** The Initiative pursues to manage forest resources sustainably while creating livelihood and economic opportunities.
    - **Human Resource Development**: The Initiative cultivates professionals needed for forest management and ecosystem conservation, and strengthens the capacity of local communities.
    - **Collaborative Innovation**: The initiative develops innovative forest management solutions through collaboration between businesses, research institutions, international organizations, and local communities.

4. EXPECTED OUTPUTS AND OUTCOMES

4.1 Expected Outputs

Policy and International Cooperation Strengthening: Support the development of forest management policies at the regional and global levels in Asia by providing scientific data and practical case studies based on the project's outcomes.

Economic Self-sufficiency: Establish a foundation for local communities to achieve economic self-sufficiency through the sustainable use of forest resources.

Human Resource Development: Train experts and local leaders in forest management and conservation, contributing to the long-term protection and advancement of forests. This will enhance the professionalism of forest management and improve the livelihoods and living standards of local communities.

Technology and Innovation: Introduce new technologies and approaches to enhance the efficiency and effectiveness of forest management. In particular, maximize the sustainability of forests through forest management and monitoring systems that utilize data from agricultural and forestry satellites.

4.2 Expected Outcomes

Forest Restoration and Protection: Achieve the restoration and protection of healthy ecosystems in local forests and establish a long-term sustainable forest management model.

Strengthened Climate Change Response: Through climate change impact analysis and carbon management activities, support the positioning of forests as a key element in addressing climate change, especially beyond the Post-SDG 2030 period.

Creation of a Mutual Growth Economic Model: Present a new economic paradigm where companies and local communities grow together**,** which supports sustainable development, strengthens corporate social responsibility, and promotes the economic self-sufficiency of local communities.

5. LIVING LAB CATEGORY

Based on the diagram in Figure 1, the four Living Labs (A, B, C, and D) can be categorized according to their position in relation to the level of 'research' and 'development'. Since the development is closely linked to the outputs of 'innovation', so the category shapes into 4 dimension of **research** and **development/innovation**:

- **Living Lab A (Top Right): High Research, High Innovation**
    - This category represents living labs that heavily integrate cutting-edge research with innovative solutions.
        i. They are focused on exploring new technologies, conducting experimental studies, and applying the findings to develop groundbreaking approaches.
        ii. They focus on generating new knowledge and applying it directly to real-world solutions through development projects.
    - Features:
        i. Advanced technology adoption, close collaboration with research institutions, and strong emphasis on scientific validation and practical application.
        ii. Strong integration of research into practical development, continuous testing and application of research findings in the field, innovation in both academic and practical domains.
    - Potential items:
        i. Forest restoration research
        ii. Introduction of technological innovations (drones, satellite observation, big data analysis, etc.)
        iii. Ecosystem service assessment
        iv. Special ecosystem research (mangroves, peatlands, etc.)
        v. Climate change response and carbon management
        vi. Assessment of biodiversity and ecosystem health status
        vii. Establishment of a real-time forest monitoring system

viii. Graduate scholarship program

- **Living Lab B (Top Left): Low Research, High Innovation**
    - Labs in this category focus more on practical innovation rather than deep research.
        i. They rely on existing knowledge and apply it in new, creative ways to address real-world problems, often prioritizing quick implementation of innovative solutions.
        ii. They aim to implement and develop solutions based on existing knowledge, focusing more on the application and scaling of solutions.
    - Features:
        i. User-driven innovation, focus on rapid prototyping and testing, reliance on practical experiences over research, solutions-oriented.
        ii. Applied development with existing technologies or methodologies, less emphasis on generating new research, focus on achieving rapid development and implementation.
    - Potential items:
        i. Development of forest-based business models
        ii. Development of non-timber forest products (NTFPs)
        iii. Sustainable wood management
        iv. Support for youth and startups
        v. Establishment of a win-win economic model

- **Living Lab C (Bottom Left): Low Research, Low Innovation**
    - These living labs operate with minimal research and limited innovation.
        i. They may be working on improving existing solutions or implementing basic practices without pushing the boundaries of innovation or conducting extensive research.
        ii. They may be in the early stages of exploration, working on incremental improvements, or testing simple, established ideas.
    - Features:
        i. Focus on incremental improvements, practical and low-cost solutions, adapting existing tools and methods without heavy research or innovative approaches.
        ii. Limited innovation and research, practical or small-scale projects, gradual progress toward development without major research efforts.
    - Potential items:
        i. Education and participation of local residents
        ii. Professional training programs

- **Living Lab D (Bottom Right): High Research, Low Innovation**
    - These living labs emphasize research but with lower emphasis on immediate innovation.

        i. They prioritize theoretical and empirical research, seeking to understand phenomena deeply before pushing for innovation. The focus may be on data collection and generating evidence to inform future innovations.
        ii. They focus on producing theoretical knowledge, data, and insights, which could later inform development efforts, but do not engage in active development projects at this stage.
    - Features:
        i. Data-driven, research-oriented, building a strong theoretical foundation, longer-term focus on generating knowledge before applying innovations.
        ii. Research-centric, generating data and knowledge for future application, less emphasis on immediate development or practical application.
    - Potential items:
        i. Policy development and support
        ii. Special ecosystem research (mangroves, peatlands, etc.)
        iii. Ecosystem service assessment
        iv. Forest restoration research
        v. Climate change response and carbon management

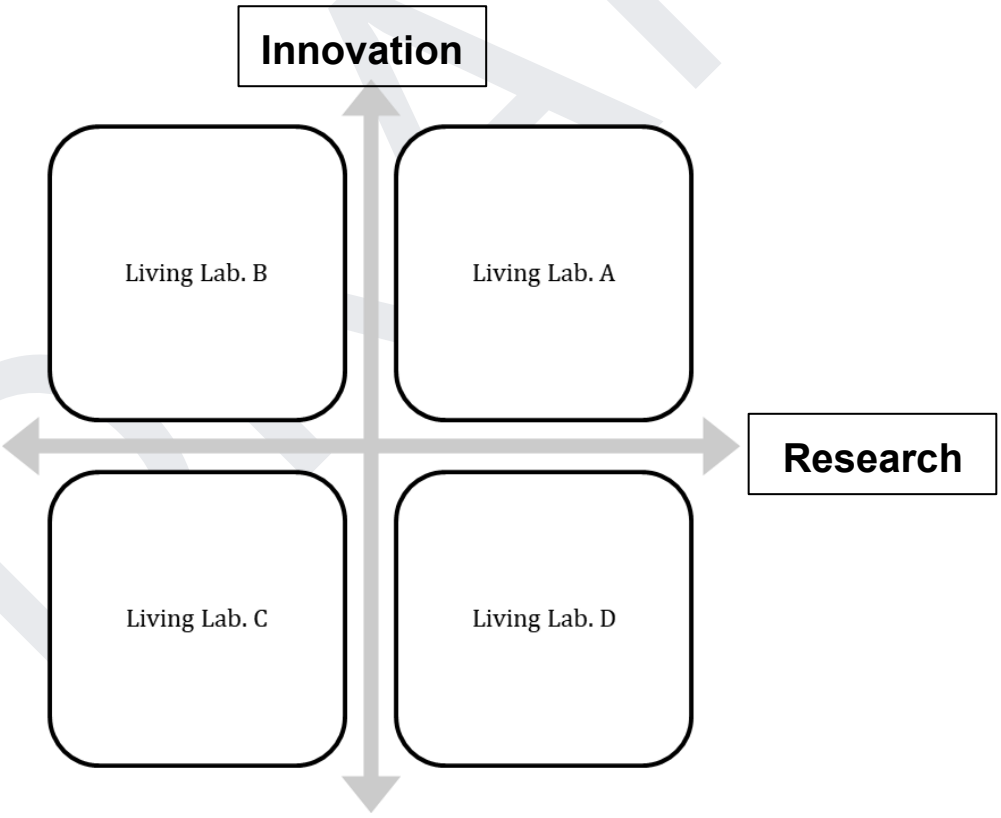

Figure 1. Living Lab A (*a balanced combination of research and development/innovation*), Living Lab B (*focuses on development/innovation over research*), Living Lab C (*a practical focus with less emphasis on both research and development/innovation*), and Living Lab D (*emphasizes research*).

6. PROSPECTIVE STAKEHOLDERS

6.1 Direct Stakeholders (in AFoCO)

- Member Countries: Governments of member countries will play a pivotal role in policy alignment and project implementation at the national level.
- Secretariat: Responsible for coordinating the entire project and facilitating international cooperation, leading communication among stakeholders.

6.2 Indirect Stakeholders (others)

- International organizations
- Government of non-Member Countries
- Research institutes
- Education institutes
- Corporates

7. POTENTIAL TIMELINES

The timeline is set by 10 years, aligning with the target period of AFoCO Climate Action Plan.

- 2024-2025: Develop pilot Living Lab projects in the Member Countries *(potential fund: AFoCO-NIFoS research fund)*
- 2025-2026: Develop a project targeted ASEAN region, including Timor-Leste *(potential target source: ASEAN-Korea Cooperation Fund)*
- 2026-2027: Develop a project targeted Central Asian region, including Bhutan and Mongolia *(target source: to be identified)*
- 2033-2034: Evaluation and preparation for the next living lab phase

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Annex-1. Climate actions, impact and milestones and their links to AFoCO's Strategic Priority Program Areas

Priority Program Area	Priority Program Area Outcome	Climate Action	Target	Expected impact	Milestone (hectares)		
					2025–2027	2027–2030	2030–2034
Forest land rehabilitation and conservation	Degraded terrestrial and coastal forest land, including mangroves, flooded forests, peatlands, are restored or rehabilitated to healthy ecosystems through participatory design, planting, management and monitoring	Forest land rehabilitation and restoration	100,000 hectares (unconditional)	Atmospheric carbon removed through restored and / or rehabilitated terrestrial and coastal forest land	50,000	30,000	20,000
Community and circular bioeconomy	Enhanced forest-based value-chains, livelihoods and adaptive capacities of forest-dependent communities	Community solutions	100 nature-based community forestry businesses 20 green villages	Community well-being enhanced from nature-based forest value chains, resilient livelihoods, and collective actions in green villages	60 15	30 5	10 0
Climate–forest disaster risk management	Early warning systems, risk prediction/forecast, and models are used by member countries to mitigate forest disaster risks. An interactive, integrated forest data management system in place that captures changes, impacts, issues and achievements within and between Member Countries	Digital innovations	ICT-based technologies exchanged and used by Member Countries AFoCO Integrated forest data management system in place.	Reduced risk exposure from application of early warning systems and prediction models in Member Countries. Improved forest data communication, storing, sharing and access by and amongst Member Countries.			

AFoCO Forest Fire Management in Asia Initiative

Strengthening Regional Capacities and Technologies for Effective Forest Fire Management

1. BACKGROUND

Forest fires are an increasing concern across Asia, impacted by climate change, human activities such as slash-and-burn agriculture, and deforestation. These fires significantly affect ecosystems, biodiversity, and forest-dependent communities. Between 1990 and 2016, about 21.3% of global forest loss occurred in the member countries of Asian Forest Cooperation Organization (AFoCO)[1], highlighting the region's vulnerability. In response, the "Forest Fire Management in Asia Initiative" aims to strengthen regional capacities and integrating advanced technologies to enhance the prevention, management, and mitigation of forest fires across Asia. With the growing threat of forest fires driven by climate change, human activities such as slash-and-burn agriculture, and deforestation, this initiative aims to address the increasing frequency and intensity of forest fires in the region. The initiative seeks to equip member countries with the knowledge, skills, and technological tools necessary to effectively manage forest fires and reduce their devastating impacts on ecosystems, biodiversity, and forest-dependent communities.

AFoCO has already improved its technical and operational responses to forest fires through projects such as the Capacity Building on Enhancing Resilience to Forest Fire[2] and ICT for Adaptation to Climate Change and Forest Fire Management in the Mekong Region[3]. However, to fully address the increasing scale and intensity of these fires, there is an urgent need to expand capacity-building efforts. This expansion should encompass all levels—from field rangers to policymakers—to create a coordinated and comprehensive approach to fire prevention and management. Through a combination of capacity-building programs, technology integration, public engagement, and policy support, the initiative plans to provide targeted training for forest rangers, government officials, and policymakers. Advanced ICT tools and early warning systems will be introduced to improve fire detection and monitoring, while community involvement in fire prevention and sustainable livelihoods will be promoted to reduce fire-prone activities. The initiative also emphasizes regional collaboration, aiming to foster a coordinated and

[1] Global forest loss between 1990 and 2016 was 132,444,900 ha, wherein the loss of 16 AFoCO member countries occupied 26,950,000 ha (source: World Bank Data https://data.worldbank.org/).

[2] Capacity Building on Enhancing Resilience to Forest Fire, and Local Livelihood and Market Linkages (AFoCO/032/2022) https://afocosec.org/project/clmv/

[3] Information and Communication Technology (ICT) for Adaptation to Climate Change and Forest Fire Management in the Mekong Region (AFoCO/037/2023) https://afocosec.org/project/037/

comprehensive approach to forest fire management, aligned with global climate goals such as the Paris Agreement and the Sustainable Development Goals (SDGs).

2. RATIONALE

2.1 Global agenda

Forest fire management plays a critical role in achieving global climate goals, particularly under the **Paris Agreement** and the **Sustainable Development Goals (SDGs)**. Reducing emissions from deforestation and forest degradation (REDD+) and enhancing forest fire resilience are essential steps toward climate adaptation and biodiversity conservation.

The United Nations **Pact for the Future**[4] emphasizes the critical role of forests in climate mitigation and disaster risk reduction, highlighting the increasing threat of forest fires due to climate change. It calls for global efforts to strengthen **early warning systems** by 2027, aiming for universal coverage to protect against multi-hazard disasters, including forest fires (Paragraph 28 under Action 9). The Pact stresses the importance of **conserving and restoring forests** to enhance their role in carbon sequestration and reduce vulnerability to disasters. Forest conservation, sustainable management, and ecosystem restoration are seen as essential steps to mitigate the risks of forest fires, particularly in regions prone to deforestation and environmental degradation (Paragraph 29 under Action 10).

Furthermore, the Pact underscores the need for **capacity-building and community engagement** to enhance resilience to forest fires. It promotes the use of **digital innovations** including remote sensing and geospatial technologies for real-time monitoring and early detection of fire risks (Paragraph 29 under Action 10). **Local communities** are central to this agenda, with a focus on developing sustainable livelihoods and involving them in forest management to reduce fire-prone activities (Paragraph 29 under Action 10). These efforts, combined with increased international cooperation and support for developing countries, are critical to managing and reducing the global impact of forest fires (Paragraph under Action 10).

2.2 Forest fire management in the frame of AFoCO Strategy

The **AFoCO Strategic Plan 2024-2030** views forest fire management as a crucial component of its broader agenda for climate adaptation and forest disaster risk reduction. The plan emphasizes the need to enhance the resilience of forests and communities to the growing threat of forest fires, which are exacerbated by climate change. It advocates for the integration of advanced technologies, such as early warning systems and real-time monitoring, to detect and mitigate fire risks. Additionally, the strategic plan highlights the importance of capacity-building at all levels—

[4] The Pact for the Future is a comprehensive framework developed by the United Nations to address key global challenges, with a focus on sustainable development, climate change, biodiversity conservation, and social equity. It is rooted in the goals of the 2030 Agenda for Sustainable Development and the Paris Agreement, emphasizing the need for international cooperation and multi-stakeholder partnerships to create a more resilient, equitable, and sustainable world.

ranging from local communities to government agencies—to effectively manage and prevent forest fires. AFoCO seeks to foster regional collaboration by promoting the exchange of knowledge, expertise, and technologies across its member countries, thereby improving overall preparedness and response to forest fire disasters.

The **Climate Action Plan 2025-2034** views forest fire management as an integral part of its strategy to combat climate change and enhance climate resilience. It recognizes forest fires as a major threat to both carbon sequestration efforts and the health of ecosystems, exacerbated by rising global temperatures. The plan advocates for the implementation of ICT-based early warning systems and monitoring technologies to detect and respond to fires promptly, reducing the potential for large-scale damage. Additionally, it highlights the importance of community-based approaches, promoting the engagement of local communities in fire prevention and management while fostering sustainable livelihood practices that reduce fire risks. The plan underscores the need for regional cooperation, enhanced capacity-building, and the integration of forest fire management into broader climate adaptation frameworks to mitigate the impact of fires on forests and communities.

Capacity building is one of the core actions to serve the member countries. Diverse Training courses have been implemented at the **AFoCO Regional Education and Training Center (RETC)** since its inception in 2018, and forest fire management is one of the core training areas in line with AFoCO Strategic Priorities. Scholarship programs for graduate schools under the AFoCO's Landmark Program, long-term research-purpose training, and consultative workshops are also actively implemented. In collaboration with the French Ministry of Europe and Foreign Affairs, the RETC has been scaling up its capacity-building programs for forest fire management targeting forest fire suppression practitioners since 2022.

2.3 Needs and Opportunities: Human Resources Factor Must be Considered as a Key Driver of Forest Fires[5]

At the regional level, human resources limitations present a significant challenge to effective forest fire management across Asia. Many forest fire management agencies in the region suffer from a lack of personnel, technical expertise, and funding to adequately address forest fire risks. Key skills such as fire behavior prediction, suppression techniques, and post-fire rehabilitation are often absent, hindering the capacity to control fires when they occur. Additionally, governance gaps complicate coordination between government bodies, communities, and non-governmental organizations, further reducing the efficacy of forest fire management efforts. The low level of public awareness around fire prevention also undermines these efforts, as communities are often unaware of the necessary precautions or the impacts of fire on ecosystems and health. These factors collectively contribute to the recurrence and intensity of forest fires across the region.

[5] Excerpted and modified from the concept note of "AFoCO-France Joint Capacity Building Program on Forest Fire Management for Climate Action", reported to the Ninth Session of the Assembly (A-23-9-11)

Within AFoCO member countries, there is a clear disparity in capacity-building efforts related to forest fire management. Some countries (e.g., Indonesia and Thailand) have relatively well-established agencies with advanced capabilities in fire prevention and response, while others struggle due to limited resources and expertise. Despite ongoing research in some member countries, formal education in forest fire management at the graduate level remains scarce, with most countries—except Indonesia—lacking specialized master's or doctoral programs. This gap between academic training and practical application has hindered the development of a highly skilled workforce to address forest fires effectively.

Human activities, driven largely by socio-economic factors, are also a critical aspect of forest fire management in Asia. Practices such as slash-and-burn agriculture, land clearing, and concession burning are deeply embedded in many communities as the most affordable methods for land preparation. However, poverty exacerbates the reliance on these fire-driven activities, with shifting cultivation still prevalent among migrant farmers. Addressing these issues requires not only immediate public awareness campaigns but also long-term solutions to develop alternative land management practices and sustainable income opportunities. The implementation of community-based programs to educate people about the environmental, health, and socio-economic impacts of forest fires, combined with innovations in sustainable agriculture, could help change fire-ignition behaviors and reduce the frequency and scale of forest fires in the region.

3. GOAL and MISSIONS

Goal

To build the capacity of forest fire management stakeholders across Asia, equipping them with the knowledge, skills, and technologies needed to prevent, manage, and mitigate forest fires effectively.

Missions

- **Capacity Building at All Levels:** Provide targeted training programs for forest rangers, government officials, and policymakers to enhance their technical, operational, and strategic capacity in managing forest fires.
- **Technology Integration:** Introduce advanced ICT tools and early warning systems to improve fire detection, monitoring, and suppression capabilities.
- **Public Engagement and Community Empowerment:** Involve local communities in forest fire prevention and provide them with alternative livelihood options to reduce fire-prone activities.
- **Policy Support:** Strengthen national and regional governance frameworks for coordinated forest fire management.

4. EXPECTED OUTPUTS AND OUTCOMES

4.1 Expected Outputs

Trained Forest Rangers: Certified trainers who will lead domestic training programs and train field-level practitioners in forest fire prevention and management.

Technology Deployment: Early warning systems and fire detection tools installed in key fire-prone regions, supported by comprehensive training programs on their use.

Policy-Level Training: Policymakers and government officials trained in forest fire governance and climate-adaptive strategies.

4.2 Expected Outcomes

Improved Capacity: Significantly enhanced technical, operational, and strategic capacities across AFoCO member countries, leading to better forest fire prevention, detection, and management.

Resilient Communities: Communities engaged in sustainable livelihoods and forest management, reducing reliance on fire-prone practices like slash-and-burn agriculture.

Regional Cooperation: Strengthened regional collaboration through shared expertise, technologies, and governance frameworks.

5. PROSPECTIVE STAKEHOLDERS

5.1 Direct Stakeholders (in AFoCO)

- Member Countries: Governments of member countries will play a pivotal role in policy alignment and project implementation at the national level.
- Secretariat: Responsible for coordinating the entire project and facilitating international cooperation, leading communication among stakeholders.

5.2 Indirect Stakeholders (others)

- International organizations, local NGOs, academic institutions, research agencies, training agencies, and among others specializing in fire detection and suppression technologies.

6. POTENTIAL TIMELINES

The timeline is set by 10 years, aligning with the target period of AFoCO Climate Action Plan.

- 2024-2025: Pilot capacity-building programs and technology deployment *(potential source of fund: AFoCO RETC, France, etc.)*

- 2026-2030: Training programs and strengthen governance frameworks across AFoCO member countries *(potential source of fund: ROK-France joint fund for Forest Fire Management in Asia)*
- 2030-2034: Evaluate the outcomes of Phase-1 and prepare for further scaling *(potential fund: to be identified)*

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AFoCO REDD+ Readiness Initiative

1. Introduction

AFoCO has advanced forest cooperation in Asia by focusing on sustainable forest management, biodiversity conservation, reforestation, and ecosystem services. It supports climate change mitigation through REDD+ (Reducing Emissions from Deforestation and Forest Degradation, and the role of conservation, sustainable management of forests, and enhancement of forest carbon stocks in developing countries) initiatives, addresses deforestation, forest degradation, and desertification, and mitigates forest-related disasters. AFoCO also strengthens stakeholder capacity through research, technology transfer, education, and partnerships with international forest initiatives.

AFoCO member countries are considering incorporating the LULUCF sector, including forests, either directly or indirectly, into their Nationally Determined Contributions (NDCs). Ten (10) member countries are implementing national REDD+ programs in line with the UNFCCC Warsaw Framework. However, most countries remain in the readiness phase, working to establish and operationalize the four key elements of the Warsaw Framework.

2. Objective of the Initiative

The objective of this initiative is to support AFoCO member countries in establishing the four key elements of the UNFCCC Warsaw Framework for REDD+ (National REDD+ Strategy or Action Plan, National Forest Monitoring System, Forest Reference / Forest Reference Emission Level, and Safeguard Information System). This will be achieved by fostering partnerships between AFoCO member countries and partners to mobilize resources and collaboration for technology development and transfer, capacity building, and by focusing on research, technical assistance, and policy advice.

3. Activities of the Initiative

The initiative will provide overall support for the REDD+ readiness of AFoCO member countries, and while not limited to, the specific activities include the following:

- Identification of AFoCO members and partners interested in participating in the initiative, followed by confirming cooperation needs and willingness to support among entities to establish partnerships.
- Development and implementation of detailed collaborative activities to complete the REDD+ Readiness of the REDD+ countries.

- Development and implementation of sub-national (provincial or regional) REDD+ Readiness to ensure consistent implementation of national REDD+ between central and local governments.
- Support for the submission of national REDD+ documents to the UNFCCC and registration on the REDD+ Web Platform.

4. Expected Outcomes

This initiative will enhance global climate efforts by increasing forest carbon sequestration and promoting sustainable development.

The initiative will support AFoCO members in achieving REDD+ readiness, advancing towards Result Based Payments (RBPs) and/or International Transferred Mitigation Outcome (ITMO) cooperation under Article 6 of the Paris Agreement, and contributing to NDC targets through the forest sector.

5. Implementation and Monitoring

The initiative will be implemented in three phases, with monitoring and evaluation carried out at each stage based on specific performance indicators.

Phase 1 will involve identifying the collaboration needs of AFoCO member countries and potential partners, assessing readiness gaps, and establishing partnerships.

Phase 2 will focus on developing a tailored REDD+ Readiness collaboration program, including detailed activities to support member countries in achieving REDD+ readiness. Finally, in

Phase 3, the program will be implemented, with progress monitored and achievements reported to the international community, including the UNFCCC.

The specific details of each phase and the corresponding monitoring plans will be determined through future consultations with stakeholders.

6. Conclusion and Call to Action

The AFoCO REDD+ Readiness Initiative is poised to play a vital role in advancing the REDD+ preparedness of its member countries, supporting global efforts to combat climate change while promoting sustainable forest management.

By fostering partnerships, mobilizing resources, and providing targeted technical and policy support, this initiative will facilitate the completion of the REDD+ readiness phase and pave the way for the realization of Results-Based Payments (RBPs) and cooperation under Article 6 of the Paris Agreement. Through a phased approach and continuous collaboration with stakeholders, AFoCO member countries will be empowered to

contribute more effectively to their NDC targets and global climate goals, ensuring a resilient and sustainable future for forests and the communities that depend on them.

We call upon governments and relevant institutions to actively participate and support this initiative.