

IPSI Collaborative Activity Proposal Form

The following form is for use when submitting proposed IPSI Collaborative Activities for consideration by the IPSI Steering Committee. See the Collaborative Activity Guidelines on p. 3 for more information.

Please return the completed form to the IPSI Secretariat (isi@unu.edu).

IPSI Collaborative Activities are the activities that shall be undertaken by more than one IPSI member and constitute an important part of IPSI activities with the purpose of fostering collaboration within the IPSI membership and implementing the IPSI Strategy and Plan of Action. The IPSI Collaborative Activities shall be developed and implemented with the endorsement of the Steering Committee in accordance with the Collaborative Activity Guidelines. Resource mobilization for IPSI collaborative activities shall be the responsibility of the implementing members in principle. – IPSI Operational Guidelines, Chapter 5.4

Date of Application:	2024/07/25
Project title:	
Satoyama Mace Initiative: Regional Revitalization of SEPLS in Carbon Credit	
Collaborating organizations (IPSI members): <i>(*Please underline the leading organization)</i>	
Agency of Rural Development and Soil and Water Conservation SEPLS Carbon Credit Regional Revitalization Center (Seed Coleus Greenhouse (IPSI))	
Other contributing organization(s) (including IPSI non-members):	
Research Center for Applied Sciences, Academia Sinica (RCAS), National Cheng Kung University, National Taiwan University, Tainan New Agricultural Biotechnology Production Cooperative	
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Expected term (e.g. 1 January 2024 – 31 December 2025):	
1 September 2024 – 31 December 2030	
IPSI strategic objective(s) addressed (tick all that apply; see p. 3 for more details):	
V	1. Knowledge Co-Production, Management, and Uptake for SEPLS
V	2. Institutional Frameworks and Capacity Development for SEPLS
V	3. Area-Based Conservation Measures for SEPLS
V	4. Ecosystem Restoration for SEPLS
V	5. Sustainable Value Chain Development for SEPLS

Continued on next page.

Description of the activity:

Please provide as much information as possible on:

- Background
- Activities (including site locations if applicable)
- Expected outcomes
- Actors and task sharing
- How the activity relates to the *IPSI Strategy* and *IPSI Plan of Action*
- Resources, funding
- Monitoring and reporting

1. Background

There are many locations worldwide where societies have existed in harmony with nature for centuries but are now threatened by rapid socioeconomic changes. Particularly in countries, these changes are evident in the decline and abandonment of agricultural and forestry lands due to demographic aging and depopulation in rural communities, leading to diminished local biodiversity in cultural and productive landscapes. In these abandoned lands, balanced ecosystems are disrupted, and invasive alien species threaten native species. If production forests are not properly managed, they will lose their ability to sustain life and prevent disasters. Additionally, the traditional wisdom and culture passed down in these productive landscapes will be lost. However, our proposed project offers a promising opportunity to restore sustainable landscapes in these areas, balance biodiversity conservation and sustainable use, and create a more prosperous future for the local communities. By introducing artificial intelligence digital carbon sink management, the carbon sinks of farmland, production forests, seascapes, and landscapes will increase the derived carbon rights, creating more income to maintain the natural environment and eliminating the traditional wisdom and culture passed down. This project could transform these communities' lives, alleviating forms and dimensions of poverty, accelerating structural transformation to achieve sustainable development, and enhancing resilience to crises and shocks.

In February 2024, the organization Seed Coleus Greenhouse became a member of the International Partnership for the Satoyama Initiative (website: <https://ipsi.mse.ncku.edu.tw>) under the United Nations University Institute for the Advanced Study of Sustainability. The Seed Coleus Greenhouse is a community organization and research base (Address: No. 92-50, Zhuzijiao, Jhulin Village, Yanshui Dist., Tainan City, Taiwan) supported by National Cheng Kung University for the implementation of the Satoyama Initiative. Seed Coleus Greenhouse is actively engaged in regional activities related to new agriculture, encompassing biodiversity, luminous plants, and carbon credit initiatives. These activities aim to promote and support socio-ecological production landscapes and seascapes (SEPLS), contributing to the enhancement of biodiversity and the well-being of the local community. Furthermore, we research the parameters associated with carbon emission reduction, focusing on resource utilization, the cyclic use of natural resources, sustainable multi-functional management of natural resources and ecosystem services, as well as the development of sustainable socio-economies that enhance community resilience through ecosystem-based approaches for climate change mitigation and adaptation activities. Our strategic plan involves the creation of a greenhouse gas (GHG) crediting program with the issuance of Verified Carbon Units (VCUs) specifically designed for the management of Socio-Ecological Productive Landscapes and Seascapes (SEPLS) to help countries make better use of their natural resources, develop productive forces, improve the living standards of their people and contribute to the world economy.

Agency of Rural Development and Soil and Water Conservation in the Ministry of Agriculture in Taiwan guides the farmers' groups, Tainan New Agricultural Biotechnology Production Cooperative, to establish the center, entitled SEPLS Carbon Credit Regional Revitalization Center in SEPLS Carbon Credit Regional

Revitalization Center in Seed Coleus Greenhouse (Address: No. 92-50, Zhuzijiao, Jhulin Village, Yanshui Dist., Tainan City, Taiwan) for agricultural-related facilities for the production, production storage, and sales guidance of agricultural productions and crop carbon sinks. "SEPLS Carbon Credit Regional Revitalization Center" is set up as a Non-Profit Organization (NPO) to help least developed countries and developing countries to further the non-profit's mission for issuing VCUs of SEPLs management as an international and transnational activities. This objective aims to channel financial resources towards international and transnational activities that effectively reduce and remove emissions, improve livelihoods, and protect the natural environment.

The coactivity, entitled "Regional Revitalization of Socio-Ecological Productive Landscapes and Seascapes in Carbon Credit", is named "Satoyama Mace Initiative". The Seed Coleus Greenhouse set up the NPO, "SEPLS Carbon Credit Regional Revitalization Center", to develop methodologies for quantifying project benefits, particularly the GHG emission reductions or removals for community development. Subsequently, the center aims to issue Verified Carbon Units (VCUs) to manage SEPLS. By marrying scientific rigor and transparency with innovative thinking, the center aspires to enhance understanding and raise awareness regarding the importance of SEPLS for achieving the Convention on Biological Diversity (CBD) objectives, the Sustainable Development Goals (SDGs) and Kunming-Montreal Global Biodiversity Framework (KMGBF) targets. These objectives include the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of benefits from utilizing genetic resources, particularly in the biotechnology field, by regional revitalization. Through carbon credit economics, the center plans to achieve its goals:

1. Generate and disseminate knowledge on the implementation and progress of the SDGs and KMGBF
2. Build multi-stakeholder partnerships and interconnections to support the achievement of the SDGs and KMGBF
3. Eradicate poverty in all its forms and dimensions
4. Accelerate structural transformation for sustainable development
5. Enhance the ability to withstand crises and shocks.

In order to achieve the concept of a sustainable field, the current building of the SEPLS Carbon Credit Regional Revitalization Center is made of recycled containers in Seed Coleus Greenhouse (Address: No. 92-50, Zhuzijiao, Jhulin Village, Yanshui Dist., Tainan City, Taiwan). Funding supported by granted projects from National Cheng Kung University and National Science and Technology Council, Taiwan (NSTC) is approximately USD 482k for sustainable field maintenance, digital technology in education, and technologies for measuring carbon sequestration, carbon sequestration methodology, KMGBF/CBD/SDGs-targets GHG program, quantification of GHG emission reductions, and biotechnology. Agency of Rural Development and Soil and Water Conservation supports USD 30k in the arrangement of the education venues (places) establishment for the field schooling to practice conduct seminars, workshops, courses, training classes, and then develop the e-learning alternative education programmes to expand service areas.

The center's focus spans key areas within biotechnology to develop new agricultural technologies, ranging from restoration and sustainable use to carbon credit in countries. The initiatives ensure appropriate access to genetic resources and the suitable transfer of relevant technologies. This process considers all rights associated with those resources and technologies. Additionally, it involves securing appropriate funding through various international agreements. The goal is to harmonize these efforts with the well-being of people's livelihoods, creating a comprehensive approach that aligns with international agreements and prioritizes

equitable and sustainable practices, helping countries eliminate poverty and achieve sustainable economic growth and human development.

2. Objective

This project aims to focus on geologic carbon sequestration of high-diversity natural landscape resources by the implementation of SEPLS Carbon Credit Regional Revitalization Center. Agency of Rural Development and Soil and Water Conservation in the Ministry of Agriculture in Taiwan guides the farmers' groups, Tainan New Agricultural Biotechnology Production Cooperative, to establish the center, SEPLS Carbon Credit Regional Revitalization Center in SEPLS Carbon Credit Regional Revitalization Center in Seed Coleus Greenhouse (Address: No. 92-50, Zhuzijiao, Jhulin Village, Yanshui Dist., Tainan City, Taiwan) for agricultural-related facilities for the production, production storage, and sales guidance of agricultural productions and crop carbon sinks. SEPLS Carbon Credit Regional Revitalization Center supported by partners services the developing countries, in particular the least developed countries and small island developing states, as well as countries with economies in transition (Corresponding to KMGBF goals for 2050). SEPLS Carbon Credit Regional Revitalization Center supported by partners aims to develop methodologies for quantifying project benefits. Specifically, the center plans to quantify greenhouse gas (GHG) emission reductions or removals and issue Verified Carbon Units (VCUs) for the management of Socio-Ecological Productive Landscapes and Seascapes (SEPLS). The planned activities includes:

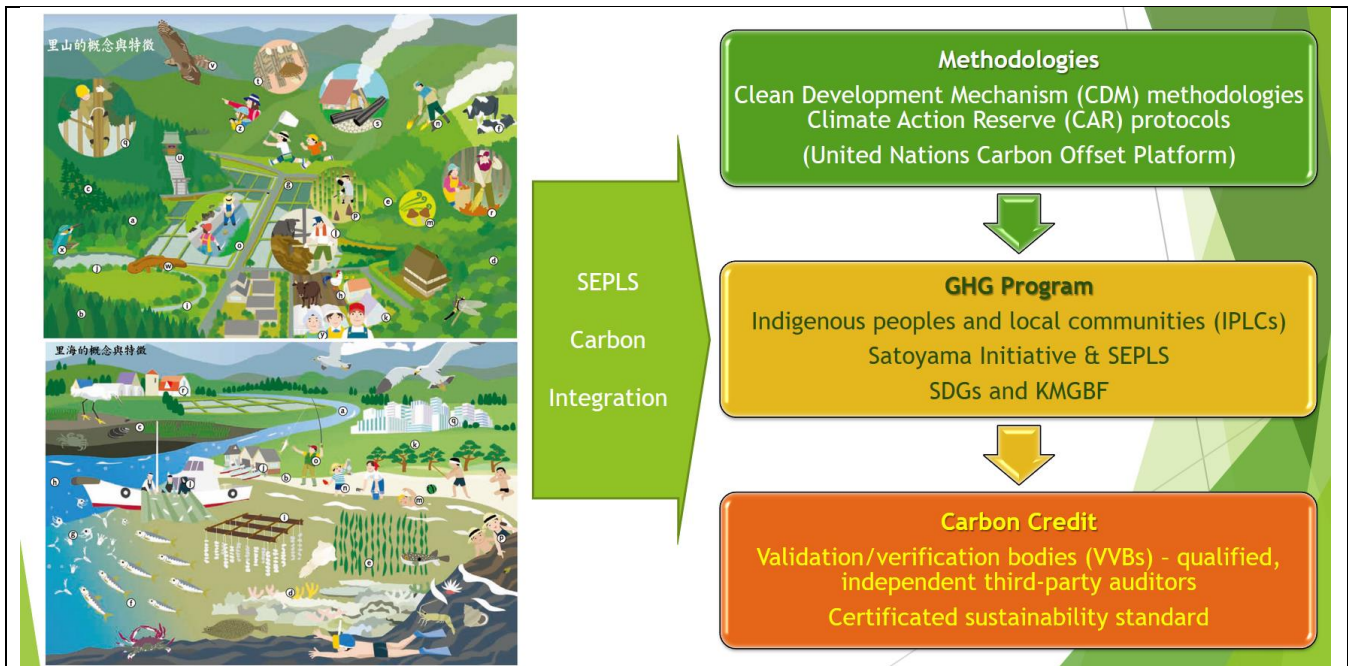
1. On-site actions: on-site activities for biotechnology/ greenhouse gas (GHG) methodology/ GHG project technology application technology application of SEPLS Clean Development Mechanism coupling with community-based conservation to reach sustainable practices. These activities aim to promote and support socio-ecological production landscapes and seascapes (SEPLS), contributing to the enhancement of biodiversity and the well-being of the local community. Furthermore, the parameters associated with carbon emission reduction, focusing on resource utilization, the cyclic use of natural resources, sustainable multi-functional management of natural resources and ecosystem services, as well as the development of sustainable socio-economies for physical/digital products enhances community resilience through ecosystem-based approaches for climate change mitigation and adaptation activities.
2. Partnership building: the multi-stakeholder platforms establishment among local communities /indigenous peoples, governments, private sector, and civil society to link community of practitioners and experience sharing.
3. Research: baseline or evidence base for SEPLS GHG project appraisal of carbon credit for SEPLS management
4. Research: the peer-reviewed paper & book publications of SEPLS Clean Development Mechanism
5. Education: textbooks development for technology application of SEPLS Clean Development Mechanism
6. Education: the arrangement of the education venues (places) establishment for the field schooling to practice conduct seminars, workshops, courses (including agricultural products and crop carbon sequestration (carbon credit) packaging and marketing management), training classes and other services from time to time.
7. Education: e-learning alternative education programmes to expand service areas in remote learning and replace in-person communication with online learning.

These VCUs can be monetized in the carbon market, providing projects with financial support to scale up, enhance the 5 Ps of the 2030 Agenda: People, Prosperity, Planet, Peace, and Partnerships, and support the achievement of the SDGs and KMGBF. The idea and application of this proposal, entitled “Satoyama Mace Initiative: Regional Revitalization of SEPLS in Carbon Credit”, is to achieve Kunming-Montreal Global Biodiversity Framework (KMGBF) through the Strategy and Plan of Action 2023-2030 of the International Partnership for the Satoyama Initiative.

3. Activities

Agency of Rural Development and Soil and Water Conservation in the Ministry of Agriculture in Taiwan guides the farmers' groups, Tainan New Agricultural Biotechnology Production Cooperative, to establish the center, entitled SEPLS Carbon Credit Regional Revitalization Center in SEPLS Carbon Credit Regional Revitalization Center, in Seed Coleus Greenhouse (Address: No. 92-50, Zhuzijiao, Jhulin Village, Yanshui Dist., Tainan City, Taiwan) for agricultural-related facilities for the production, production storage, and sales guidance of agricultural productions and crop carbon sinks. SEPLS Carbon Credit Regional Revitalization Center supported by partners services the developing countries, in particular the least developed countries and small island developing states, as well as countries with economies in transition (Corresponding to KMGBF for 2050). SEPLS Carbon Credit Regional Revitalization Center (Seed Coleus Greenhouse) develops new agricultural technologies (from greenhouse gas parameters to methodologies of management in Socio-Ecological Productive Landscapes and Seascapes (SEPLS)), ranging from restoration and sustainable use to carbon credit. The new agricultural technologies shape developing countries' sustainable development. The combination of SEPLS management in education digitalization and strategic innovation in carbon credit generates development financing in developing countries. Subsequently, the center aims to issue Verified Carbon Units (VCUs) to manage SEPLS and achieve the SDGs and KMGBF. By marrying scientific rigor and transparency with innovative thinking, the center aspires to enhance understanding and raise awareness regarding the importance of SEPLS for achieving structural transformation, building resilience, and leaving no one behind. SEPLS management is enhanced by three enablers: strategic innovation, digitalization, and development financing, as the following activities.

- ✓ Establishing a Non-Profit Organization (NPO) to help least developed countries(LDCs) and developing countries to further the non-profit's mission for issuing VCUs of SEPLs management as an international and transnational activity.
- ✓ Developing the parameters and methodologies to shape countries' sustainable development based on Kunming-Montreal Global Biodiversity Framework (KMGBF) targets.
- ✓ Education in carbon management of SEPLS by digitalization in countries.
- ✓ Counseling the carbon management of SEPLS in the greenhouse gas (GHG) crediting program.
- ✓ Providing the issuance of Verified Carbon Units (VCUs) designed for the Sustainable Development Goals.
- ✓ Assist in listing VCUs on the international and transnational trading platform.
- ✓ The overall picture of this IPSI collaborative activities is as the following.



Picture of Satoyama mace Initiative: regional revitalization of SEPLS in carbon credit (Ref: Left two pictures: UNU-IAS 2010)

Project period is from 2024 to 2030. The activity includes 4 phases in on-site actions, partnership building, research, and digital education. Four phases include:

Phase 1 Generation of Clean Development Mechanism in Adaptive Management of SEPLS

The carbon sequestration biotechnology is generated based on Clean Development Mechanism (CDM) methodologies and Climate Action Reserve (CAR) protocols (according to United Nations Carbon Offset Platform) according to the concept of SEPLS and the Satoyama Initiative. By knowledge co-production, management, and uptake in digital transformation, the carbon sequestration methodology and biotechnology involves in institutional frameworks and capacity development, area-based conservation measures, ecosystem restoration, and sustainable value chain development.

Phase 2 Developments of SEPLS Greenhouse Gas (GHG) Methodology

SEPLS greenhouse gas (GHG) methodology in the concept of SEPLS and the Satoyama Initiative develops in the field of agriculture and food security, biodiversity conservation, circular economy, ecosystem services, environmental degradation, land use and land use change, natural capital, natural resources management, supply chain, agriculture waste, water–energy–food and water-soil-waste connections and others. The carbon reduction in the concept of SEPLS and the Satoyama Initiative products is necessary to strengthen those that are central to the needs of decision-makers according to the user-driven approach.

Phase 3 Mature GHG Crediting Programs based on SEPLS Greenhouse Gas (GHG) Methodology

SEPLS Greenhouse Gas (GHG) Methodology applied on the encompassing diverse ecosystems (agro-ecosystems, secondary forest, artificial and natural wetlands, grassland, mountains, satoumi-coastal and marine ecosystems). SEPLS GHG Crediting Programs diffuse to Southeast Asia and Pacific countries, including Vietnam, Thailand, Malaysia, Taiwan, and so on by setting up service points in physical and digital.

Phase 4 Establish Demonstration Site of GHG Crediting Programs Related to Concept of SEPLS

GHG program under methodology related to SEPLS and the Satoyama Initiative is able to form a template and demonstration to interested parties and organizations of indigenous peoples and local communities, which also strengthens communication among local communities in different SEPLS across world. To share knowledge and experience between the various domains by international and transnational diffusion, we cooperate to develop

the world-leading digital products for the carbon credits line with the concept of SEPLS and the Satoyama Initiative.

3-1 Activities Location:

2024-2030: The countries in Southeast Asia and Pacific countries, such as Vietnam, Thailand, Malaysia, Taiwan, Marshall Islands, Palau, Tuvalu, and so on.

2030-2050: The countries worldwide

3-2 Who to involve:

Stakeholder representatives in this process may include:

- ✓ Government and other sectors that have an impact on the environment such as agriculture, fisheries, forestry, infrastructure, energy, finance, etc.
- ✓ Government and other sectors that benefit from conserving biodiversity, such as health departments, disaster risk planning, culture, etc.
- ✓ Local government representatives, to ensure representation and coordination at national level and to facilitate the development of local biodiversity strategies and action plans (LBSAPs)
- ✓ Representatives of neighboring countries, in cases where transboundary cooperation is being explored
- ✓ Private sector representation from sectors such as agriculture, forestry, aquaculture, fisheries, financial institutions, mining, local government, energy, transport, etc., as well as private landowners and private protected areas
- ✓ Civil society organizations and representatives of stakeholder groups, especially those that are known to be underrepresented
- ✓ Indigenous peoples and local communities (IPLCs), women and girls, the elderly, youth, and anyone who is unfamiliar with the workings of government

3-3 A pivotal step to support Action 2023-2030 for the Satoyama Initiative guided according to "Strategy and Plan of Action 2023-2030 of the International Partnership for the Satoyama Initiative", "IPSI Charter" and "IPSI Operational Guidelines":

SEPLS Carbon Credit Regional Revitalization Center develops methodologies for quantifying project benefits, particularly the GHG emission reductions or removals. Subsequently the Center aims to issue Verified Carbon Units (VCUs) for the management of SEPLS. By marrying scientific rigor and transparency with innovative thinking, the center aspires to enhance understanding and raise awareness regarding the importance of SEPLS for achieving the three objectives, including the Convention on Biological Diversity (CBD), Sustainable Development Goals (SDGs) and Kunming-Montreal Global Biodiversity Framework (KMGBF). These objectives include the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of benefits arising from the utilization of genetic resources, particularly in the biotechnology field. The center's focus spans three key areas within biotechnology:

(A) Developing new agricultural technologies, ranging from restoration and sustainable use to carbon credit.

(B) Preserving biodiversity.

(C) Study, work and spread spillover the knowledge facilitation, policy research, indicators research, capacity building, and on-the ground activities for SEPLS

The initiatives ensure appropriate access to genetic resources and the suitable transfer of relevant technologies. This process considers all rights associated with those resources and technologies. Additionally, it involves securing appropriate funding through various international agreements. The goal is to harmonize these efforts with the well-being of people's livelihoods, creating a comprehensive approach that aligns with international agreements and prioritizes equitable and sustainable practices.

By this way, Action 2023-2030 in the strategy and plan:

- Knowledge Co-Production, Management, and Uptake: Conduct research and knowledge management related to landscape and seascape approaches to address direct and underlying causes responsible for the loss of biological and cultural diversity as well as ecological and socio-economic services in carbon credit from SEPLS.
- Institutional Frameworks and Capacity Development: Strengthen institutional frameworks and develop capacity to integrate landscape and seascape approaches into policies and cross-sectoral strategies related to biodiversity, climate change, sustainable land and sea management, health, agri-food systems, and disaster risk reduction to maintain or enhance the benefits of SEPLS in carbon credit to the environment and society.
- Area-Based Conservation Measures: Promote effective conservation and management through protected areas and other effective area-based conservation measures (OECMs), recognizing indigenous and traditional territories where applicable, and facilitate their integration in carbon credit into the wider landscape and seascape to contribute to the relevant targets of the Kunming-Montreal Global Biodiversity Framework.
- Ecosystem Restoration: Promote the restoration of SEPLS by deriving carbon credit and contribute to the goals of the United Nations Decade on Ecosystem Restoration and relevant targets of the Kunming-Montreal Global Biodiversity Framework.
- Sustainable Value Chain Development: Promote sustainable practices, market-based mechanisms, and value chains to support sustainable production, including customary sustainable use and economies in carbon credit that rely on traditional knowledge and cultural values and practices, from SEPLS to contribute to the achievement of relevant targets of the Kunming-Montreal Global Biodiversity Framework.

3-4 Kunming-Montreal Global Biodiversity Framework (KMGBF) targets as a guide on applying landscape approaches to SEPLS Carbon Credit Regional Revitalization:

1. Knowledge co-production, management, and uptake for Socio-Ecological Production Landscapes and Seascapes (SEPLS) among university students, residents, farmers, social groups, and social organizations. Improve understanding of the Satoyama Initiative and its implementation through educational initiatives, information dissemination, development of carbon reduction methods, and diverse training activities. The primary objectives include elevating awareness and comprehension of the social-ecological-productive landscape advocated by Satoyama Initiative. This involves promoting pertinent information as a reference for decision-making, encompassing aspects such as the value, history, status, positive and negative influencing factors, changing trends, and the interplay between tradition and modernity in the sustainable management of social-ecological-productive landscapes. Additionally, emphasis is placed on the relevance to national regulations and international treaties, with a specific focus on traditional knowledge, innovations, and practices outlined in the Convention on Biological Diversity. The overarching objective is to achieve equilibrium between production and the preservation of biodiversity, ecosystems, and resource sustainability. Consequently, the aim is to develop conservation measures specific to the distinctive features of Socio-Ecological Production Landscapes and Seascapes within designated areas.
2. Enhance the benefits derived from socio-ecological-productive landscapes by actively supporting

initiatives that improve ecosystem services, contributing to human well-being. Facilitate the exploration of innovative co-management systems within sustainable value chain development for Socio-Ecological Productive Landscapes and Seascapes (SEPLS). Strive towards achieving harmonious coexistence between human society and nature in alignment with institutional frameworks and capacity development tailored for SEPLS.

3. Strengthen human, organizational, and sustainable financial capabilities to effectively implement the Satoyama Initiative. Advocate for the mainstream integration of Satoyama Initiative-related issues and values, and actively promote the development of relevant policies.
4. Examine both the direct and indirect factors contributing to the deterioration and loss of ecological and socio-economic functions within biological and cultural diversity, as well as social-ecological-productive landscapes. Identify the preservation of existing functions, and focus on reconstructing, revitalizing, or restoring those that have been degraded or lost. This approach aims to sustainably utilize and manage land and natural resources, emphasizing the protection and reconstruction needed to achieve ecosystem restoration for Socio-Ecological Productive Landscapes and Seascapes (SEPLS). The overarching goal is to generate tangible benefits for the environment, livelihoods, and community well-being. Support land use projects that effectively address climate change, provide advantages to local communities and smallholders, and contribute to the conservation of biodiversity.
5. Pioneering agricultural practices, such as luminous plant cultivation and carbon credit initiatives, are being integrated with regional activities to enhance capacity building and implement on-the-ground activities for Socio-Ecological Productive Landscapes and Seascapes (SEPLS). Our commitment involves actively participating in research and practical endeavors aligned with the Satoyama Initiative. This engagement encompasses individual projects, such as case studies conducted by each member organization, as well as collaborative initiatives among member organizations.
6. Our development efforts are geared towards enhancing understanding and raising awareness regarding the crucial role of SEPLS in achieving the three primary objectives of the Convention on Biological Diversity (CBD). These objectives are the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of benefits arising from the utilization of genetic resources. Through our initiatives, we aim to emphasize the interconnectedness between SEPLS and these fundamental goals, fostering a deeper appreciation for the integral role SEPLS plays in fulfilling the overarching mission of the CBD.
7. We aim to bolster the management of Socio-Ecological Productive Landscapes and Seascapes (SEPLS) to effectively address climate change, provide tangible benefits to local communities and smallholders, and contribute to the conservation of biodiversity. Recognizing SEPLS management as a pivotal component of sustainable development, we believe that well-crafted management projects have the potential to safeguard endangered species, enhance ecosystem resilience, and combat climate change.

Thoughtfully designed management initiatives not only contribute to environmental preservation but also offer a range of socio-economic advantages to communities in and around these projects. These benefits may include new job opportunities through participation in greenhouse gas credit programs, improved access to healthcare and education, assistance in securing tenure to lands and resources, and the protection of traditional cultures. Through our commitment to effective SEPLS management, we aspire to create a harmonious balance that addresses ecological challenges while fostering the well-being and prosperity of local communities.

Most countries consist mostly of multifunctional landscapes and seascapes, and their coastal waters consist mostly of multifunctional seascapes. These landscapes and seascapes may cross national and other boundaries. That's too much for a government to manage, so landscape approaches cannot be applied everywhere, immediately. Actions of SEPLS Carbon Credit Regional Revitalization in SEPLS Carbon Credit Experiment Promotion Center in to reach these targets should be implemented consistently and in harmony with the Convention on Biological Diversity and its Protocols, and other relevant international obligations, taking into account national circumstances, priorities and socioeconomic conditions. Recognition of the efforts of local proponents of landscape approaches can encourage them to continue and to expand their efforts and

can serve as a model for others by the model of carbon credit program. SEPLS carbon credit regional revitalization approaches are tools and solutions for implementation and mainstreaming. SEPLS carbon credit regional revitalization approaches in carbon credit programs not only reduce threats to biodiversity but also meet people's needs through sustainable use and benefit-sharing by designing and shaping the implementation, corresponding to Kunming-Montreal Global Biodiversity Framework (KMGBF).

1. Reducing threats to biodiversity

TARGET 1: Plan and Manage all Areas To Reduce Biodiversity Loss

Ensure that all areas are under participatory, integrated and biodiversity inclusive spatial planning and/or effective management processes addressing land- and sea-use change, to bring the loss of areas of high biodiversity importance, including ecosystems of high ecological integrity, close to zero by 2030, while respecting the rights of indigenous peoples and local communities.

SEPLS Carbon Credit Regional Revitalization approaches

Target 1 inherently acknowledges the need for landscape approaches. It can be applied more-or-less as it is at the national level in the SEPLS Carbon Credit Program.

Possible SEPLS Carbon Credit Programs -related indicators

- Number of local authorities applying landscape approaches in a country
- Percentage of land and seas covered by biodiversity-inclusive spatial plans
- Proportion of agricultural area under productive and sustainable agriculture
- Progress towards sustainable forest management
- Progress towards sustainable water management
- Number of integrated landscape initiatives
- Proportion of agricultural area managed with climate-, water- and biodiversity-friendly practices
- Availability of geospatial mapping tools to support decision-making and landscape planning

TARGET 2: Restore 30% of all Degraded Ecosystems

Ensure that by 2030 at least 30 per cent of areas of degraded terrestrial, inland water, and marine and coastal ecosystems are under effective restoration, in order to enhance biodiversity and ecosystem functions and services, ecological integrity and connectivity.

SEPLS Carbon Credit Regional Revitalization approaches

Actions toward target 2 can integrate landscape approaches by setting targets of restorative land and sea use, such as erosion control in agriculture and soil amelioration where industry and mining have occurred.

Possible SEPLS Carbon Credit Programs -related indicators

- Percentage of land and seas covered by biodiversity-inclusive spatial plans
- Progress towards sustainable forest management
- Progress towards sustainable water management
- Number of integrated landscape initiatives
- Proportion of agricultural area managed with climate-, water- and biodiversity-friendly practices
- Area of landscapes with continuous vegetative cover

TARGET 3: Conserve 30% of Land, Waters and Seas

Ensure and enable that by 2030 at least 30 per cent of terrestrial and inland water areas, and of marine and coastal areas, especially areas of particular importance for biodiversity and ecosystem functions and services, are effectively conserved and managed through ecologically representative, well-connected and equitably governed systems of protected areas and other effective area-based conservation measures, recognizing indigenous and traditional territories, where applicable, and integrated into wider landscapes, seascapes and the ocean, while ensuring that any sustainable use, where appropriate in such areas, is fully consistent with conservation outcomes, recognizing and respecting the rights of indigenous peoples and local communities, including over their traditional territories.

SEPLS Carbon Credit Regional Revitalization approaches

SEPLS carbon credit regional revitalization approaches can be applied to target 3 if protected areas are designated, and other effective area-based conservation measures(OECMs) recognized, with the agreement and commitment of those involved in managing those areas. Building capacities and creating opportunities for a wide set of stakeholders is central to applying landscape approaches to this target.

Possible SEPLS Carbon Credit Programs -related indicators

Number of local authorities applying landscape approaches in a country

Proportion of agricultural area under productive and sustainable agriculture

Progress towards sustainable forest management

Progress towards sustainable water management

Number of integrated landscape initiatives

Proportion of agricultural area managed with climate-, water- and biodiversity-friendly practices

Area covered by OECMs and mixed-us protected areas

TARGET 4: Halt Species Extinction, Protect Genetic Diversity, and Manage Human-Wildlife Conflicts

Ensure urgent management actions to halt human induced extinction of known threatened species and for the recovery and conservation of species, in particular threatened species, to significantly reduce extinction risk, as well as to maintain and restore the genetic diversity within and between populations of native, wild and domesticated species to maintain their adaptive potential, including through in situ and ex situ conservation and sustainable management practices, and effectively manage human-wildlife interactions to minimize human-wildlife conflict for coexistence.

SEPLS Carbon Credit Regional Revitalization approaches

Human-wildlife conflict is a part of target 4 that is particularly relevant to SEPLS carbon credit regional revitalization approaches, for example through ongoing consultation with those who interact most with wildlife. Raising of awareness about endangered species that occur in parts of the landscape or seascape where conservation is not a priority and reducing adverse impacts on the most threatened species, are also relevant.

Possible SEPLS Carbon Credit Programs -related indicators

Percentage of land and seas covered by biodiversity-inclusive spatial plans

Proportion of agricultural area under productive and sustainable agriculture

Progress towards sustainable forest management

Progress towards sustainable water management

Proportion of agricultural area managed with climate-, water- and biodiversity-friendly practices

Percentage improvement in the multiple dimensions of human well-being of households within a landscape

TARGET 5: Ensure Sustainable, Safe and Legal Harvesting and Trade of Wild Species

Ensure that the use, harvesting and trade of wild species is sustainable, safe and legal, preventing overexploitation, minimizing impacts on non-target species and ecosystems, and reducing the risk of pathogen spillover, applying the ecosystem approach, while respecting and protecting customary sustainable use by indigenous peoples and local communities.

SEPLS Carbon Credit Regional Revitalization approaches

Target 5 of the GBF implies human use of the landscape or seascape other than conservation. Therefore, it already encourages SEPLS carbon credit regional revitalization approaches as long as actions are applied to various parts of the landscape or seascape and not only conserved areas, and if applied to various users of the landscape or seascape.

Possible SEPLS Carbon Credit Programs -related indicators

Percentage of the population in traditional occupations

Proportion of agricultural area under productive and sustainable agriculture

Progress towards sustainable forest management

Progress towards sustainable water management

Proportion of agricultural area managed with climate-, water- and biodiversity-friendly practices

TARGET 6: Reduce the Introduction of Invasive Alien Species by 50% and Minimize Their Impact

Eliminate, minimize, reduce and or mitigate the impacts of invasive alien species on biodiversity and ecosystem services by identifying and managing pathways of the introduction of alien species, preventing the introduction and establishment of priority invasive alien species, reducing the rates of introduction and establishment of other known or potential invasive alien species by at least 50 per cent by 2030, and eradicating or controlling invasive alien species, especially in priority sites, such as islands.

SEPLS Carbon Credit Regional Revitalization approaches

Target 6 of the GBF incorporates SEPLS carbon credit regional revitalization approaches if actions acknowledge the role of multiple users of the landscape or seascape, and their potential role in reducing the introduction and spread of invasive species, for example in the control of invasive species in agriculture and aquaculture.

Possible SEPLS Carbon Credit Programs -related indicators

Percentage of land and seas covered by biodiversity-inclusive spatial plans

Percentage of the population in traditional occupations

Proportion of agricultural area under productive and sustainable agriculture

Progress towards sustainable forest management

Progress towards sustainable water management

Proportion of agricultural area managed with climate-, water- and biodiversity-friendly practices

National policy support for integrated landscape management

National policy support for integrated basin management

TARGET 7: Reduce Pollution to Levels That Are Not Harmful to Biodiversity

Reduce pollution risks and the negative impact of pollution from all sources by 2030, to levels that are not harmful to biodiversity and ecosystem functions and services, considering cumulative effects, including: (a)

by reducing excess nutrients lost to the environment by at least half, including through more efficient nutrient cycling and use; (b) by reducing the overall risk from pesticides and highly hazardous chemicals by at least half, including through integrated pest management, based on science, taking into account food security and livelihoods; and (c) by preventing, reducing, and working towards eliminating plastic pollution.

SEPLS Carbon Credit Regional Revitalization approaches

Pollution is caused by various land and water uses other than conservation, so actions toward target 7 can be aimed at addressing the need to reduce pollution by different forms of land use. At the same time, as stated in this target, food security and livelihoods should be taken into account, for example through acceptable levels of chemicals required for agriculture, aquaculture and forestry, and waste management.

Possible SEPLS Carbon Credit Programs -related indicators

Percentage of the population in traditional occupations

Proportion of agricultural area under productive and sustainable agriculture

Progress towards sustainable forest management

Progress towards sustainable water management

Proportion of agricultural area managed with climate-, water- and biodiversity-friendly practices

Percentage improvement in the multiple dimensions of human well-being of households within a landscape

TARGET 8: Minimize the Impacts of Climate Change on Biodiversity and Build Resilience

Minimize the impact of climate change and ocean acidification on biodiversity and increase its resilience through mitigation, adaptation, and disaster risk reduction actions, including through nature-based solutions and/or ecosystem-based approaches, while minimizing negative and fostering positive impacts of climate action on biodiversity.

SEPLS Carbon Credit Regional Revitalization approaches

Climate change mitigation, adaptation, and risk reduction can be applied by almost all land and sea users to almost all aspects of land and sea use. Target 8 is thus relevant across sectors and can borrow from existing climate change strategies. To contribute to target 8, actions need to explicitly consider negative impacts on biodiversity.

Possible SEPLS Carbon Credit Programs -related indicators

Level of cross-sector involvement in compiling an SEPLS carbon credit programs including National Biodiversity Strategy and Action Plans (NBSAPs).

Number of local authorities applying landscape approaches in a country

Percentage of land and seas covered by biodiversity-inclusive spatial plans

Number of integrated landscape initiatives

Proportion of agricultural area managed with climate-, water- and biodiversity-friendly practices

2. Meeting people's needs through sustainable use and benefit-sharing

TARGET 9: Manage Wild Species Sustainably To Benefit People

Ensure that the management and use of wild species are sustainable, thereby providing social, economic and environmental benefits for people, especially those in vulnerable situations and those most dependent on biodiversity, including through sustainable biodiversity-based activities, products and services that

enhance biodiversity, and protecting and encouraging customary sustainable use by indigenous peoples and local communities.

SEPLS Carbon Credit Regional Revitalization approaches

Target 9 reflects SEPLS carbon credit regional revitalization approaches when actions toward the target acknowledge and involve all relevant stakeholders impacted by, or impacting, the sustainable use of wild species. Traditional practices of IPLCs are particularly relevant due to their close relationship with wild species.

Possible SEPLS Carbon Credit Programs -related indicators

Level of cross-sector involvement in compiling an SEPLS carbon credit programs including NBSAPs

Percentage of land and seas covered by biodiversity-inclusive spatial plans

Percentage of the population in traditional occupations

Progress towards sustainable forest management

Progress towards sustainable water management

Number of integrated landscape initiatives

National policy support for integrated landscape management

National policy support for integrated basin management

TARGET 10: Enhance Biodiversity and Sustainability in Agriculture, Aquaculture, Fisheries, and Forestry

Ensure that areas under agriculture, aquaculture, fisheries and forestry are managed sustainably, in particular through the sustainable use of biodiversity, including through a substantial increase of the application of biodiversity friendly practices, such as sustainable intensification, agroecological and other innovative approaches, contributing to the resilience and long-term efficiency and productivity of these production systems, and to food security, conserving and restoring biodiversity and maintaining nature's contributions to people, including ecosystem functions and services.

SEPLS Carbon Credit Regional Revitalization approaches

Due to its focus on sustainable agriculture, aquaculture, fisheries or forestry, target 10 is inherently landscape or seascape oriented if the stakeholders who manage these areas consulted and involved in target setting.

Possible SEPLS Carbon Credit Programs -related indicators

Level of cross-sector involvement in compiling an SEPLS carbon credit programs including NBSAPs

Percentage of land and seas covered by biodiversity-inclusive spatial plans

Proportion of agricultural area under productive and sustainable agriculture

Progress towards sustainable forest management

Progress towards sustainable water management

Number of integrated landscape initiatives

Proportion of agricultural area managed with climate-, water- and biodiversity-friendly practices

National policy support for integrated landscape management

National policy support for integrated basin management

Degree of application of a legal/regulatory/policy/institutional framework which recognizes and protects access rights for small-scale fisheries

TARGET 11: Restore, Maintain and Enhance Nature's Contributions to People

Restore, maintain and enhance nature's contributions to people, including ecosystem functions and services, such as the regulation of air, water and climate, soil health, pollination and reduction of disease risk, as well as protection from natural hazards and disasters, through nature-based solutions and/or ecosystem-based approaches for the benefit of all people and nature.

SEPLS Carbon Credit Regional Revitalization approaches

Almost all land and sea users in almost all types of land and sea use, benefit from ecosystem services. SEPLS carbon credit regional revitalization approaches are therefore inherently relevant to target 11 whenever the stakeholders who manage these areas are involved in, and benefit from, the restoring, maintaining, and enhancing of ecosystem services.

Possible SEPLS Carbon Credit Programs -related indicators

Percentage of land and seas covered by biodiversity-inclusive spatial plans

Proportion of agricultural area under productive and sustainable agriculture

Progress towards sustainable forest management

Progress towards sustainable water management

Proportion of agricultural area managed with climate-, water- and biodiversity-friendly practices

Area of landscapes with continuous vegetative cover

Percentage improvement in the multiple dimensions of human well-being of households within a landscape

TARGET 12: Enhance Green Spaces and Urban Planning for Human Well-Being and Biodiversity

Significantly increase the area and quality, and connectivity of, access to, and benefits from green and blue spaces in urban and densely populated areas sustainably, by mainstreaming the conservation and sustainable use of biodiversity, and ensure biodiversity-inclusive urban planning, enhancing native biodiversity, ecological connectivity and integrity, and improving human health and well-being and connection to nature, and contributing to inclusive and sustainable urbanization and to the provision of ecosystem functions and services.

SEPLS Carbon Credit Regional Revitalization approaches

Cities can be considered as landscapes, so target 12 has SEPLS carbon credit regional revitalization built into it to some extent. Various landowners, including city governments and large corporations, can be involved in creating, improving, and promoting access to green and blue spaces in urban and densely populated areas and conserving their species. Special access rights for local stakeholders can help to foster stewardship.

Possible SEPLS Carbon Credit Programs -related indicators

Number of local authorities applying SEPLS carbon credit regional revitalization approaches in a country

Percentage of land and seas covered by biodiversity-inclusive spatial plans

Area of landscapes with continuous vegetative cover

National policy support for integrated landscape management

National policy support for integrated basin management

Percentage improvement in the multiple dimensions of human well-being of households within a landscape

TARGET 13: Increase the Sharing of Benefits from Genetic Resources, Digital Sequence Information and Traditional Knowledge

Take effective legal, policy, administrative and capacity-building measures at all levels, as appropriate, to ensure the fair and equitable sharing of benefits that arise from the utilization of genetic resources and from digital sequence information on genetic resources, as well as traditional knowledge associated with genetic

resources, and facilitating appropriate access to genetic resources, and by 2030, facilitating a significant increase of the benefits shared, in accordance with applicable international access and benefit-sharing instruments.

SEPLS Carbon Credit Regional Revitalization approaches

Facilitating access to genetic resources and ensuring the fair and equitable sharing of benefits arising from the use of genetic resources, and as relevant, of associated traditional knowledge, requires multi-stakeholder involvement. Target 13 is therefore another target that already has SEPLS carbon credit regional revitalization approaches built-into it.

Possible SEPLS Carbon Credit Programs -related indicators

Percentage of land and seas covered by biodiversity-inclusive spatial plans

Percentage of the population in traditional occupations

Number of companies reporting on disclosures of risks, dependencies and impacts biodiversity

Number of integrated landscape initiatives

Percentage improvement in the multiple dimensions of human well-being of households within a landscape

3. Tools and solutions for implementation and mainstreaming

TARGET 14: Integrate Biodiversity in Decision-Making at Every Level

Ensure the full integration of biodiversity and its multiple values into policies, regulations, planning and development processes, poverty eradication strategies, strategic environmental assessments, environmental impact assessments and, as appropriate, national accounting, within and across all levels of government and across all sectors, in particular those with significant impacts on biodiversity, progressively aligning all relevant public and private activities, and fiscal and financial flows with the goals and targets of this framework.

SEPLS Carbon Credit Regional Revitalization approaches

Target 14 reflects SEPLS carbon credit regional revitalization approaches if the integration of biodiversity values into policies, assessment, planning, and development acknowledges and involves diverse stakeholders and manages trade-offs with other key development goals.

Possible SEPLS Carbon Credit Programs -related indicators

Level of cross-sector involvement in compiling an SEPLS carbon credit programs including NBSAPs

Number of companies reporting on disclosures of risks, dependencies and impacts biodiversity

Number of integrated landscape initiatives

National policy support for integrated landscape management

National policy support for integrated basin management

TARGET 15: Businesses Assess, Disclose and Reduce Biodiversity-Related Risks and Negative Impacts

Take legal, administrative or policy measures to encourage and enable business, and in particular to ensure that large and transnational companies and financial institutions:

(a) Regularly monitor, assess, and transparently disclose their risks, dependencies and impacts on biodiversity, including with requirements for all large as well as transnational companies and financial institutions along their operations, supply and value chains, and portfolios;

(b) Provide information needed to consumers to promote sustainable consumption patterns;
(c) Report on compliance with access and benefit-sharing regulations and measures, as applicable; in order to progressively reduce negative impacts on biodiversity, increase positive impacts, reduce biodiversity-related risks to business and financial institutions, and promote actions to ensure sustainable patterns of production.

SEPLS Carbon Credit Regional Revitalization approaches

Business is a broad term that can reflect a wide diversity of landscape and seascape uses, from small to large and from agricultural/ aquacultural to industrial to financial. Many are a significant part of the landscape or seascape. Target 15 reflects SEPLS carbon credit regional revitalization approaches if actions consider both the impacts and the benefits of business on the full range of landscape and seascape users.

Possible SEPLS Carbon Credit Programs -related indicators

Level of cross-sector involvement in compiling an SEPLS carbon credit programs including NBSAPs

Percentage of land and seas covered by biodiversity-inclusive spatial plans

Number of companies reporting on disclosures of risks, dependencies and impacts biodiversity

Number of integrated landscape initiatives

National policy support for integrated landscape management

National policy support for integrated basin management

TARGET 16: Enable Sustainable Consumption Choices To Reduce Waste and Overconsumption

Ensure that people are encouraged and enabled to make sustainable consumption choices, including by establishing supportive policy, legislative or regulatory frameworks, improving education and access to relevant and accurate information and alternatives, and by 2030, reduce the global footprint of consumption in an equitable manner, including through halving global food waste, significantly reducing overconsumption and substantially reducing waste generation, in order for all people to live well in harmony with Mother Earth.

SEPLS Carbon Credit Regional Revitalization approaches

Target 16 addresses ecological footprint at a fairly global level, but SEPLS carbon credit regional revitalization approaches can contribute collectively when actions include, for example, standards for sustainable production practices such as certification of sustainable production, providing sustainable options for consumers.

Possible SEPLS Carbon Credit Programs -related indicators

Level of cross-sector involvement in compiling an SEPLS carbon credit programs including NBSAPs

Number of companies reporting on disclosures of risks, dependencies and impacts biodiversity

Number of integrated landscape initiatives

National policy support for integrated landscape management

National policy support for integrated basin management

TARGET 17: Strengthen Biosafety and Distribute the Benefits of Biotechnology

Establish, strengthen capacity for, and implement in all countries, biosafety measures as set out in Article 8(g) of the Convention on Biological Diversity and measures for the handling of biotechnology and distribution of its benefits as set out in Article 19 of the Convention.

SEPLS Carbon Credit Regional Revitalization approaches

Facilitating access to genetic resources and ensuring the fair and equitable sharing of benefits arising from the use of genetic resources, and associated traditional knowledge, inherently requires multi-stakeholder involvement.

Possible SEPLS Carbon Credit Programs -related indicators

Proportion of agricultural area under productive and sustainable agriculture

Progress towards sustainable forest management

Progress towards sustainable water management

Number of companies reporting on disclosures of risks, dependencies and impacts biodiversity

Percentage improvement in the multiple dimensions of human well-being of households within a landscape

TARGET 18: Reduce Harmful Incentives by at Least \$500 Billion per Year, and Scale Up Positive Incentives for Biodiversity

Identify by 2025, and eliminate, phase out or reform incentives, including subsidies, harmful for biodiversity, in a proportionate, just, fair, effective and equitable way, while substantially and progressively reducing them by at least \$500 billion per year by 2030, starting with the most harmful incentives, and scale up positive incentives for the conservation and sustainable use of biodiversity.

SEPLS Carbon Credit Regional Revitalization approaches

Actions toward target 18 can encourage rational and safe use of chemicals in production activities and incentivize policies and activities for various sectors that will reduce impact on ecosystems and biodiversity.

Possible SEPLS Carbon Credit Programs -related indicators

Level of cross-sector involvement in compiling an SEPLS carbon credit programs including NBSAPs

Number of companies reporting on disclosures of risks, dependencies and impacts biodiversity

Number of integrated landscape initiatives

National policy support for integrated landscape management

National policy support for integrated basin management

TARGET 19: Mobilize \$200 Billion per Year for Biodiversity From all Sources, Including \$30 Billion Through International Finance

Substantially and progressively increase the level of financial resources from all sources, in an effective, timely and easily accessible manner, including domestic, international, public and private resources, in accordance with Article 20 of the Convention, to implement national biodiversity strategies and action plans, mobilizing at least \$200 billion per year by 2030, including by:

(a) Increasing total biodiversity related international financial resources from developed countries, including official development assistance, and from countries that voluntarily assume obligations of developed country Parties, to developing countries, in particular the least developed countries and small island developing States, as well as countries with economies in transition, to at least \$20 billion per year by 2025, and to at least \$30 billion per year by 2030;

(b) Significantly increasing domestic resource mobilization, facilitated by the preparation and implementation of national biodiversity finance plans or similar instruments according to national needs, priorities and circumstances;

(c) Leveraging private finance, promoting blended finance, implementing strategies for raising new and additional resources, and encouraging the private sector to invest in biodiversity, including through impact funds and other instruments;

(d) Stimulating innovative schemes such as payment for ecosystem services, green bonds, biodiversity offsets and credits, and benefit-sharing mechanisms, with environmental and social safeguards;
(e) Optimizing co-benefits and synergies of finance targeting the biodiversity and climate crises;
(f) Enhancing the role of collective actions, including by indigenous peoples and local communities, Mother Earth centric actions and non-market-based approaches including community based natural resource management and civil society cooperation and solidarity aimed at the conservation of biodiversity;
(g) Enhancing the effectiveness, efficiency and transparency of resource provision and use;
(Substantially and progressively increase the level of financial resources from all sources, in an effective, timely and easily accessible manner, including domestic, international, public and private resources, in accordance with Article 20 of the Convention, to implement national biodiversity strategies and action plans, by2030 mobilizing at least 200 billion United States dollars per year.)

SEPLS Carbon Credit Regional Revitalization approaches

National governments can obligate environmental safeguards, policies, compensatory mechanisms and penalties in case of adverse events to people and nature. Systems of fees to access landscapes and seascapes can also be considered, for commercial activities.

Possible SEPLS Carbon Credit Programs -related indicators

Level of cross-sector involvement in compiling an SEPLS carbon credit programs including NBSAPs

Number of companies reporting on disclosures of risks, dependencies and impacts biodiversity

Number of integrated landscape initiatives

National policy support for integrated landscape management

National policy support for integrated basin management

TARGET 20: Strengthen Capacity-Building, Technology Transfer, and Scientific and Technical Cooperation for Biodiversity

Strengthen capacity-building and development, access to and transfer of technology, and promote development of and access to innovation and technical and scientific cooperation, including through South-South, North-South and triangular cooperation, to meet the needs for effective implementation, particularly in developing countries, fostering joint technology development and joint scientific research programmes for the conservation and sustainable use of biodiversity and strengthening scientific research and monitoring capacities, commensurate with the ambition of the goals and targets of the Framework.

SEPLS Carbon Credit Regional Revitalization approaches

Actions toward target 20 incorporate SEPLS carbon credit regional revitalization approaches if they ensure that relevant knowledge, including traditional knowledge, innovations and practices of IPLCs, guide decision-making.

Possible SEPLS Carbon Credit Programs -related indicators

Level of cross-sector involvement in compiling an SEPLS carbon credit programs including NBSAPs

Percentage of the population in traditional occupations

Number of companies reporting on disclosures of risks, dependencies and impacts biodiversity

National policy support for integrated landscape management

National policy support for integrated basin management

Percentage improvement in the multiple dimensions of human well-being of households within a landscape

TARGET 21: Ensure That Knowledge Is Available and Accessible to Guide Biodiversity Action

Ensure that the best available data, information and knowledge are accessible to decision makers, practitioners and the public to guide effective and equitable governance, integrated and participatory management of biodiversity, and to strengthen communication, awareness-raising, education, monitoring, research and knowledge management and, also in this context, traditional knowledge, innovations, practices and technologies of indigenous peoples and local communities should only be accessed with their free, prior and informed consent, in accordance with national legislation.

SEPLS Carbon Credit Regional Revitalization approaches

Establish freely accessible clearing house mechanisms available for decision makers at multiple levels, that integrate data from different sectors.

Possible SEPLS Carbon Credit Programs -related indicators

Number of local authorities applying SEPLS carbon credit regional revitalization approaches in a country

Percentage of land and seas covered by biodiversity-inclusive spatial plans

Percentage of the population in traditional occupations

National policy support for integrated landscape management

National policy support for integrated basin management

Percentage improvement in the multiple dimensions of human well-being of households within a landscape

TARGET 22: Ensure Participation in Decision-Making and Access to Justice and Information Related to Biodiversity for all

Ensure the full, equitable, inclusive, effective and gender-responsive representation and participation in decision-making, and access to justice and information related to biodiversity by indigenous peoples and local communities, respecting their cultures and their rights over lands, territories, resources, and traditional knowledge, as well as by women and girls, children and youth, and persons with disabilities and ensure the full protection of environmental human rights defenders.

SEPLS Carbon Credit Regional Revitalization approaches

SEPLS carbon credit regional revitalization approaches, by definition, align with this target. Any application of this target is likely to promote the inclusion of diverse stakeholder groups, recognizing their role in landscape and seascape management. The protection of environmental human rights defenders may be relevant because SEPLS carbon credit regional revitalization approaches can be an important tool in mediating resource conflicts, where biodiversity is threatened by other interests.

Possible SEPLS Carbon Credit Programs -related indicators

Number of local authorities applying SEPLS carbon credit regional revitalization approaches in a country

Percentage of land and seas covered by biodiversity-inclusive spatial plans

Percentage of the population in traditional occupations

National policy support for integrated landscape management

National policy support for integrated basin management

Percentage improvement in the multiple dimensions of human well-being of households within a landscape

Proportion of IPLC groups involved in landscape and seascape planning.

Proportion of the adult population with secure tenure rights to land, across genders

TARGET 23: Ensure Gender Equality and a Gender-Responsive Approach for Biodiversity Action

Ensure gender equality in the implementation of the Framework through a gender-responsive approach, where all women and girls have equal opportunity and capacity to contribute to the three objectives of the

Convention, including by recognizing their equal rights and access to land and natural resources and their full, equitable, meaningful and informed participation and leadership at all levels of action, engagement, policy and decision-making related to biodiversity.

SEPLS Carbon Credit Regional Revitalization approaches

SEPLS carbon credit regional revitalization approaches, by definition, align with this target. Any application of this target is likely to promote the inclusion of women and girls, recognizing their crucial role in landscape management.

Possible SEPLS Carbon Credit Programs -related indicators

Percentage of the population, across genders, in traditional occupations

Extent to which education for sustainable development, including gender equality and human rights, are mainstreamed at all levels in national education policies, curricula, teacher education and student assessments

Percentage improvement in the multiple dimensions of human well-being of households within a landscape

Proportion of countries where the legal framework (including customary law) guarantees women's equal rights to land ownership and/or control

Degree of application of a legal/regulatory/policy/institutional framework which recognizes and protects access rights for small-scale fisheries

References:

[1] CBD, "Decision 15/5. Monitoring framework for the Kunming-Montreal Global Biodiversity Framework," 2022.[Online].

[2] EcoAgriculture Partners, An Integrated Landscape Target for the Sustainable Development Goals, 2014.

[3] E. A. Morgan, T. Cadman and B. Mackey, "Integrating forest management across the landscape: a three pillar framework," Journal of Environmental Planning and Management, vol. 64, no. 10, pp. 1735-1769, 2021.

[4] United Nations, "End hunger, achieve food security and improved nutrition and promote sustainable agriculture,"[Online]. Available: <https://sdgs.un.org/goals/goal2>.

3-5 Monitoring, review, and reporting

Carbon credit regional revitalization approaches is for implementation of greenhouse gas (GHG) crediting programs based on "Monitoring framework for the Kunming-Montreal Global Biodiversity Framework". A program of monitoring can keep track of where landscape carbon manage approaches are being applied so that efforts can be supported, lessons can be shared, and successes can be replicated. After the review process, the implementation of greenhouse gas (GHG) crediting programs in well accordance with KMGBF and SDGs are presented certificated sustainability standard. These processes conducted by third party validation/verification are issued carbon credit by SEPLS Carbon Credit Regional Revitalization Center.

3-6 Prediction of carbon credit from greenhouse gas (GHG) crediting program in activities location

2024-2030: 60 million VCUs

2030-2050: 60 billion VCUs

(According to the carbon price announced by Climate Impact X (CIX) in Singapore, the carbon price will be up to ~60 USD/ VCS (tCO₂e). The income can support LDCs and developing countries in reaching the Sustainable Development Goals in the near future.)

4. Expected Outcomes

While articulated before the adoption of the 2030 Agenda, it was developed by drawing on a robust and sustainable development vision in this center through six signature solutions: poverty and inequality, governance, resilience, environment, energy, and gender equality, as follows.

- A series of signature solutions in carbon credit services supporting the core work of NGOs and governments in developing countries
- The center supports platforms for sustainable development goals and a global advisory and implementation services platform based on carbon credit management.
- An improved and advanced business model to support the Sustainable Development Goals.
- The community will understand the issues of carbon credit in the Sustainable Development Goals and work together on adaptive management of their landscape.
- The community's capacity for landscape management will improve.
- Local flora and fauna will be made known and effectively conserved, becoming indicators of biodiversity in the area. Traditional knowledge and skills are protected and will go down to future generations.

The goal is to harmonize these efforts with the well-being of people's livelihoods, creating a comprehensive approach that aligns with international agreements and prioritizes equitable and sustainable practices.

5. Actors and Task Sharing

Agency of Rural Development and Soil and Water Conservation in the Ministry of Agriculture in Taiwan guides the farmers' groups, Tainan New Agricultural Biotechnology Production Cooperative, to establish the center, entitled SEPLS Carbon Credit Regional Revitalization Center in SEPLS Carbon Credit Regional Revitalization Center in Seed Coleus Greenhouse (Address: No. 92-50, Zhuzijiao, Jhulin Village, Yanshui Dist., Tainan City, Taiwan) for agricultural-related facilities for the production, production storage, and sales guidance of agricultural productions and crop carbon sinks. SEPLS Carbon Credit Regional Revitalization Center executes this plan and develop methodologies for quantifying project benefits, particularly the GHG emission reductions or removals. Subsequently, the center aims to issue Verified Carbon Units (VCUs) to manage SEPLS. After the VCUs are issued and traded, the income from the carbon price acts as an advanced business model to support the Sustainable Development Goals in countries. By marrying scientific rigor and transparency with innovative thinking, the center aspires to enhance understanding and raise awareness regarding carbon credit management to achieve the three objectives of structural transformation, leaving no one behind and building resilience. The carbon management based on SEPLS Carbon Credit Regional Revitalization program (SEPLS-CCRR program) will focus on community development of the KMGBF and SDGs.

SEPLS Carbon Credit Regional Revitalization Center as NPO supported by National Cheng Kung University, Agency of Rural Development and Soil and Water Conservation, Academia Sinica (RCAS), National Taiwan University, Tainan New Agricultural Biotechnology Production Cooperative, and other partners to develop:

1. carbon sequestration methodology and biotechnology.

The carbon sequestration methodology and biotechnology (based on Clean Development Mechanism (CDM) methodologies and Climate Action Reserve (CAR) protocols according to United Nations Carbon Offset Platform) are corresponding to SEPLS and the Satoyama Initiative

2. frame of GHG program under SEPLS and the Satoyama Initiative.

Methodologies are essential to quantifying real and accurate greenhouse gas (GHG) benefits of a GHG program and to generate Verified Carbon Units (VCUs). Frame of GHG program under SEPLS and the Satoyama Initiative is able to form a template and demonstration to interested parties.

3. NPO handles to review and check these two parts:

3-1. The carbon sequestration methodology and biotechnology and GHG programs are based on Clean Development Mechanism (CDM) methodologies and Climate Action Reserve (CAR) protocols (according to United Nations Carbon Offset Platform) under SEPLS and the Satoyama Initiative.

3-2. Quantification of GHG emission reductions is monitored and reported by organizations of indigenous peoples and local communities, and then qualified by independent third-party auditors by validation/verification bodies (VVBs) (according to ISO 14065).

4. For the digital technology in education

The carbon reduction in the concept of SEPLS and the Satoyama Initiative products is necessary to strengthen those that are central to the needs of decision-makers according to the user-driven approach. To share knowledge and experience between the various domains by international and transnational diffusion, we cooperate to develop the world-leading digital products and physical products for the carbon credits line with the concept of SEPLS and the Satoyama Initiative.

SEPLS Carbon Credit Regional Revitalization Center as NPO is leading the on-the-ground demonstration to restore the production landscape and increase the value of the landscape in carbon credits, making it widely known to the public, with its knowledge partners Agency of Rural Development and Soil and Water Conservation supports, National Cheng Kung University (NCKU), National Taiwan University (NTU), and Academia Sinica. These partners will also focus on knowledge generation and recommendations. Special envoy no borders is an independent international sustainability initiative activist, committed to generating carbon credits for sustainable actions to eliminate poverty, mitigate climate change, provide affordable clean energy, promote gender equality and others, including the Convention on Biological Diversity (CBD), Sustainable Development Goals (SDGs) and Kunming-Montreal Global Biodiversity Framework (KMGBF), and implement that the core spirit of sustainable development is "Leave no one behind". The Academic Network Organization has more than 200,000 alumni all over the world. Accelerating the link to the Academic Network Organization will have far-reaching influence. The Academic Network Organization addresses issues of concern to the international community, such as climate change, sustainable development, artificial intelligence, aging society, etc. Network pass on experience across generations and borders, combining the vision and thinking to create

an innovative ecosystem cooperate with each other and jointly solve international social issues. Agency of Rural Development and Soil and Water Conservation, Seed Coleus Greenhouse and Tainan New Agricultural Biotechnology Production Cooperative cooperating with Academic Network Organization will leverage its network of foreign academic institutions and NGOs to bring external perspectives, scientific knowledge & technologies, practice greenhouse gas (GHG) crediting programs, and the activities in countries to discover new value in the site. NCKU and NTU will support capacity building and knowledge of greenhouse gas (GHG) crediting programs, sharing based on its landscape approach and extensive experiences in adaptive management of SEPLS in digital or on the ground.

Project period is form 2024 to 2030. The activity includes 4 phases in on-site actions, partnership building, research, and digital education. The activity includes on-site actions, partnership building, research, and digital education. CBD Greenhouse Gas (GHG) Methodology and program applied on the encompassing diverse ecosystems (agro-ecosystems, secondary forest, artificial and natural wetlands, grassland, mountains, satoumi-coastal and marine ecosystems) become on-site actions to Southeast Asia and Pacific countries (main in DCs and LDCs), including Vietnam, Thailand, Malaysia, Indonesia, Marshall Islands, Palau, Tuvalu, Taiwan, and so on by setting up service points in physical and digital. The participating countries are confirmed but not limited.

By setting up service desks in physical and/or digital. We serve as a non-profit organization (NPO) to provide SEPLS communities in least developed countries and developing countries with the on-site activities and to further the non-profit's mission for issuing VCUs of SEPLS management. The onsite activities support SEPLS communities the carbon sequestration methodology and biotechnology in education, tutor SEPLS communities the writing for KMGBF/CBD/SDGs-targets GHG program, and assist SEPLS communities to trade their carbon credits/VCUs into the cash flow on the international carbon trade exchange platform. After the carbon credits exchanged, the transaction cash flow feeds back into the SEPLS community directly.

Phase 1 Generation of Clean Development Mechanism in Adaptive Management of SEPLS

The carbon sequestration biotechnology is generated based on Clean Development Mechanism (CDM) methodologies and Climate Action Reserve (CAR) protocols (according to United Nations Carbon Offset Platform) according to the concept of SEPLS and the Satoyama Initiative. By knowledge co-production, management, and uptake in digital transformation, the carbon sequestration methodology and biotechnology involves in institutional frameworks and capacity development, area-based conservation measures, ecosystem restoration, and sustainable value chain development.

Phase 2 Developments of SEPLS Greenhouse Gas (GHG) Methodology

SEPLS greenhouse gas (GHG) methodology in the concept of SEPLS and the Satoyama Initiative develops in the field of agriculture and food security, biodiversity conservation, circular economy, ecosystem services, environmental degradation, land use and land use change, natural capital, natural resources management, supply chain, agriculture waste, water–energy–food and water-soil-waste connections and others. The carbon reduction in the concept of SEPLS and the Satoyama Initiative products is necessary to strengthen those that are central to the needs of decision-makers according to the user-driven approach.

Phase 3 Mature GHG Crediting Programs based on SEPLS Greenhouse Gas (GHG) Methodology

SEPLS CBD Greenhouse Gas (GHG) Methodology applied on the Encompassing diverse ecosystems (agro-ecosystems, secondary forest, artificial and natural wetlands, grassland, mountains, satoumi-coastal and

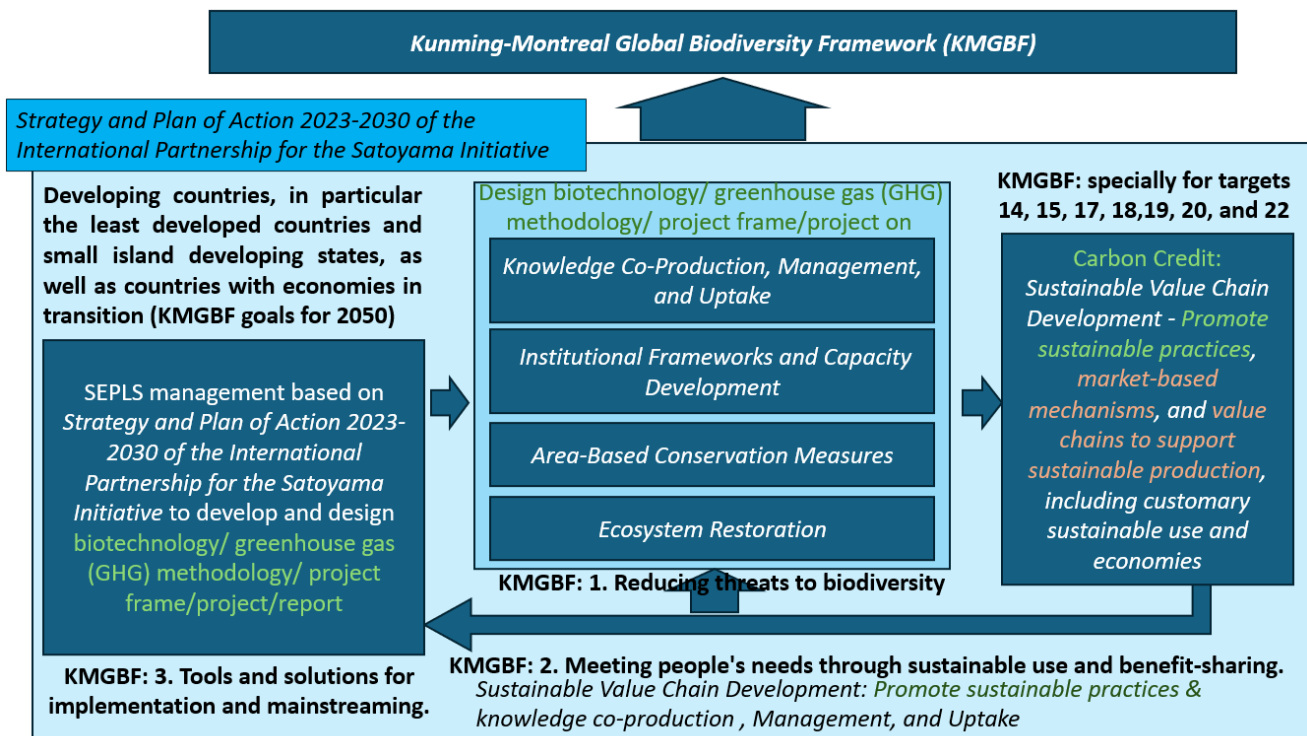
marine ecosystems). SEPLS CBD GHG Crediting Programs diffuse to Southeast Asia and Pacific countries, including Vietnam, Thailand, Malaysia, Indonesia, Marshall Islands, Palau, Tuvalu, Taiwan, and so on by setting up service points in physical and digital.

Phase 4 Establish Demonstration Site of GHG Crediting Programs Related to Concept of SEPLS

GHG program under methodology related to SEPLS and the Satoyama Initiative is able to form a template and demonstration to interested parties and organizations of indigenous peoples and local communities, which also strengthens communication among local communities in different SEPLS across world. To share knowledge and experience between the various domains by international and transnational diffusion, we cooperate to develop the world-leading products for the carbon credits line with the concept of SEPLS and the Satoyama Initiative.

6. How the activity relates to the IPSI Strategy and IPSI Plan of Action

Scheme of Satoyama Mace Initiative: regional revitalization of SEPLS in carbon credit based on Strategy and Plan of Action 2023-2030 of the International Partnership for the Satoyama Initiative as presentation of scheme 1.



Scheme 1 Scheme of Satoyama Mace Initiative: Regional Revitalization of SEPLS in Carbon Credit based on Strategy and Plan of Action 2023-2030 of the International Partnership for the Satoyama Initiative (Bold words: Kunming-Montreal Global Biodiversity Framework (KMGBF) and italics: IPSI strategic objectives (Cluster 1-5))

In this collaboration proposal, NPO supported by partners services the developing countries, in particular the least developed countries and small island developing states, as well as countries with economies in transition (Corresponding to KMGBF for 2050). The biotechnology/ greenhouse gas (GHG) methodology/ project (according to United Nations Carbon Offset Platform) are designed and adjusted for SEPLS management

based on IPSI strategic objectives (Cluster 1-5) in the Strategy and Plan of Action 2023-2030 of the International Partnership for the Satoyama Initiative.(Corresponding to KMGBF: 3. Tools and solutions for implementation and mainstreaming.) The adjusted biotechnology/ greenhouse gas (GHG) methodology/ project frame/project are implemented in the field of Cluster 1: Knowledge Co-Production, Management, and Uptake, Cluster 2: Institutional Frameworks and Capacity Development, Cluster 3: Area-Based Conservation Measures, and Cluster 4: Ecosystem Restoration to reduce threats to biodiversity.(Corresponding to KMGBF: 1. Reducing threats to biodiversity) Carbon credit from Cluster 1-4 GHG programs is an intermediary used for exchange to improve transaction efficiency to setup Cluster 5 Sustainable Value Chain Development, which can promote sustainable practices, market-based mechanisms, and value chains to support sustainable production, including customary sustainable use and economies. Benefits of Cluster 5 form carbon credit can be given back to promote sustainable practices of Cluster 1-5. (corresponding to KMGBF: 2. Meeting people's needs through sustainable use and benefit-sharing) The idea and application of this proposal is to achieve Kunming-Montreal Global Biodiversity Framework (KMGBF) through the Strategy and Plan of Action 2023-2030 of the International Partnership for the Satoyama Initiative.

7. Resources & Funding

The current building of the SEPLS Carbon Credit Regional Revitalization Center is made of recycled containers in Seed Coleus Greenhouse (Address: No. 92-50, Zhuzijiao, Jhulin Village, Yanshui Dist., Tainan City, Taiwan). Funding supported by granted projects form National Cheng Kung University and National Science and Technology Council, Taiwan (NSTC) is approximately USD 482k for sustainable field maintenance, digital technology in education, and technologies for measuring carbon sequestration, carbon sequestration methodology, KMGBF/CBD/SDGs-targets GHG program, quantification of GHG emission reductions, and biotechnology. Agency of Rural Development and Soil and Water Conservation supports USD 30k in the arrangement of the education venues (places) establishment for the field schooling to practice conduct seminars, workshops, courses, training classes, and then develop the e-learning alternative education programmes to expand service areas.

Project Period: 1 September 2024 – 31 December 2030

8. Monitoring and Reporting

The progress on this NPO is reported annually openly, and a summary update in detail will be provided to the partners and sponsors annually, making the indicators of achievement in the results framework of this proposal annually in line with the concept of SEPLS and the Satoyama Initiative, advises us to attain key performance indicators and make the achievement of milestones in the world. We will continue sharing digital productions, important findings and progress to IPSI partners, UN Environment Programme-World Conservation Monitoring Centre (UNEP-WCMC), Convention on Biological Diversity (CBD) Secretariat, and related events.

9. Contact

Collaborating organizations

- Agency of Rural Development and Soil and Water Conservation

Mr. Kung-Chung Lo, Agency of Rural Development and Soil and Water Conservation

- SEPLS Carbon Credit Regional Revitalization Center (Seed Coleus Greenhouse (IPSI))

Prof. Yen Hsun Su, National Cheng Kung University

- Special envoy no border

Prof. Huey-Jen Jenny Su, National Cheng Kung University

<https://www.linkedin.com/in/huey-jen-jenny-su-b96a541ba/?originalSubdomain=tw>

Other contributing organization(s):

- National Taiwan University:

Prof. Shu-Mei Wang, National Taiwan University

- National Cheng Kung University:

Prof. Jyh-Ming Ting, National Cheng Kung University

Prof. Wei-Sheng Chen, National Cheng Kung University

- Academia Sinica:

Prof. Chao-Cheng Kaun, Research Center for Applied Sciences, Academia Sinica (RCAS)

- Tainan New Agricultural Biotechnology Production Cooperative:

Prof. Chen-Piao Yen, Chung Hwa University of Medical Technology

Please attach additional pages as necessary.

IPSI Secretariat use only

IPSI Collaborative Activity Guidelines

Overview

IPSI Collaborative Activities are activities that are carried out by two or more IPSI member organizations and that contribute to IPSI's strategic objectives. Participants may include contributing IPSI non-members also, but at least two must be IPSI members. Activities may include research, capacity-building, awareness-raising, on-the-ground or any other activities that contribute to IPSI's strategic objectives.

IPSI's strategic objectives, as identified in the *IPSI Strategy*, are:

1. Knowledge Co-Production, Management, and Uptake for SEPLS
2. Institutional Frameworks and Capacity Development for SEPLS
3. Area-Based Conservation Measures for SEPLS
4. Ecosystem Restoration for SEPLS
5. Sustainable Value Chain Development for SEPLS

In order to be recognized as an IPSI Collaborative Activity, an activity must be proposed to and endorsed by the IPSI Steering Committee.

Proposal and endorsement procedure

Activities to be considered for recognition as IPSI Collaborative Activities should be proposed to the IPSI Secretariat using the "IPSI Collaborative Activity Proposal Form" included in this document (p. 1-2). Upon initial verification, the Secretariat will forward proposals to the IPSI Steering Committee for consideration.

Responsibilities and benefits

Participants in IPSI Collaborative Activities are encouraged to use IPSI's name and the Satoyama Initiative logo in promotional and informational materials related to the activity, and to acknowledge IPSI's support in all outputs.

Collaborating organizations are strongly encouraged to provide the IPSI Secretariat with updates on the progress of IPSI Collaborative Activities on a regular basis or as new information becomes available, to be disseminated throughout IPSI's communications network. The form attached as Annex 1 (p. 4) below may be used for this purpose.

At the conclusion of an IPSI Collaborative Activity, collaborating organizations are asked to report on the activity and any outputs and/or outcomes using the form attached as Annex 2 below (p. 5).

It is up to the participants' discretion which organization will serve as the contact point for the IPSI Secretariat.

Resource mobilization

Organizers of IPSI Collaborative Activities are strongly recommended to secure resources necessary for activities on through their own means. Collaboration with other IPSI partners and use of an IPSI Collaborative Activity's endorsement to find funding sources are recommended means of mobilizing resources for IPSI Collaborative Activities.

Contact

Secretariat of the International Partnership for the Satoyama Initiative (IPSI)
UNU Institute for the Advanced Study of Sustainability
5-53-70 Jingumae, Shibuya-ku
Tokyo 150-8925, Japan
(tel) +81-3-5467-1212
(fax) +81-3-3499-2828
(email) isi@unu.edu

Annex 1: Progress report for IPSI Collaborative Activity (ongoing)

The following form is for use when reporting progress of an ongoing Collaborative Activity. Please fill out this form as updates become available and submit to the IPSI Secretariat (isi@unu.edu).

Reporting Date:	
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Project title:	
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Please provide any relevant information on the activities and any outputs and/or outcomes below:

Please attach additional pages as necessary.

Annex 2: Report of conclusion of IPSI Collaborative Activity

The following form is for use in reporting the conclusion of an IPSI Collaborative Activity. Please fill out this form when the Collaborative Activity is finished and submit to the IPSI Secretariat (isi@unu.edu).

Reporting Date:	
Project title:	
Actual term (e.g. 1 January 2014 – 31 December 2015):	
Please provide a description of the activities and its outputs and/or outcomes below:	
Remarks:	

Please attach additional pages as necessary.

<i>IPSI Secretariat use only</i>
