



Generating collective knowledge on the conservation, management and sustainable use of socio-ecological production landscapes and seascapes

- A summary of a review of 80 case studies under the International Partnership for the Satoyama Initiative (IPSI)



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This publication is a summary version of the full report of the review of 80 case studies submitted under the International Partnership for the Satoyama Initiative (IPSI) between 2009 to February 2015. The review was undertaken by experts at UNU-IAS as Secretariat of IPSI and the Institute for Global Environmental Strategies (IGES).

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Introduction

The International Partnership for the Satoyama Initiative (IPSI) is a global partnership to promote revitalization and sustainable management of areas where humans are engaged in production activities – agriculture, forestry, fisheries, and others – and benefit from various ecosystem services while supporting biodiversity. The partnership was created to implement the Satoyama Initiative, a global effort to realize society in harmony with nature. Toward this end, member organizations are engaged in a wide range of activities from working with local communities on the ground to global-level policy-making. IPSI serves as a platform for creating synergies and sharing knowledge by bringing together expertise from different sectors and around the world. One of the major mechanisms to facilitate knowledge sharing is the

collection and publication of case studies on the IPSI website. IPSI case studies are mainly provided by IPSI member organizations to demonstrate and share their activities in “socio-ecological production landscapes and seascapes (SEPLS)”, as submission of a case study is a requirement for IPSI membership. As of February 2015, the IPSI Secretariat had received 80 cases studies from 64 organizations including some outside of IPSI. In order to understand the current status of information and knowledge accumulated within IPSI and to extract lessons learned, a comprehensive analytical review of the 80 IPSI case studies was undertaken by the IPSI Secretariat and the Institute for Global Environmental Strategies (IGES). This brochure summarizes the findings of the review.

Methodology

In order to extract and organize the rich and diverse information entailed in the case studies, a classification framework was developed based on a preliminary review. The classification categories were based on key characteristics of the activities described in the studies, such as geographical scale, regional focus, ecosystem, approach, and types of organizations involved. In addition, seven themes were identified to understand the thematic areas which each of the case studies covered, and to group the lessons extracted from the case studies. These seven themes were identified considering a) the four “Strategic Objectives” from the IPSI Strategy and

b) the “three-fold approach” and “six ecological and socioeconomic perspectives” of the Satoyama Initiative (see figure below), both representing important elements of the concept of the Initiative. Furthermore, the contribution of the case studies to IPSI’s strategic objectives and the Convention on Biological Diversity’s “Aichi Biodiversity Targets” was also explored. The categorized information was then analyzed, quantitatively to gain an understanding of the current predominant features and trends of the case studies, and qualitatively to extract the essence of the lessons learned from the collection of case studies.

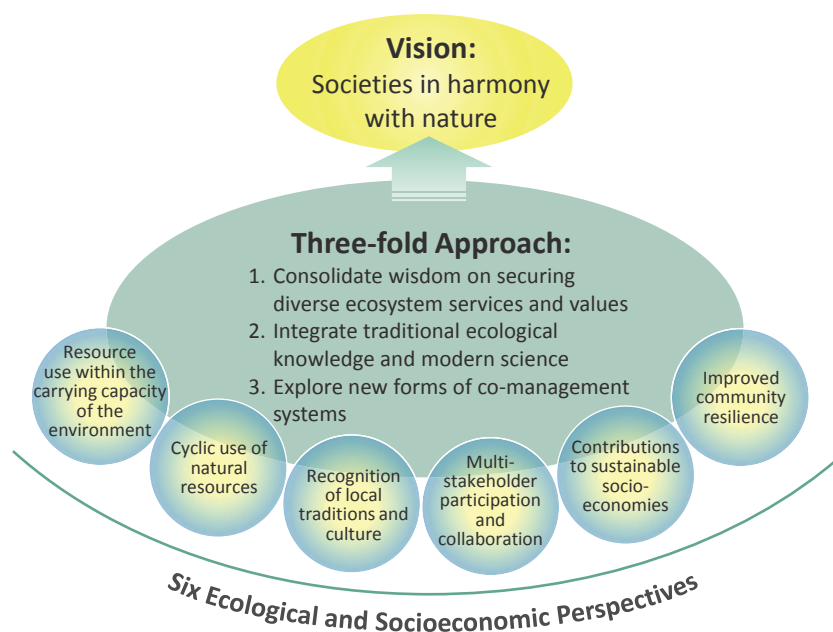


Figure: Conceptual Framework of the Satoyama Initiative

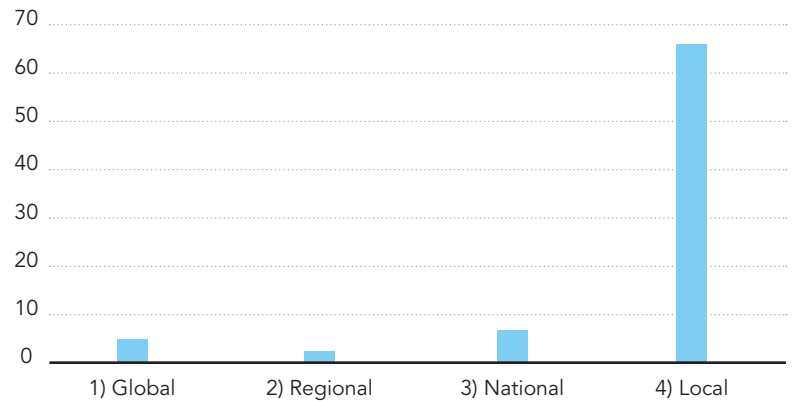
General characteristics of IPSI case studies

Based on the data obtained through the review of the set of 80 IPSI case studies, general characteristics have been identified as below.

Scale of case study activities

IPSI member organizations' activities are mainly implemented at the local scale – in over 80 percent of submitted case studies – showing members' higher interest in and linkage with their local areas. The remaining 20 percent describe activities with a focus at a larger scale, with 5 of the case studies having a global scope.

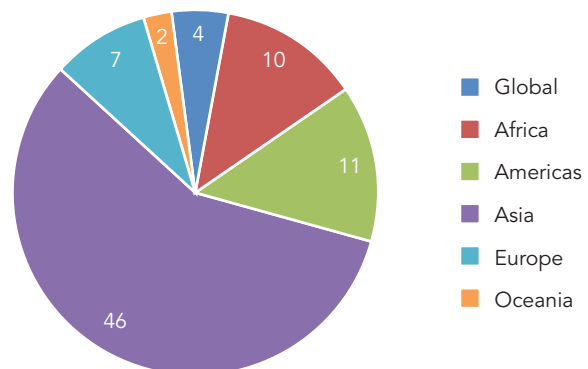
Number of Case Studies by Scale of Activities



Regions covered

The geographic distribution of the case studies covers all five global regions identified in the classification. The majority come from Asia, partially reflecting the regional distribution of IPSI members. Case studies in the Americas and in Africa follow in number, while the lowest numbers of case studies are from Europe and Oceania, or have a global scope.

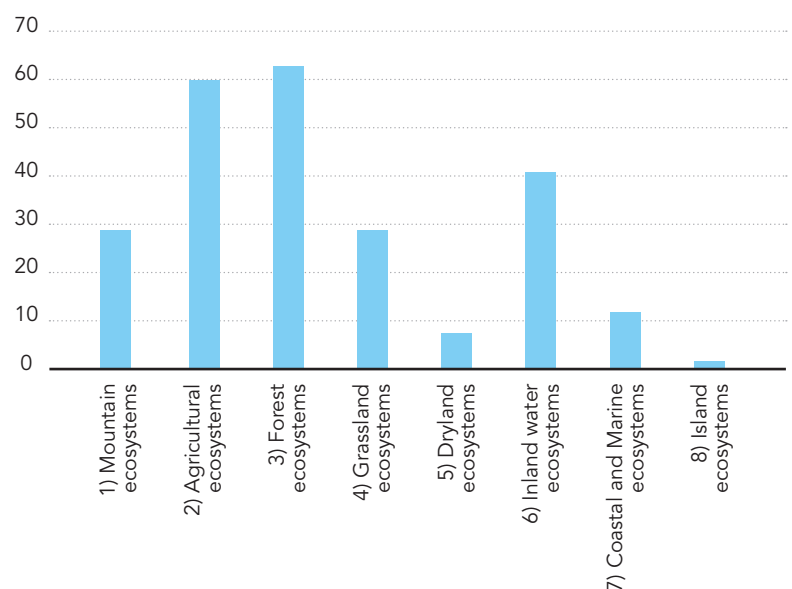
Regional Distribution of Case Studies
(number of cases by region)



Ecosystem types

Most of the case studies' activities are implemented in agricultural and forest ecosystems, followed by inland water, mountain and grassland ecosystems. Island ecosystems and dryland ecosystems are seen least in the case studies. Coastal and marine ecosystems also seem to be underrepresented considering their global significance.

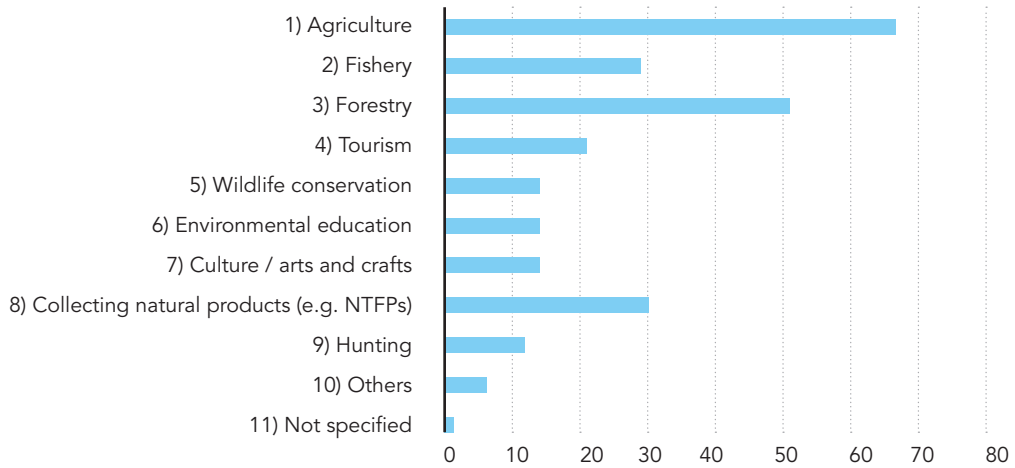
Number of Case Studies by Ecosystem Type



Socio-economic activities

The review distinguished different types of socio-economic activities undertaken in project sites. The majority of the case studies present agriculture and forestry as the main means of livelihoods, correspondent with the ecosystem types above, followed by fishery and collecting natural products, for example non-timber forest products (NTFPs). Apart from these common production activities, it was shown that tourism also is a relatively major activity in SEPLS.

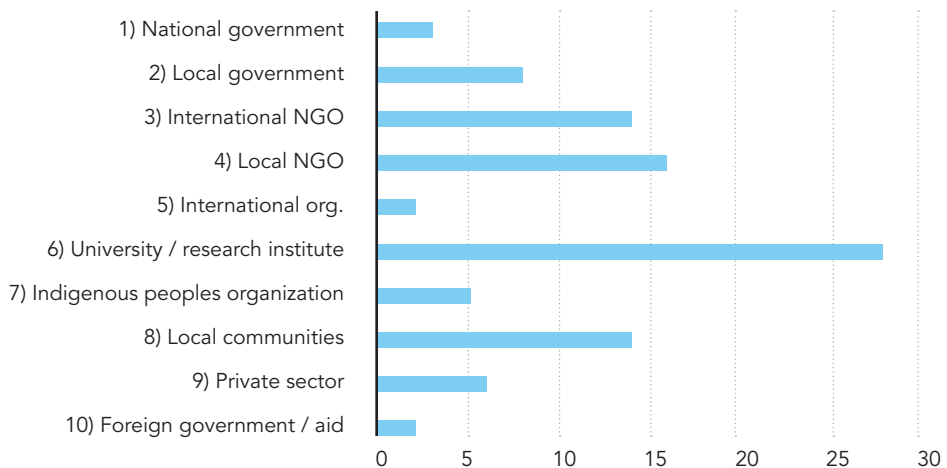
Number of Case Studies by Type of Socio-economic Activity



Implementing organizations

The most numerous implementing organizations in IPSI case studies are universities and research institutes, which are often engaged in field-based activities in collaboration with various stakeholders on the ground. Local organizations, both local NGOs and local community organizations, are also highly represented, as well as international NGOs.

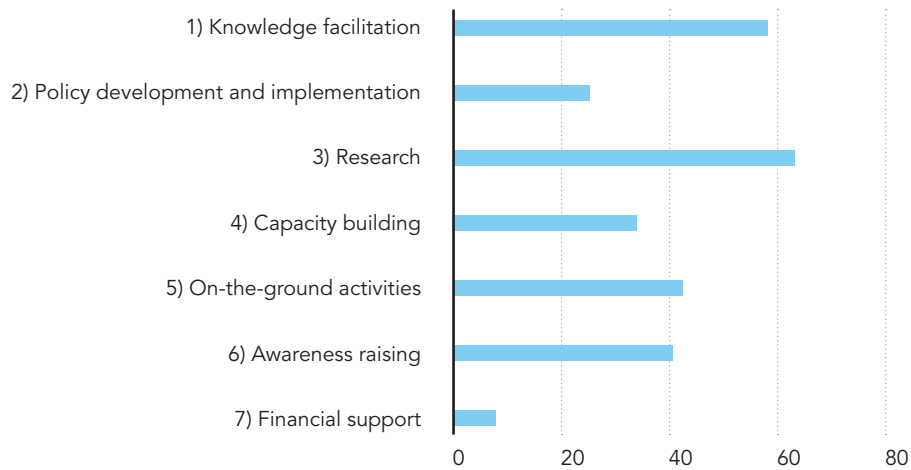
Number of Case Studies by Type of Implementing Organizations



Types of approach

There is a clear dominance of knowledge- and awareness-based approaches over other approaches such as the provision of financial support. Most case studies apply multiple types of approach, for example combining research and on-the-ground activities with policy development.

Number of Case Studies by Type of Approach



Themes addressed

The case studies mostly address landscape and seascape conservation and knowledge consolidation. However, they show a broad thematic coverage, reflecting the interrelated issues among them, with many also addressing issues of securing livelihoods and enhancing well-being, followed by stakeholder empowerment, sustainable use of biodiversity, and ensuring good governance and equity.

Number of Case Studies by Theme



Key lessons learned from the case studies

The review of the IPSI case studies provides a number of key findings, which have been classified under seven main, deeply interrelated, thematic areas. The following summarizes the essence of the lessons:

Theme 1: “Consolidating knowledge and promoting innovation”

A number of case studies give various insights into issues and knowledge that has been accumulated by local communities. In general, the case studies show that the culture, including beliefs, value systems, rules and regulations developed by local communities in SEPLS contribute to establishing a positive relationship between humans and biodiversity (see Box 1). However, in many cases, local communities, especially younger generations, have lost their traditional knowledge for various reasons including the modernization of agriculture and changes in lifestyle. In such instances, *raising the awareness of communities on the relevance of traditional knowledge* for sustainable natural resource management helps promote the revitalization and use of traditional knowledge in the contemporary context.

Some case studies have also generated lessons on the documentation of *traditional knowledge*, such as on various crops and varieties, mapping of natural resources and boundaries of customary areas, and the promotion of participatory learning processes for indigenous people. In light of the rapidly changing socio-economic circumstances that surround local communities and

increasing threats from climate change, many case studies recognize the need for dynamic interaction between traditional knowledge and other information and knowledge systems including modern science. Examples include findings on the use of traditional crop and livestock species through community seed banks and on-farm conservation, the exchange and sharing of knowledge about new crop varieties and technologies, and supporting farmers by providing them with printed maps of their farms to inform their decision-making about, for example, distribution of fields and crops.

There are also many lessons concerning *learning and knowledge-sharing processes*. A lack of teachers who are experts in the field is identified as an impediment to incorporating SEPLS-related issues in formal education, and thus efforts to build teachers’ capacity can make substantial changes. Although learning and knowledge-sharing are vital for addressing issues in SEPLS, it is important to note that knowledge and experience are place-specific and require modification and translation when put into other contexts, according to the specific natural and socio-economic environment. While learning and knowledge-sharing processes often require significant resources and logistical support, allowing for meaningful participation makes them more cost- and time-effective.

Box 1

The IPSI case study conducted in Bangladesh’s protected Sundarban forests finds that the various beliefs, value systems, rules and regulations developed by each traditional resource-users’ group contribute to the creation of strong links between humans and biodiversity. The study shows that the customary use of resources by both indigenous and local communities ensures the conservation and sustainable use of the natural landscape. For example, the customary practices of traditional fishers include using large-looped nets in rivers and small-looped ones only in ponds or closed water bodies, and not using very-small-looped nets at all. One very important condition is that most traditional resource users rely on the forest to provide them with their entire livelihood. They consider the forest to be holy, and believe that it must be protected from all forms of misuse and abuse.

Source: Unnayan Onneshan, Bangladesh. (2011). “Resuscitating the Sundarbans - Customary use of biodiversity and traditional cultural practices in Bangladesh”.



Theme 2: “Ensuring good governance and equity”

Ecosystem degradation and biodiversity loss are often caused by weak governance and social inequity. A number of case studies identify needs and propose measures to ensure or improve *interest representation* and *organizational responsibility* of stakeholders, including local communities. For example, project implementers from outside the local community may point to the need for projects to cultivate lasting relationships with local and other actors in order to be seen as credible, legitimate, and trustworthy. When involving communities in natural resource management, it is important to develop trust between the community and authorities, and to jointly develop an operable strategy. It is also suggested that consensus among residents should be obtained, especially when external interventions in the SEPLS heavily influence communities, such as in the establishment of protected areas. Regarding local development, a few case studies indicate that efforts made endogenously by local communities tend to be more effective. Local problems

should be solved by local actors to ensure that they feel ownership over decisions and remain responsible even after projects implemented by outside actors end.

Another important lesson learned is that competing demands for natural resources can increase the need for *institutional coordination of different interests* in natural resource management. The integration of existing informal institutions with newly-established formal institutions can secure farming and traditional land use systems. For example, farmers’ organizations can spearhead planning, resource generation and the implementation of community development plans. Female participation in participatory learning processes should be encouraged since their roles are essential in production and management activities.

Several case studies also demonstrate the importance of strengthening *indigenous governance*. They suggest that indigenous community rights over resources and land should be respected at all levels and be given formal status to promote customary sustainable use of biological resources according to



traditional norms and regulations. Land and natural resource laws and policies should be updated for effective recognition and protection of traditional tenure, governance, religious practices and resource-use regimes of indigenous peoples.

Many studies stress the importance of *participatory decision-making and implementation* for ensuring sustainable and multi-functional management of natural resources and ecosystems. Dialogue between the local community and government authorities can help transform the informal local code of conduct and norms of behavior into formal management principles. Authorities can offer a wide range of management options for local decision-making as a first step for starting a participatory process. The creation of intercommunity groups where all communities in a SEPLS gather for decision-making can strengthen networks and generate synergies. Participation of local communities in research and monitoring, in the interpretation of results and in the implementation of actions can be crucial for their long-term success.

Community-based management of natural resources, particularly of forests and lakes, provides a rich set of experiences and lessons. Many case studies show that management schemes including community involvement strengthened local organizational structures and established democratic decision-making processes (see Box 2). This not only promoted sustainable use of natural resources, but also enhanced

Box 2

A project promoting community forest restoration as part of the integrated management of the Lake Chapala Basin in Mexico has found many advantages in its approach. Community-based management allows the local people to take ownership of their development process by building community institutions, conducting capacity-building in communities, diversifying land use, promoting equitable access to natural resources, prioritizing the locals' basic needs, integrating with local and regional markets and promoting multiple mechanisms of financing amongst others. This helps establish a solid foundation for informed and democratic decision-making processes for ecosystem management.

Source: International Lake Environment Committee Foundation (ILEC), and Corazon de la Tierra A.C. (Heart of the Earth), Mexico (2012). "Community Forest Restoration for the Integrated Management of Lake Chapala Basin."



socio-economic benefits to the community through collective income generation, ensured inclusive participation in management institutions, such as community users' groups, and allowed for the allocation of appropriate resources based on transparency and accountability.

Many case studies also recognize the importance of *multi-stakeholder partnerships*. For example, in order to conserve endangered or reintroduced species in SEPLS, it is crucial for diverse stakeholders, such as farmers, local governments and the private sector, to work together to both maintain the productive capacity of ecosystems and to protect habitat. Involving not only scientists but also a variety of local and regional stakeholders in an ecosystem assessment project can contribute to a wider transmission of important concepts such as that of SEPLS and their reflection in relevant policies such as national or local biodiversity strategies and action plans. Many case studies also focus on *partnership-building through integrated management* to address the complex requirements of some project activities. Integrated water resource management may also serve as an efficient approach for equitable decision-making in water-resources allocation and land-use management, through a gradual, continuous and holistic improvement of governance. Influencing an economic development pathway requires political momentum with strong partnerships.

Theme 3: “Securing livelihoods and enhancing well-being”

In line with the concept of SEPLS, which reflects the integration of socio-economic and ecological issues, a number of case studies are highly relevant to issues of *local well-being and sustainable livelihoods*. These include food security, health, additional or alternative income generation, livelihood security and risk reduction. Not only is the diversity of terrestrial and aquatic biota vital to local livelihoods, some communities recognize it as central to the concept of well-being. Some case studies describe providing financial rewards for biodiversity conservation to local people, and institutionalization of such activities as a form of payment for ecosystem services (PES) has the potential to further strengthen economic and ecological sustainability. Others deal with the improvement of health conditions of local communities through a minimization of pollution, including by fertilizers, and waste treatment.

Several case studies are concerned with issues of *food security and poverty alleviation*, showing that, for example, productive lake ecosystems can become a prime source of quality food and employment for the poor. Some point out the need to create conditions for ensuring food security, such as allowing for both the revitalization of traditional knowledge and innovations on production methods, which can provide lessons

for increasing the diversity of crops and rotational agriculture (see Box 3).

Lessons about the creation of opportunities for local community members to generate *additional or alternative income* or setting up businesses can be drawn from some of the case studies. Income generation other than the intensive use of natural resources can range from private plantations and promotion of non-timber forest products (NTFPs) to new development of high-value-added farm and livestock products in rural areas. Diversification of cash crops can ensure a stable source of income that is less susceptible to climate change or market prices. In some local contexts, the cultivation of medicinal plants on farmland can be significantly more profitable than conventional crop cultivation. Another example of an additional income opportunity is growing bamboo for traditional and modern uses, which can generate the triple benefit of raising farmer incomes, sequestering carbon and avoiding deforestation. A few case studies find that for end consumers to be willing to pay high prices to farm businesses that support rural landscapes and biodiversity requires a high level of environmental consciousness. Enterprises owned by small communities are found to attract more attention and are more successful when set up and managed collectively. Some projects have also contributed to the economic autonomy of local communities through increased local production in their food supply.

Box 3

A case study from an agricultural area in the Philippines demonstrates the development of and innovation in traditional occupations for increased food security and poverty alleviation. Alternative occupations include food gathering, food processing, pottery, bamboo weaving, barter, salt making, stone-wall construction and broom making. The project promotes sustainable food production with increased crop diversity in rotational agricultural areas through revitalization of and innovation in traditional knowledge. This includes preserving the “*inum-an*”, a traditional production system based on shifting cultivation that has contributed to the people’s sustenance since time immemorial, with *camote* (sweet potato), legumes and vegetables produced near rice terraces. As a result of this project, these products continue to supplement rice farming, contributing more than 50 percent of the food needs of the village.



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Source: Montanosa Research and Development Center (MRDC), Indigenous Peoples’ International Centre for Policy Research and Education (TEBTEBBA) (2012). “Role of Traditional Knowledge in Strengthening Socio-ecological Production Landscapes.”

Theme 4: “Conserving landscape/seascape diversity and ecosystems”

The need to identify and raise awareness about the *values of landscapes and seascapes* for their conservation or revitalization is a finding common to many case studies. A landscape approach as promoted by the Satoyama Initiative can be successful by establishing a multi-stakeholder, participatory process, but it may be necessary to first demonstrate benefits from ecosystem services to the local people before scaling up for broader impact, or to link agricultural practices with the economic incentive to maintain a traditional landscape. Continued landscape management including production activities is necessary for conserving not only environmental value but also historical and cultural heritage. Recognition of such values by stakeholders is vital for ensuring continued human intervention or its reintroduction where it has been abandoned.

Additional significant lessons are related to *biodiversity conservation*. It has been shown that performing scientific environmental research can demonstrate the positive impact of nature-friendly agricultural practices on biodiversity. Scientific biodiversity data collection and farm mapping are approaches that benefit both biodiversity conservation and farmers through improved farm management. On the other hand, the case studies also show that traditional land use is a sustainable means of protecting the genetic diversity of crops

and food plants available from the wild. Some case studies find that combining strategies for the economic well-being of local communities with biodiversity conservation strategies can make conservation more effective including by providing financial rewards for those involved in conservation activities.

Other case studies draw important lessons on the *restoration of biodiversity* in SEPLS, such as: ecosystem restoration and recovery of endangered species benefits from a combination of scientific knowledge and traditional knowledge and skills of local communities, particularly where scientific information on the species is very limited; reintroduction of species benefits from a multi-disciplinary team of experts (see Box 4); restoration of degraded ecosystems requires alternative approaches to raise standards of living while reducing human disturbances where these put pressure on ecosystems; and an integrated approach tends to improve forest ecosystems through soil conservation, tree planting, sharing of tree seeds, pest control, fire prevention works and PES for involved communities.

Box 4

Two case studies from Japan provide lessons about restoring habitat and contributing to community development from the reintroduction of the Oriental White Stork. One shows that the reintroduction of storks in Japan requires both the necessary funding and a multidisciplinary approach involving a team of persons with a variety of backgrounds (in government agencies, NGOs, universities, veterinary institutions, zoos, private animal breeders, botanical gardens, etc.). The other concludes that the optimum environment for storks can also be a good environment for human beings if environmentally-friendly farming methods are adopted.

Source: Toyooka City (2012). Community Development to Live in Harmony with the Oriental White Stork in Toyooka City, Hyogo, Japan; and Hyogo Prefectural Government (2011). Reintroduction Project of the Oriental White Stork for Coexistence with Humans in Satoyama areas, Hyogo, Japan.



Theme 5: “Promoting sustainable use of biodiversity”

IPSI case studies contain lessons to ensure *sustainable biological resource use*, address overuse of wild flora and fauna and encourage *cyclic use of natural resources*. One important finding is that sustaining the variety of native plants in woodlands around dwellings contributes to sustainable use and management of natural resources. Although large-scale monocrop farming tends to cause a significant burden on the soil and environment, efforts can still be made toward sustainable farming by reducing use of pesticides and agrochemicals significantly and creating ecological niches.

Many case studies describe the introduction of community-based management as outlined in Theme 2 as a key factor that can lead to sustainable use of biodiversity in SEPLS. These case studies also show that local communities are able to develop and

apply various options to control *overuse of biological resources*, such as ecotourism or fruit production. For example, the domestication of wild medicinal plant species can reduce overexploitation of natural habitat in the forest and thus contribute to maintaining the natural resource base (see Box 5).

Several case studies indicate that to establish *cyclical use of natural resources*, a systematic and appropriate management framework unique to the local context is required. For example, yields can be improved by utilizing waste materials from crops as organic fertilizer. The studies tend to agree that cyclical use needs to be in line with ecosystem functioning and human activity, meaning a material flow within the range of environmental capacity and natural resilience. A few case studies look into the use of organic waste from households, communities and institutions, which can be effectively treated, reduced, reused and recycled for human and environmental benefits.



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Box 5

A case study from a project in the Rasuwa District of Nepal provides lessons from the domestication and promotion of medicinal and aromatic plant (MAP) species for Themes 3, 4, 5 and 6. Some of the plant species such as *Swertia chirayita* are almost at the verge of extinction due to their high market value and unsustainable harvesting in their natural habitats. The domestication of these species by the project enhanced the natural resource base in the forest as it helped to reduce their haphazard collection. Furthermore, farmers are gaining more profit from medicinal plants compared with conventional crops through the project’s efforts to connect producers and big traders directly.

Source: Kathmandu Forestry College (KAFCOL), Nepal (2011). “Biodiversity Conservation through Domestication of High Value Medicinal and Aromatic Plants in Mountain Ecological Landscapes of Nepal.”

Theme 6: “Empowering stakeholders”

The case studies demonstrate the importance of *community mobilization and financial, institutional and human capacity building*. In general, capacity building has to occur both at personal and institutional levels, and not only target local communities but also the project-implementing organization itself. Constant contact between the implementing organization and the communities is vital for and should be a part of any community-based natural resource management project.

In terms of ensuring financial sustainability on the ground, it is necessary to build the long-term financial capacity of local people by utilizing available resources for both subsistence and commercial purposes, such as income-generating activities under conservation agreements or by supporting nature-based enterprises such as ecotourism. The formation of community forest-users’ groups as effective and inclusive institutions and their engagement in forest management builds institutional capacity. This includes the capacity of local communities and their enterprises to plan, utilize, monitor and control their natural resources, reducing unsustainable and unlawful activities such as illegal logging and associated trade. A few case studies also show that combining research with an active environmental education program targeting local stakeholders is able to change attitudes and build human capacity. Key farmers, healers and local authorities can take the initiative and play an important role in mobilizing the community.

Theme 7: “Addressing emerging issues”

The lessons learned through IPSI case studies on emerging issues are particularly related to *climate change mitigation and adaptation*. Among these is the involvement of farmers in developing and implementing climate change adaptation and mitigation strategies through concrete activities. It is clear that local communities, particularly indigenous communities, are affected by and need to cope with climate change in different ways, and at different levels, and some case studies thus emphasize the importance of understanding the link between community empowerment and adaptation to climate change in its social, cultural and political dimensions. One concrete adaptation measure identified is “conservation agriculture” (or “conservation tillage”), which in the context of a case study from Namibia encourages farmers to produce and apply compost-based fertilizer (manure), to practice minimal soil disturbance using ripping and furrowing, to create in-field water harvesting, and to apply crop rotation. Although context-specific, this method may be replicable in other countries that experience unpredictable rainfall events and patterns or in arid areas. Water issues are closely related to climate change mitigation, and case studies contain lessons such as maintaining and increasing wild vegetation on farms as an important contribution for reducing greenhouse gases (see Box 6).

Box 6

A case study from Uganda focuses on the restoration of community forests for “mitigation of negative effects of climate change”, involving farmers in developing and implementing climate change mitigation and adaptation strategies through concrete activities. Examples include, for mitigation, sharing best practices and building capacity for the efficient application of existing climate-friendly technologies by making them more affordable and efficient as well as more accessible to farmers, and for adaptation, developing climate information services and best-possible estimates of weather and climate impacts on crop or forage production at a temporal and spatial scale useful for vulnerable rural communities. The case study shows a link between its activities and contributions to climate change mitigation through improved and sustainable agricultural productivity across multiple factors including water use, carbon efficiency, improved nutrient-use efficiency and land-use intensity.



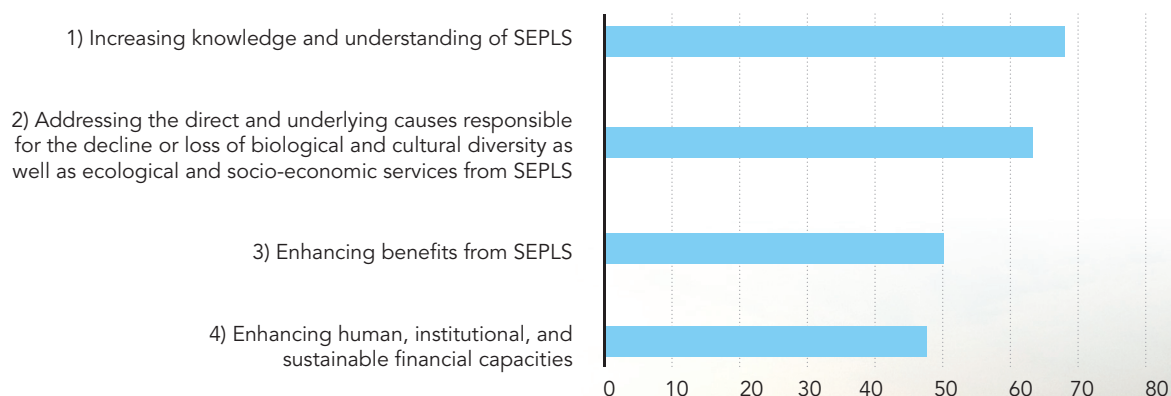
Source: Civil Society Organizations’ Network for Sustainable Agriculture and Environment in East Africa (CISONET) (2013). “Restoration of Community Deforested Forests for Mitigation of Negative Effects of Climate Change Mpigi-Uganda.”

Contribution of the case studies to the IPSI Strategic Objectives and the Aichi Biodiversity Targets

The case studies show a fairly even distribution in terms of which of IPSI's four Strategic Objectives they implicitly contribute to. The largest number contribute to Strategic Objective 1, "increasing knowledge and understanding of SEPLS", followed by Strategic Objective 2, "addressing the direct and underlying causes for decline in biological and cultural diversity in SEPLS". The present review shows, however, that many activities carried out by IPSI members tend to address more than one Strategic Objective. This represents the often multi-faceted nature of the case studies, as well as the interlinkages between the Strategic Objectives. A quick review of contributions to the Aichi Biodiversity Targets was also conducted for some of the case studies. The

results show that the Aichi Biodiversity Targets most relevant to this sample of case studies contribute to: raised awareness of the values of biodiversity (Target 1); sustainable production and consumption (Target 4); reduction of the rate of habitat loss (Target 5); sustainable agriculture, aquaculture and forestry (Target 7); safeguarding of ecosystems and essential services (Target 14); restoration of ecosystems and enhancement of resilience to contribute to climate change mitigation and adaptation (Target 15); respect for and integration of traditional knowledge (Target 18); and improvement and application of biodiversity-related scientific knowledge and technologies (Target 19).

Number of Case Studies Addressing the IPSI Strategic Objectives



Conclusions and way forward

This review of the IPSI case studies and the lessons they provide has shown that the activities of the members of the partnership are highly diverse, focusing on a broad range of issues that SEPLS face, and providing innovative approaches to effectively address these issues. The case studies have thus demonstrated that their activities make significant contributions toward the sustainable management and use of SEPLS, which is crucial to ensure broad-based development and the well-being of large numbers of people who depend on them and to ensure ecological resilience. In this sense, the case studies directly or indirectly contribute to the conservation of biodiversity at different geographical scales and in different socio-ecological environments.

More specifically, the review found that most activities in the IPSI case studies are implemented at the local level and tend to involve multiple ecosystems. While the case studies have a global representation in all continents and cover a large range of regions, diverse ecosystems, issues, approaches and organization types, some of these are better represented than others. Because of the multi-faceted nature of the case studies, lessons could be extracted and synthesized under a number of thematic areas: knowledge and innovation; governance; livelihoods and well-being; landscape/seascape conservation; sustainable use of biodiversity; stakeholder empowerment; and climate change mitigation and adaptation. The case studies also demonstrate the interrelatedness of these areas, as their activities usually cover several thematic areas.

There is great potential for global application of the collective knowledge generated and possessed by the various IPSI members. It could be very useful for other organizations working in SEPLS at different levels and for different purposes in comparable socio-ecological contexts, and aiming to conserve, manage and use ecosystem services in a sustainable manner. As the IPSI Secretariat continues to encourage the submission of new case studies from IPSI members, future case studies are expected to further enrich the existing body of knowledge.



For more information please visit the IPSI website: <http://satoyama-initiative.org>

Or contact IPSI Secretariat: isi@unu.edu

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