



ISAP 2020
International Forum for Sustainable Asia and the Pacific

December 2020



Role of socio-ecological production landscapes and seascapes in the face of COVID-19 and towards transformative change

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KEY MESSAGES

Under the COVID-19 crisis, socio-ecological production landscapes and seascapes (SEPLS) provide safety-nets on which people rely for their food, livelihood and other necessities. Traditional knowledge on natural resources enables these provisions.

Challenges include ongoing degradation of SEPLS threatening these safety-nets and limitations on face-to-face communication to prevent infection, which may hamper trust building and consensus

Landscape management for diversity and resilience is needed to prevent and respond to future pandemics.

Such landscape management can take advantage of ongoing changes affected by the COVID-19 pandemic, including people's sense of space and time as well as rapid IT development.

Communication gaps and the digital divide¹, which can be exacerbated by physical distancing under COVID-19 and increasing reliance on ICT, should be addressed for a future with no one left behind.



¹ the gap between those able to benefit from the internet and those who are not

Introduction

The emergence of zoonotic diseases like COVID-19 is correlated with increasingly unsustainable interactions between people and nature. Their probability of developing into pandemics is increased by the rapid movement of people and products that characterises globalisation. We can mitigate these risks by re-establishing a harmonious relationship with nature.

Behind the COVID-19 crisis is an imbalance in the relationship between nature and humankind. The IPBES Pandemics Report (IPBES 2020) pointed to unsustainable exploitation of the environment, including land-use change and wildlife trade and consumption, as an underlying cause of pandemics. Given these circumstances, the question is how to envision a sustainable world post-COVID. Overcoming this crisis, improving human health and well-being, and rebuilding the relationship between people and nature that supports such well-being, will lead to the creation of a resilient and sustainable world. Actions towards that goal include ensuring social capital and the provision of multiple ecosystem services to build resilience against future pandemics and other environmental risks. The way in which we recover from this crisis should be seen as a major opportunity towards transformative change.

One way to improve our relationship with nature is by nurturing socio-ecological production landscape and seascapes (SEPLS). SEPLS produce, for instance, crops, livestock and other goods indispensable for humans to flourish, while at the same time facilitating our existence in harmony with nature. This is achieved by maintaining dynamic bio-cultural mosaics of habitats as well as land and sea use where the interaction between people and the landscape maintains or enhances biodiversity – all while providing humans with the goods and services needed for their well-being. SEPLS can play an important role in the recovery from the COVID crisis facing us now, and transformative change towards a sustainable and resilient world. Years before COVID-19, the International Partnership for the Satoyama Initiative (IPSI) was established to implement the Satoyama Initiative, a global effort to realise societies in harmony with nature. IPSI has been fostering synergies among its membership and with other organisations and networks, where each member cooperates with a range of stakeholders to develop and maintain SEPLS.

On Thursday 12 November 2020, United Nations University Institute for the Advanced Study of Sustainability (UNU-IAS) and Institute for Global Environmental Strategies (IGES) convened a session entitled “The Satoyama Initiative, transformative change, and societies in harmony with nature” at the 12th International Forum for Sustainable Asia and the Pacific (ISAP2020). Consisting of three presentations and a panel discussion, the session identified key challenges and opportunities facing SEPLS under the COVID crisis, and their implications for transformative change. This issue brief summarises key points from the session, which may contribute to future investigations into this important topic.

Presentation 1: Socio-ecological resilience building through mixed-species forest restoration in Viet Nam

Ms. Dang Kien, Community Entrepreneur Development Institute (CENDI)



Recently Viet Nam has been facing accelerating land degradation associated with intensified mono-crop agriculture and plantation forestry that are rapidly replacing tropical forests. This is not only depleting various ecosystem goods and services in the tropical forests that underpin rural community livelihoods and downstream users, but also exacerbating climate change impacts including floods and the loss of surface soil to torrential rains.

Due to economic disruption caused by COVID-19, many people turned to rural areas for food and livelihood security, finding degraded forests in which clean water, rich soil, medicinal plants, fuelwood, etc. had become extremely scarce. Coincidentally Viet Nam experienced four tropical storms and one tropical depression in October 2020, the highest number in the country's recorded meteorological history. Historic flooding and deadly landslides left at least 159 dead and 71 others missing in the central region during that month.

Since 2015, the Community Entrepreneur Development Institute (CENDI) and its alliance organisations have promoted mixed-species forest restoration with local community groups, particularly the youth, along with guidance and support from IPSI, the Satoyama Development Mechanism (SDM)² and Nature Life International Germany (NLI). Restoration has focused on degraded rural lands and mountainous upland, to diversify resources that underpin their food and livelihood security. These communities were not exempted from the dreadful impacts of COVID-19 and the unprecedented climate disasters. They overcame these events, however, and now commit more strongly to restoring forests through a mixed-species planting scheme that integrates the promotion of agro-forestry and biodiverse farm models to ensure landscape resilience and sustainability.

In 2019, the revised Vietnam Forest Law included provisions on mixed-species forest restoration and on community rights in sacred forests. This was enabled after years of activism and advocacy campaigns building on the successes demonstrated by community-level pilot projects. As such, a combination of a new legal frame and bottom-up actions from local communities will help realise transformative change in rural land governance and promote sustainable resource use practices towards sustainability.



Restored landscape in Simacai district, northern Vietnam (photograph by Vang Min)

² SDM provides seed funding to selected IPSI members to facilitate the implementation of activities under IPSI.

Presentation 2: Building climate change resilience through participatory mangrove management – a case study of Alitas farmers in Infanta, Quezon, Philippines



Dr. Leni D. Camacho, Professor, University of the Philippines Los Baños

In the Philippines, the mangrove ecosystem plays a critical role to ensure social and ecological resilience through its multiple functions, including filtering river and sea water, regulating storm waves and winds, preventing coastal erosion, and sequestering atmospheric carbon. Mangroves in the Philippines have been reduced to less than half of their original extent around 1900, largely due to the expansion of farmlands, aquaculture, and industrial development. Since the late-1990s, however, mangrove cover has started recovering – largely due to community-based forest management efforts.

In the Barangay Alitas, the local community represented by Alitas Farmers Association, local government units and the national Department of Environment and Natural Resources collaborated to restore mangroves in the areas formerly opened up for fish aquaculture and then abandoned. Mangrove restoration activities emphasised the role of well-kept mangroves in supporting livelihoods and providing safety-nets for natural resource-dependent communities. Moreover, mangrove governance has been improved by developing a sense of ownership by local communities, empowering women and other marginalised stakeholders, and sharing responsibilities between these communities and local and national governments.

The impact of COVID-19 on the local community was not particularly significant, with healthy mangroves that provide a source of livelihood and a diverse range of food, including fish and 'nipa' fruit wine. Moreover, social and financial capital among the local people nurtured through mangrove restoration activities helped them proactively respond to the crisis. This included their cooperation in adhering to government protocols on infection prevention and a communal financing mechanism provided by the Alitas Farmers Association. The nationwide recovery of mangroves, and sharing of responsibility between communities and governments for conservation and sustainable use of mangroves, illustrate a transformative change pathway for sustainable mangrove management in the Philippines.



Mangrove restoration on abandoned fishponds (photograph by Dixon T. Gevaña)

Presentation 3: Lessons learned from managing SEPLS and their implications for transformative change in the post-COVID19 era



Dr. Maiko Nishi, Research Fellow, UNU-IAS

Since 2015, IPSI has been publishing an annual publication series called the “Satoyama Initiative Thematic Review” (SITR), under a specific theme of global importance each year. SITR brings together case study contributions from IPSI members and synthesises their findings for relevance to policy and science.

The sixth volume of SITR (SITR-6), under the theme of “fostering transformative change for sustainability in the context of SEPLS” , is currently under production and will be published in early 2021. SITR-6 is a compilation of 11 case studies from across the world on the theme of transformative change, along with a synthesis study. This volume explores how SEPLS management relates to the idea of transformative change, while referring to the IPBES definition of transformative change – “[a] fundamental, system-wide reorganization across technological, economic and social factors, including paradigms, goals and values” . Drawing on these case studies, SITR-6 offers the following five common principles to bring about transformative change in the context of SEPLS (Nishi et al. in press):

- 1 **Endogenously-driven actions based on value pluralism:** Actions need to be driven by stakeholders at the community level. In determining decisions and actions, perspectives from all stakeholders should be respected, and their differing values acknowledged.
- 2 **Systemic and transdisciplinary approaches to foster niche innovations:** Along with a systemic approach for change, creative integration of different knowledge systems can help to produce sustainable solutions.
- 3 **Equitable authority over SEPLS resources:** Access to, and use of, natural resources should be equitable and clearly defined among stakeholders, with special attention to customary rights and local priorities.
- 4 **Multi-level networking to facilitate peer learning:** Networking between stakeholders helps to implement a systemic approach and foster peer learning in and beyond SEPLS. A facilitator can play a key role in coordination, resource mobilisation and capacity development.
- 5 **Iterative participatory and inclusive assessments to strategically steer transitions:** A clear strategy is needed to monitor, evaluate and adaptively manage changes towards desired outcomes. The process to develop such a strategy should be participatory, inclusive and respectful so as to enable systematic assessments and course corrections.

Conclusions

Informed by the above three presentations, and through an interactive discussion between the presenters and other participants, the session responded to the following three key questions:

How have people in SEPLS experienced the COVID-19 crisis?

Under the economic and social disruption caused by COVID-19, SEPLS such as mixed-species managed forest and mangroves have provided safety-nets on which people relied for food, livelihood and other necessities. Traditional knowledge associated with SEPLS, as well as deep respect for the land and knowledge on unique and diverse crops and livestock, was found to be important to sustain these provisions. In addition, cooperation and unity among the community members engaged in SEPLS management made them proactive about reducing the COVID-19 infection risk, for example by adhering to government guidelines.

What are the challenges facing SEPLS under COVID-19?

Ongoing and widespread degradation of SEPLS, including their replacement by monoculture plantations, depletes diverse ecosystem goods and services that provide emergency safety-nets. People's heavier reliance on SEPLS due to the COVID-19 crisis, however, can also deplete the resources that SEPLS offer. Moreover, current physical distancing measures to prevent COVID-19 infection are limiting intimate face-to-face communications among people, which have been vital to build trust with each other and consensus on SEPLS management. Virtual meetings are rapidly replacing face-to-face communications, but cannot fully close potential gaps in communications particularly in SEPLS where people often have limited internet access and IT literacy. This means that people living in SEPLS may be marginalised in the decision-making process.

What are the implications for rebuilding a post-COVID-19 world along a sustainable pathway?

SEPLS provide the diversity and resilience that help to prevent, and build readiness to face, future pandemics. Future landscape management can leverage multiple values, including those of diverse resources and space that SEPLS provide, felt by a wider public under the COVID-19 crisis. People's sense of space, time and mobility is rapidly changing due to the crisis. Long stay-home hours and physical distancing in public require more space both in the private and public spheres. Teleworking has become more widely accepted with the aid of rapid IT development. These factors are likely to change population distribution between urban and rural areas, and thus the way in which people interact with one another and the environment. Rural municipalities can leverage this development to attract people from urban areas and thus to help revitalise the local economy, society and culture. However, assuming that there will be increasing reliance on ICT for communications in such a decentralised society, focused efforts should be made to address communication gaps and try to close the digital divide³ for a future where no one is left behind.

³ the gap between those able to benefit from the internet and those who are not

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