

# 3rd ESP Asia Conference

14-17 December 2021 | Nagasaki, Japan

Eco-health and ecosystem services in Asia:  
Bottom-up aspects for planetary health

ONLINE

## BOOK OF ABSTRACTS

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### I. SESSION DESCRIPTION

**ID: S9**

Ecosystem services and Indigenous and local communities well-being

**Hosts:**

	Title	Name	Organisation	E-mail
Host:(1)	Dr	Kamaljit K Sangha	Charles Darwin University, Darwin, Australia	Kamaljit.sangha@cdu.edu.au

**Abstract:**

Natural resources play a vital role in supporting the well-being of many Indigenous peoples and local communities (IPLCs) around the globe. Despite wider acknowledgement of IPLCs' connections with natural systems, their role and services towards peoples' well-being continue to be overlooked, particularly with meaningful engagement in sustainable development and welfare planning and implementation policies. One main reason for this neglect is that these connections generate intangible benefits whose measurement is beyond the capability of existing economic tools. This should not mean that such benefits and values be excluded from policy planning—but effectively this is a common practice at local, national and regional scale across the globe. To understand the true value of IPLCs' connections with nature and the importance of ecosystem services, this talk will focus on discussing: i. the ecosystem services approach; ii. key frameworks, and iii. valuation techniques that are particularly applicable from Indigenous context, based on our research with Indigenous communities across northern Australia.

**Goals and objectives of the session:**

Goal: to understand the role of ES delivered from IPLCs managed lands towards people's well-being

Objectives:

1. What ES approaches and frameworks suit to IPLC context?
2. How to appropriate measure the value of ES from IPLCs managed lands?

**Planned output / Deliverables:**

A collective paper from the interested participants for a reputed journal such as ES

**Related to ESP Working Group/National Network:**

SWG 9 – Indigenous people & Local communities

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## II. SESSION PROGRAM

**Date of session:** Wednesday, 15 December 2021

**Time of session:** 10:00 – 13:00

### List of abstracts and speakers

Time	Presenter	Title of presentation
10:00-10:05	Dr Kamaljit K Sangha (host)	Opening
10:05-10:20	Sangha	Valuing ecosystem services applying indigenous perspectives
10:20-10:35	Lemiakina	Identifying and adopting environment-friendly income generating opportunities for sustainable development of the local communities in Issyk-Kul Biosphere Reserve, Kyrgyz Republic
10:35-10:50	Kundu	Indigenous knowledge as 'socio-economic strongboxes' in emerging coastal cities - technology versus ecosystem services from selected marine fish landing centres in Odisha, India
10:50-11:05	Magdayo	Perceptions and practices of farmers on rice production management in the lowland areas of Diplahan, Zamboanga Sibugay, Mindanao, Philippines.
11:05-11:30	All	Discussion on common themes and future challenges

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## III. ABSTRACTS

### Valuing ecosystem services applying indigenous perspectives

Presenting author: Kamaljit K Sangha

Contact: kamaljit.sangha@cdu.edu.au

#### Abstract

Natural resources play a vital role in supporting the well-being of many Indigenous peoples and local communities (IPLCs) around the globe. Despite wider acknowledgement of IPLCs' connections with natural systems, their role and services towards peoples' well-being continue to be overlooked, particularly with meaningful engagement in sustainable development and welfare planning and implementation policies. One main reason for this neglect is that these connections generate intangible benefits whose measurement is beyond the capability of existing economic tools. This should not mean that such benefits and values be excluded from policy planning—but effectively this is a common practice at local, national and regional scale across the globe. To understand the true value of IPLCs' connections with nature and the importance of ecosystem services, this talk will focus on discussing: i. the ecosystem services approach; ii. key frameworks, and iii. valuation techniques that are particularly applicable from Indigenous context, based on our research with Indigenous communities across northern Australia.

### Identifying and adopting environment-friendly income generating opportunities for sustainable development of the local communities in Issyk-Kul Biosphere Reserve, Kyrgyz Republic

Presenting author: Aida Lemiakina

Contact: alemiakina@gmail.com

#### Abstract

One of the main challenges in management of the protected areas is finding balance between environmental and social sustainability. Local population that lives near protected areas is direct user of ecosystem services generated by these areas and plays an important role in effective biodiversity conservation. There is a high necessity to change economic activity of local population affecting environment to prevent continuing damage to protected areas.

This article examines current connections between limited/low income level of the local households and environmental threads in Issyk-Kul Biosphere Reserve, Kyrgyz Republic in order to identify and adopt environment-friendly income generating opportunities for sustainable development of the local communities while reducing pressure to the nature.

This paper examines three specific objectives:



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1. Improve existing income-generating agricultural practices through piloting environment-friendly approaches on the example of restructuring existing livestock population to reduce pressure on pastures, while ensuring sustainable income level.
2. Identify and assess possible new environment-friendly sources of income related to the ecosystem services generated by Issyk-Kul Biosphere Reserve: eco-tourism, downstream gardening, aquaculture, organic crop production, and handicrafts.
3. Increase awareness of local population about ecosystem services provided by forests and pastures located upstream and their role in human well-being.

## **Indigenous knowledge as ‘socio-economic strongboxes’ in emerging coastal cities - technology versus ecosystem services from selected marine fish landing centres in Odisha, India**

Presenting author: Sudip Kumar Kundu

Contact: [sudipkrkundugeoh@gmail.com](mailto:sudipkrkundugeoh@gmail.com)

### Abstract

In recent times, new emerging centres of socio-economic development have populated the map of the Global South, including India, profiting from the splurge of urbanisation, mostly attributed to technological advancements in the region. High contributors to the economy are the coastal zones, where the impacts of technology have been widespread and most expressed. These factors deem the ecosystem services of these emerging coastal cities, redundant to the extent of a partial or total loss of the unique marine and coastal ecosystem services. On the other hand, indigenous knowledge of the coastal communities, which are largely unreported or unexplored, can provide the technological means to prevent losses, albeit on a small scale. The present investigation details field-based observations on the use of indigenous technologies adopted by traditional marine fishers in Odisha where there are manifold opportunities to develop strong policies for sustainable development owing to the comparative lower stresses of urbanisation faced by these emerging cities and towns. Indigenous knowledge on the potential fish accumulation zones for e.g., using of bamboo sticks to track fish accumulation etc detailed by interviews and focussed group discussions during field surveys will be used to evaluate the relative advantages of the traditional approaches on the roadmap to achieve the targets of Sustainable Development Goals (SDG) 14, especially SDG 14b, for selected fish landing centres in Odisha, India. Indigenous technologies related to fishing methods and processing as well as, their impacts on the critical ecosystem services will be discussed in detail which aid the preservation of ecosystem services on a long-term basis.

## **Perceptions and practices of farmers on rice production management in the lowland areas of Diplahan, Zamboanga Sibugay, Mindanao, Philippines.**

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Presenting author: Eduardo Jr. Magdayo

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## Abstract

The study aimed to ascertain the current perceptions and practices of local rice farmers in the municipality of Diplahan, Zamboanga Sibugay. It was also conducted in order to know the issues and concerns of farmers by looking into their management practices that include seed and seedling transplanting, fertilizer application and pesticide application, tillage and non-tillage cultivation. The research was carried out in ten barangays in the said municipality. Personal interviews (PI) were conducted with 150 local farmers in the study to collect information for perceptions and practices using a guide questionnaire that was translated into Cebuano to facilitate a better understanding among the farmers. The study results showed that rice production in Diplahan has fallen below the minimum required yield to achieve rice self-sufficiency due to the numerous issues regarding rice crop management in both irrigated and non-irrigated farmlands. The study found that farmers continued to rely on existing local knowledge gained from families, experience, and co-farmers, despite there are already existing programs and seminars on the proper farm management conducted by the Department of Agriculture. Many of them believed merely on luck. Moreover, more appropriate farming practices were not implemented due to poverty and other economic issues. Furthermore, the low productivity among the barangays in Diplahan indicates that farmers are still using low-yielding rice varieties, and lack of good irrigation facilities especially to those rain-fed areas. Lastly, problems in rice crop management such as nutrient application, pest recognition, pesticides, herbicides, and insecticides applications by local farmers emerge in the study.