Oceania Ecosystem Services Forum: Healthy Ecosystems for Resilient Communities, Brisbane, 27th -31st March 2017

Workshop 10 - Wood or Water: Trade-offs and Synergies among Ecosystem Services

Session Report

Date and Venue

The session titled "Wood or Water: Trade-offs and Synergies among Ecosystem Services" was conducted during "Oceania Ecosystem Services Forum: Healthy Ecosystems for Resilient Communities" at Brisbane, Australia on 27th March 2017.

Coordinating team

Session was organized by Dr. Ruchi Badola, Dr. Syed Ainul Hussain and Dr. Pariva Dobriyal from Wildlife Institute of India, Dehradun India and Dr. Madhav Karki from International Centre for Integrated Mountain Development, Nepal and Sunita Chaudhary, Macquarie University. Drs. Badola, Hussain and Dobriyal organized the event through Skype. 11 Research Scholars of Wildlife Institute of India participated through Skype.

Lead talk

Dr. Madhav Karki made a presentation titled "Ecosystem Services Trade-offs and Synergies". He highlighted the commonest and most difficult trade-off scenario faced by the policy makers while planning for ecosystem services production and conservation. He talked about the interactions between different ecosystem services under various socio-ecological conditions this was supported with several examples such as Grain for Green program of China. He also presented two case studies from the Great Barrier Reef and development of hydropower infrastructure in Mekong River basin. He discussed about the scenarios built around the four Great Transition Initiative archetypes i.e. Market Forces, Fortress World, Policy Reform, Great Transition and impacts on marginalized communities. The talk was followed by discussion round where participants asked questions about the presentation and shared their experiences.

During discussion round the results presented by Kubiszewski et al (2016) were discussed. The study stated that Oceania is the least impacted due to tradeoff under all the archetypes. It has low population, smaller GDP compared to China and similar Ecosystem service value. It was clarified that this study has only considered the terrestrial Ecosystem Services for both China and Oceania. However, Oceania may have huge Ecosystem values from the marine ecosystem. Impacts of Protected Area declaration on the ecosystem services for different stakeholder groups, particularly the local communities were discussed. Developing countries with multiple users have different trade-offs. In these countries trade-offs with regards to conservation and

development are also disproportionately distributed, where poor, women and children often bear the major cost of conservation and degraded and inaccessible ecosystem services. Also trade-offs are scale dependent as are the ecosystem services.

Case study from Himalayan region

The discussion round after first presentation was followed by introduction of the case study "Himalaya – Forests and people", by Ms. Sunita Chaudhary. Later, the participants were divided into three groups for discussion and deliberation on the six questions posed for the groups with regard to the case study. The participants were given one hour time for deliberation and at the end of the allotted time, each group made a small presentation which focused on the conclusions the group draw from their discussion and answers to the questions asked.

While presenting the results of their deliberation the groups divided the ecosystem services from the Himalayan region into two groups. Water regulation, carbon storage, soil moisture, genetic resources were put into one group and irrigation, hydropower; spiritual, scientific were put under second group of services. The beneficiary of the trade-offs and synergies could be the upstream community, since they get employment in these projects, second winner could be the owners of construction companies and then the citizens of the nation. While on the other hand, losers would be the downstream community, eco-refugees, and the global citizens. Most of the values in second group have surrogate values. Under Market Force Archetype, increase in ecosystem services could be the ones related to irrigation, and others of direct consumptive value, while the regulating services could decline. However, there could be a slight increase under Market Force Achetype. While under Fortress World Archetype, there would be increase in local food production and there would be more stock on farmland to meet the demand for a closed community, putting additional pressure on natural capital of the area. Policy reform with consideration of cultural, social and ecological needs of local, regional and global communities is found to be more effective as it minimizes the loss and maximizes the benefits of ecosystem services and can change trade-offs into synergies.

List of Participants

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