

## SCB-Oceania 2014\*

Island ecosystems have peculiar biodiversity in terms of high endemism. Islands are susceptible to local threats like deforestation, wildlife poaching, etc. Considering these challenges, the focus of the Society for Conservation Biology-Oceania (SCB-O) 2014 conference was on building resilience not only in environment, but also the people who depend on the ecosystem services. This was the first conference co-hosted by the SCB Oceania section and University of the South Pacific (USP), Fiji. It was an important international meeting for discussing new research in the area of conservation science and best practices related to island ecosystems. Three symposia were held between 9 and 11 July 2014. Around 152 researchers and practitioners from Australia, New Zealand, USA, Columbia, Fiji, Solomon Island, Samoa, Hawaii Island, Papua New Guinea, Japan and India presented their work and experiences in different symposia. From Andaman and Nicobar Islands, study on 'Participatory conservation of edible-nest swiftlet through livelihood generation' was discussed.

The preconference workshops conducted during 7 and 8 July 2014 were: (i) A hands-on introduction to applied social network analysis (SNA) for community-based conservation; (ii) Scientific writers and presenters' workshop: Two essential skills to becoming a good scientist; (iii) Working forward to implementing more effective sea cucumber fisheries management in Pacific Islands, and (iv) Bridging the research implementation gaps.

Applied SNA for community-based conservation workshop was conducted by Ken Vance-Borland of the Conservation Planning Institute. He explained how SNA can identify properties of social networks such as actors position, interaction and boundaries. Participants were also educated about the history, theory and methods of SNA. The main focus of the workshop was on how

potentially SNA can be applied to conservation with hands-on analysis of different cases and projects.

Workshop on effective sea cucumber fisheries management was conducted by Rocky Kaku and Jayven Ham from Vanuatu Fisheries Department and Stacy Jupiter, Wildlife Conservation Society, Fiji. The objectives of the workshop were to share the experience of managing sea cucumber stocks among interested Pacific Islanders and to initiate a technical working group on sea cucumber management in Pacific Islands. Pacific Islanders involved in sea cucumber fisheries management and assessment presented their ongoing practices.

Workshop on bridging the research implementation gap was conducted by scholars from AUT University and was focused on successful conservation outcomes which are often limited by (i) the research implementation gap and (ii) scale mismatch. Activities in the workshop were adapted from Frog Design's Collective Action Toolkit (2013). The workshop provided the opportunity for conservation practitioners to identify the research implementation gap, priorities, motivations and work scale of conservation issues.

There were six invited lectures by renowned practitioners. Taholo Kami (IUCN-Oceania Regional Office, Suva, Fiji) gave a talk on 'Biodiversity conservation in the Pacific – significant shift required'. Here challenges like resource decline, habitat degradation, climate change, growing population and lack of alignment of biodiversity protection faced by the Pacific, were addressed. The strategies which can be adopted by the decision-makers at all levels to put environment and social considerations back into the centre of economic development were explained in detail. These strategies are: (i) understanding the special value, (ii) regarding biodiversity and ecosystem services as strategic national assets, (iii) revisiting and engaging the values of people, (iv) challenging the development approach and path and (v) growing the investment in biodiversity. A 'green growth development' agenda an innovative way forward to merge environment,

social and economic interests in a more balanced and sustainable manner was also discussed.

David A. Keith (University of New South Wales, Sydney) gave a lecture on 'Risk assessment of ecosystems: concepts, challenges and opportunities'. He explained about scientifically robust risk assessment to (i) communicate clearer conservation messages widely, (ii) design effective management strategies that address underlying causes of risk, (iii) efficient allocation of resources that produce most benefit and (iv) assess the performance of conservation efforts. He outlined a conceptual model of risk assessment, based on a synthesis of ecosystem diversity theories. The model proposes four main pathways of ecosystem decline, each associated with distinctive symptoms of risk. These pathways form the basis for evolving criteria that may be used to assign ecosystems to ordinal categories of risk in a similar way as Red-List criteria for species. Some of the major challenges confronting the design and application of Red-List criteria for ecosystems include defining the units of assessment, defining ecosystem collapse and estimating rates of functional decline in a common currency across ecosystems in which qualitatively different processes govern the risk of collapse. He showed the results of applications of the protocol to a sample of contrasting terrestrial, freshwater and marine ecosystems which suggest that it can produce workable outcomes with modest amounts of data.

Randy Thaman and Konai Helu Thaman (USP, Fiji) gave a talk on 'Kakala Hingoa – sacred plants and conservation in the Pacific Islands'. They emphasized the importance of vernacular and scientific taxonomy and traditional knowledge without which conservation of both Red-listed and other species will be problematic. They also argued about using sacred and fragrant plants as 'flagship' species for both *in-situ* and *ex-situ* conservation as a better way to gain wider appreciation for the ecosystem services. Their use should also produce greater intellectual and spiritual commitment to conservation.

\*A report of the conference on SCB-Oceania 2014 held in University of South Pacific, Suva, Fiji, between 9 and 11 July 2014. The conference was organized by the Society for Conservation Biology, Fiji.

Eve McDonald-Madden (University of Queensland) in his talk on 'Searching for black swans among the shrinking ice', addressed uncertainties of outcomes of climate change popularized as 'unknown unknowns' or 'black swans'. She gave an overview of the current state of research on climate change adaptation for conservation from a decision analytical perspective. She proposed adaptive management for explicitly thinking about the value of information and argued that 'black swans' are vital diagnostic opportunities to learn and improve our predictions of climate change effects.

Chris Filardi (American Museum of Natural History, USA) gave a talk on 'Throwing away the keys to paradise: unlocking conservation lessons among Pacific islands'. Communication, partnership, humility and human resilience

which are critical to conservation at any scale were discussed.

Bob Pressey (James Cook University, Australia) in his lecture discussed 'making protected areas makes a difference: impact evaluation as a tractable scientific challenge and an essential policy tool'. He talked about the protected areas and their failings because of remoteness and commercial uses. He addressed impact evaluation of both terrestrial and marine areas which use increasingly robust methods to estimate the difference between no intervention or an alternative intervention. Another key requirement for progress in biodiversity conservation for scientists is to 'step outside' the political constraints which have hindered progress. He said apparently naive approaches are needed to take conservation forward.

In his closing remarks, Richard Kingsford (University of NSW, Australia)

informed about 'SCB (Oceania) – plans, opportunities and publishing'. He talked about the approach of going beyond the science and communicating more broadly the implications of science to the public and involving more members. Finally, he pointed out that a key function of local and global importance, is the pursuit of quality science through the publications.

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## MEETING REPORT

### Climate change vulnerability and hazards in mountainous regions\*

The impacts of climate change (CC) are complex and varied and threaten human life through increased intensity and frequency of extreme events and natural hazards. Implications of CC-enhanced events could be more devastating in mountainous regions, which are susceptible to topographical hazards. The Indian Himalayan Region (IHR), which is also structurally weak and fragile, becomes vulnerable to these events. Kedar-nath tragedy of June 2013, which was the outcome of long spells of heavy rains, and consequent melting of glacier, lake outburst and flooding in the Mandakini river and the death and destruction that followed bear testimony to this. The magnitude and scale of such events can further enlarge under the advanced CC

scenarios. The CC preparedness in the IHR has now become the agenda of international developmental agencies and government departments, which have begun to collate and gear up efforts to address the issue through promulgation of Himalaya/climate-specific programmes, experience sharing, and framework development.

A scientific workshop on the vulnerability and hazards of IHR was recently organized. Nearly 50 delegates representing various national and international organizations/institutions participated in the workshop. This collaborative endeavour under the Indian Himalayan Climate Adaptation Programme (IHCAP) envisaged to achieve development of common framework for vulnerability, risk and hazard assessment for IHR for adaptation prioritization and its implementation modalities and mainstreaming in developmental planning of the Himalayan states. The workshop was structured in three sessions aimed at gaining insights into vulnerability, risk and hazard issues, adaptation planning, and opportunities for collaborative activities and group inputs for common framework. The inaugural session was devoted

to detailing of the programmes, missions and mandates by organizers and their climate change link. Jean-Bernard Dubois (Global Programme Climate Change of the Swiss Agency for Development and Cooperation (SDC)), highlighted linking of science with policy as a salient feature of IHCAP. The need was also reiterated by B. M. S. Rathore (Ministry of Environment, Forests and Climate Change, Government of India), who mentioned that the variance in vulnerabilities across IHR also accrues due to differences in eco-cultural diversity, sociological variables and actuation of adaptive responses. He emphasized on the need for adaptive capacity management plan. Deficiency of data for vulnerability assessments, and lack of high-resolution datasets for scenario projections was the general view of the speakers. The role of Himalayan ecosystem for climate regulation and trans-regional ecosystem service effects for 51 million agriculture practising people of the North Indian plains, and the National Mission for Sustaining Himalayan Ecosystem (NMSHE) as a Himalayan region-specific programme was highlighted. Low and weak adaptive capacity of the

\*A report on the Scientific Exchange Workshop on Climate Change Vulnerability, Risks and Hazards, and Adaptation in the Indian Himalayan Region, held during 19 and 20 June 2014 at New Delhi; and jointly organized by the Swiss Agency for Development and Cooperation, Department of Science and Technology (New Delhi), and G. B. Pant Institute of Himalayan Environment and Development.