Other activities that may be considered in line with the key activities:

- Awareness-raising and activities that link and/or develop networks.
- Training and capacity-development on predictive analysis modelling and systems analysis at various scales.
- Science-policy mechanisms based on complex scientific understanding and research based on the needs of policy makers and the private sector on biodiversity and ecosystem services.

LOOKING FORWARD

Ensuring that the framework is dynamic in nature, the APN will undertake a range of activities from now until the end of the current strategic phase, in March 2015 (APN, 2011b). These will include:

- Identifying selected topics for the annual calls for proposals (ARCP and CAPaBLE programmes).
- Seeking investment from the donor community.
- Synthesising results of activities under the APN's "Ecosystems, Biodiversity and Land Use" Focused Activities programme (EBLU, 2011), and other relevant activities.
- Addressing and incorporating gaps identified for ecosystem services in the APN book on Climate in Asia and the Pacific: Security, Society & Sustainability (Stevenson & Manton, 2013; doi: 10.1007/978-94-007-7338-7).

The APN Biodiversity and Ecosystem Services Framework is an opportunity for member countries, stakeholders, the donor community, and the international research communities and networks to propose and engage in collaborative activities with the APN that embarks on underpinning regional-based research; capacity development via training and technology transfer; strengthening, establishing and/or interacting with science-policy mechanisms in key thematic areas under the B&ES Framework for the Asia-Pacific region, especially in developing countries.

RELATED ACTIVITIES

- Interactive Session on Biodiversity and Ecosystem Services during the 18th Inter-Governmental Meeting held in Kobe, Japan, in April 2013.
- The United Nations University Institute for Sustainability and Peace (UNU-ISP) and Korea Environment Institute (KEI) held a workshop entitled "Asia-Pacific Regional Workshop on Regional Interpretation of the IPBES Conceptual Framework and Knowledge Sharing" in Seoul, Republic of Korea, from 2nd to 4th September 2013, with joint support from the APN and the Ministry of Environment, Republic of Korea.
- APN-funded Satoyama project entitled "Building Resilience with Common Capital" that was conducted as an APN and Hyogo Prefecture joint activity. In the project, three key mismatches relating to ecology, institutions and values were illustrated and APN showed how these mistmatches have perpetuated the decline of ecosystem services and well-being at different scales.

GET INVOLVED

The Asia-Pacific Network for Global Change Research (APN) is a network of 22 member country governments that promotes global change research in the region, increases developing country involvement in that research, and strengthens interactions between the science community and policy makers.

For further information about the APN and to get involved in our activities, please visit www.apn-gcr.org.

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Ministry for the Environment
Manatū Mō Te Taiao

United States Global Change Research Program

BIODIVERSITY & ECOSYSTEM SERVICES

FRAMEWORK

APN
Asia-Pacific Network for Global Change Research

ASIA-PACIFIC NETWORK FOR GLOBAL CHANGE RESEARCH

APN B&ES FRAMEWORK

Home to more than half the world's population and a region that is spectacularly rich in biodiversity, Asia and the Pacific is rapidly developing economically.

Policy- and decision-making in the region to realise sustainable, green growth practices need to be underpinned by sound scientific knowledge, and mechanisms that effectively link biodiversity and ecosystem services (B&ES) to sustainable development and green growth is lacking.

With this rationale, the APN has undertaken a series of activities over two years culminating in the APN B&ES Framework.

In the lead-up to establishing the APN B&ES Framework, questions of "What do we know about ecosystem services?" and "How do we want to manage them?" were raised.

While it was generally agreed that the Framework must include green growth and sustainable development, the question "To what extent is economics involved?" was stressed, particularly in the context of policy- and decision-making in the region.

UNDERPINNING THE SCIENCE OF B&ES FOR POLICY

Effective ways of collaborative science that ensure policy- and management- decisions are informed by the best available information, and good understanding of uncertainties associated with science, is needed.

To this end, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES; www.ipbes.net) was established, as agreed by Governments in the Busan Outcome (IPBES, 2010). The first plenary of IPBES established preliminary rules and procedures for its work (IPBES, 2013). An IPCC for biodiversity, IPBES recognises the global importance of freshwater, marine and terrestrial ecosystems, and the services they provide.

In June 2012, the landmark United Nations Rio+20 sustainability conference presented the outcome "The Future We Want" (UNSKDP, 2012a). The APN, under its B&ES Framework, supports activities that are in line with Rio+20 outputs.

These areas complement the goals of the APN B&ES Framework as well as underscore the importance of marine, coastal, freshwater, forest, and wetland and dryland ecosystems for livelihoods and human well-being.

OPPORTUNITIES UNDER THE B&ES FRAMEWORK

A series of APN-led meetings and workshops identified important existing gaps for the Asia-Pacific region requiring attention through comprehensive scientific research, capacity development and science-policy mechanisms (APN, 2011a).

With input from key experts from ASEAN Centre for Biodiversity, DIVERSITAS, GEOBON, ICSU, MSU, UNU, among others, the gap analysis report (http://www.apn-gcr.org/wp-content/uploads/2013/08/BES-Gap%20Analysis%20Report.pdf) outlines important thematic areas and key activities for the region, to effectively align APN's scientific theme of Biodiversity, Ecosystems and Land Use with the work of UNCBD, Millennium Ecosystems Assessment (MEA, 2005), such as the impact of degrading ecosystems on the ability to achieve the Millennium Development Goals (http://www.un.org/millenniumgoals/); UNFCCC through decisions on REDD+ mechanisms, ecosystem-based approaches to climate adaptation, among others (UNFCCC, 2012); UNCSD Rio+20 (2012a,b); and IPBES, especially in this "United Nations Decade on Biodiversity 2011-2020" (UNCBD, 2011).

Encompassing a range of comprehensive, regional-based and collaborative scientific research, capacity development, and science-policy mechanisms, "thematic gaps" will include, broadly speaking, the following:

1. Identification of drivers and pressures for biodiversity change that influence ecosystem services
2. Assessment of the impacts of biodiversity loss and vulnerability to the shrinking of ecosystem services
3. Adaptation, response and mitigation of the depletion of biodiversity and ecosystem services
4. Prediction of changes in biodiversity and ecosystem services through model-based scenarios

KEY ACTIVITIES FOR THEMATIC AREAS

1

- Supporting the articulation of biodiversity and ecosystem indices
- Understanding the dynamics of land and land-use change on biodiversity resources and ecosystem services including the influence of climate change

2

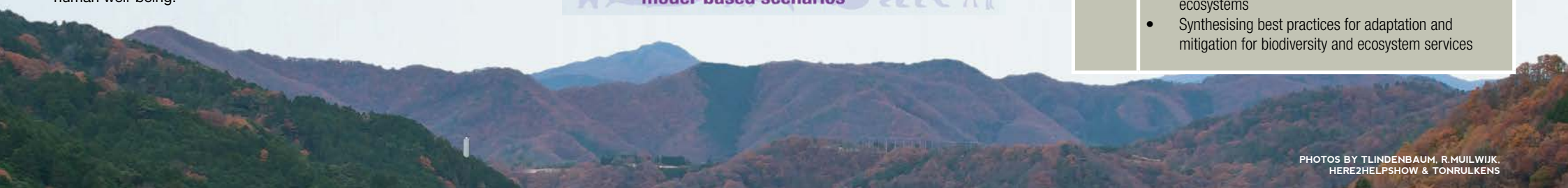
- Enhancing knowledge and understanding on the role of biodiversity in nature as a way of conferring ecosystem resilience and reducing vulnerabilities in the face of global environmental change
- Research that will identify and document ecological tipping points; Research that will illustrate the linkages between socio-cultural knowledge and livelihoods to different levels of biodiversity
- Case studies that will support the work of international programmes on evaluation of changes in biodiversity and ecosystem services

3

- Building spatially-explicit models for areas of interest within the Asia-Pacific region that enable the potential for future change in biodiversity and ecosystem services to be assessed as a function of plausible scenarios of change in land use, climate and invasive species
- Extending these models to incorporate the potential consequences of spatially-explicit configurations of management responses in terms of multiple values of diversity in nature and ecosystem services
- Establishing links between models and associated models of human-natural systems and between these models and global-scale scenario modelling of biodiversity and ecosystem services

4

- Elucidating parsimony and conflict between carbon management and biodiversity conservation as key mitigation strategies
- Integrating the human dimensions into action for biodiversity conservation and carbon management
- Restoring biodiversity in disturbed or managed ecosystems
- Synthesising best practices for adaptation and mitigation for biodiversity and ecosystem services



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