



APN takes action to safeguard biodiversity in the region

Biodiversity as a Research Interest

Under the APN Scientific Research Agenda, 'Ecosystems, **Biodiversity** and Land Use' is one of the four general scientific themes. Also, through government consultations among APN member countries in the Asia-Pacific region, 'land use and **biodiversity**' is listed as a scientific priority. Thus, the APN continues to support biodiversity-related research and capacity development activities in the region.



APN Symposia on Biodiversity

The APN regularly co-hosts international seminars in Hyogo Prefecture, Japan with Hyogo Prefectural Government to meet one of its main goals of providing scientific knowledge to the public. **Biodiversity was the central theme of a series of seminars** that were held in 2007-2009. Outputs of the three (3) seminars were synthesised and showcased in a side-event at the **ASEAN Conference on Biodiversity**, October 2009, Singapore and are highlighted in this bulletin.



1) Seminar on Pathways Towards a Sustainable Society with Biodiversity Conservation

Challenge

Threat of losing and altering biodiversity due to rapid economic development and land-use change

Response and Way Forward

- Promote awareness on the benefits being obtained from biodiversity and the damages associated with its loss
- Integrate/harmonise efforts of social and natural scientists, policy-makers and the general public on biodiversity conservation then put policy into action and practice to achieve a sustainable society

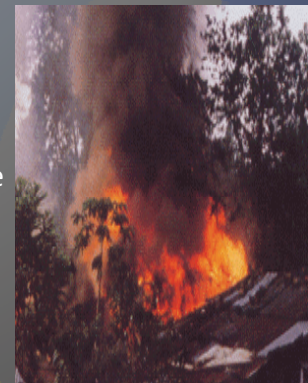
2) Seminar on Global Warming and Ecosystem/Biodiversity Changes: Facing the Challenge of Changing Ecosystems

Challenge

Negative impacts of climate change and global warming on biodiversity and ecosystems

Response and Way Forward

- Take pro-active action and share effective mechanisms across the region in order to adapt to climate change and global warming and to avert the negative effects on biodiversity and ecosystems
- Experts/scientists should exert more effort to communicate the scientific knowledge and research results to policy-makers and the general public so they will be better informed and prepared



Key Donor Members



Ministry for the Environment
Korea Environment & Ecology



The APN also relies heavily on the generosity and commitment of all its member countries and a broad range of institutions and partner organisations for financial and in-kind support.

3) Seminar on Biodiversity and Human Dimensions: Promoting Harmonious Coexistence

Challenge

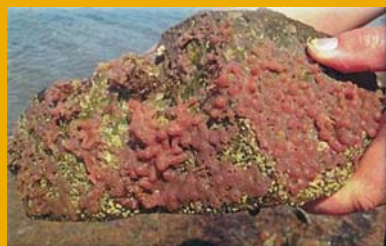
Poor recognition of how individual human activities negatively affect biodiversity

Response and Way Forward

- Review and evaluate local values which are culturally unique to the region
- Understand the connections and relationships amongst all living creatures and how these relate to human day-to-day activities
- Consider biodiversity from a more comprehensive viewpoint instead of focussing on a single aspect only
- Include in national economic plans and activities strategies to maximise the benefits from ecosystem regulating services

KEY Messages from the Biodiversity Symposia

- Think globally, act locally but also think and act locally in a global context
- Collaborative activities/projects at the local level should be emphasised and duplicated especially those that have proven effective in conserving biodiversity that is under the pressure of human activities
- Strategies to stabilise ecosystems, conserve biodiversity and mitigate the effects of global climate change must be pursued through international cooperation
- To support developing countries in implementing adaptation measures and protecting biodiversity and ecosystems, international networks such as the APN play increasingly important roles in facilitating the transfer of scientific knowledge and technologies into policies, action and practices



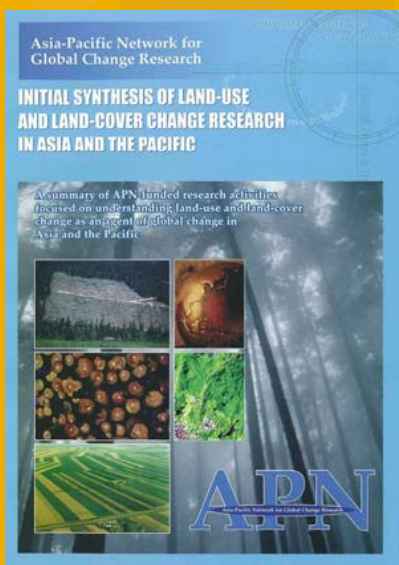
In biodiversity conservation, awareness is a key element...

...economic incentives may not work without awareness, knowledge, and institutions...

...research, education and policies are important!

This bulletin also highlights APN biodiversity efforts under both its Science and Institutional Agendas and features a selection of completed and ongoing biodiversity-related APN projects and activities under the Annual Regional Call for Research Proposals (ARCP) and Capacity Development (CAPaBLE) Programmes.

- Since APN's launch, it has supported around **50 projects** under the theme 'Ecosystems, Biodiversity and Land Use' and has provided over **US\$ 3 million** for scientific research and capacity development activities
- APN conducted a **synthesis of APN-funded research activities** focussed on understanding land-use and land-cover change (LUCC) as an agent of global change in Asia and the Pacific
- Screening/evaluation of **biodiversity projects/proposals** for funding under a focussed topic "Reducing Emissions from Deforestation and Forest Degradation, Conservation of Forest Carbon Stocks, Sustainable Management of Forests, and Enhancement of Forest Carbon Stocks (REDD+)" is underway
- The APN is co-organising with Hyogo Prefectural Government and key partners, the **International Symposium: Coexistence with Nature ~ Biodiversity and People – Hyogo Dialogue for the Future** to be held in Kobe, Japan, September 2010
- As a partner of CBD in promoting the International Year of Biodiversity (2010), a **Biodiversity Platform Webpage** has been established on the APN website that provides access to a wide array of useful information, resources and links
- The APN is co-organising a **side-event and exhibit at CBD COP 10** in Nagoya with partners (DIVERSITAS, Hyogo Prefectural Government) and other key organisations
- The APN is engaging in **strategic biodiversity events and activities in the global change community** and is supporting the establishment of an Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES)



Selected Biodiversity Projects under ARCP and CAPaBLE Programmes

Completed ARCP Projects

Land Use/Cover Change in Asia and the Carbon Cycle;

Project Leader: Dr. Joseph CANADELL

- Collected information on carbon storage and flux in the Asia-Pacific region and contributed to the Global Carbon Project (GCP) of the ESSP
- Produced 12 published papers in peer-reviewed journals



Scoping Workshop on Global Change Impact Assessment for Himalayan Mountain Region for Environmental Management and Sustainable Development; Project Leader: Dr. Kedar Lal SHRESTHA

- Assessed the vulnerability of mountain ecosystems and people to global change
- Built capacity of graduate students and effectively promoted links between science and policy by raising the awareness of ministers and planning commission members

Land-use Systems in Temperate East Asia and Central Asia; Project Leader: Dr. Dennis OJIMA

- Played notable roles in networking leading LUCC researchers in East Asia and in training younger researchers
- Contributed to GLP and organised fora for regional and international scientists to share information and develop a stronger understanding of linkages between climate, ecosystems and human elements of the region
- Facilitated the integration of the knowledge gained by different research groups of natural and social scientists and identified policy products and knowledge gaps

Land-Use and Land-Cover Change for Southeast Asia; Project Leader: Dr. Sharifah Mastura SYED ABDULLAH

- Facilitated the installation of hardware and software in Cambodia, Laos and Viet Nam; acquisition of satellite data; training in LUCC methodologies; and an advance-training workshop on ETM+, SPOT VGT and LTM models
- Produced LUCC Southeast Synthesis Report and helped establish the APN's first publication in its syntheses series entitled *Land-Use and Land-Cover Change in the Asia-Pacific Region: An Initial Synthesis*

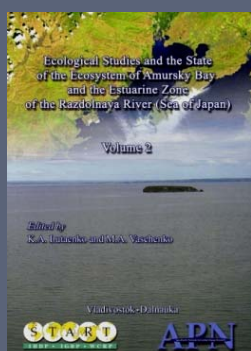


Standardisation and Systematisation of Carbon-budget Observation in Asian Terrestrial Ecosystems based on AsiaFlux Framework; Project Leader: Dr. Yoshikazu OHTANI

- Built a cohesive flux-measuring network in Asia, called AsiaFlux
- Held two AsiaFlux workshops in 2005 and 2006 with foremost experts and young scientists from inside and outside of Asia which led to greater collaboration of carbon flux scientists
- Produced a technical manual summarising the results of data re-analysis and standardisation of observation methods

Collaborative Studies in Tropical Asian Dendrochronology: Addressing Challenges in Climatology and Forest Ecology; Project Leader: Dr. Nestor BAGUINON

- Investigated and documented tree species with annual rings in per-humid and humid tropics to expand the existing network of tree species for climate and ecological studies
- Emphasised that increase of tree species for dendrochronology will cover greater geographic space and together with other meteorological data, the spatially expanded tree ring data would increase information detail for the development of a high resolution climate model for the region
- Developed a project website: <http://apnssead.tk/>



Marine Biodiversity of Coastal Zones in the North West Pacific: Status, Regional Threats, Expected Changes and Conservation; Project Leader: Dr. Andrey ADRIANOV

- Investigated biodiversity status and change in coastal zones in the North West Pacific with emphasis on intertidal and island ecosystems, alien invasive species and overall biodiversity documentation
- Published three books and 12 papers which provided new biodiversity information for the scientific community and decision-makers
- Developed a project website: <http://www.imb.dvo.ru/misc/apn/bio/index.htm>

Completed CAPaBLE Projects

Greenhouse Gas (GHG) and Aerosol Emissions under Different Vegetation Land Use in the Mekong River Basin Sub-region; Project Leader:

Dr. Sirintornthep TOWPRAYOON

- Concluded that biogenic and biomass burning constitutes a major source of air pollutants in the region, especially greenhouse gases (GHGs) and aerosol
- Trained more than 30 scientists and policy-makers from the Mekong River Basin Sub-Region on the capacity building framework and scientifically sound decision support information to improve the regional GHGs and aerosol emission inventory

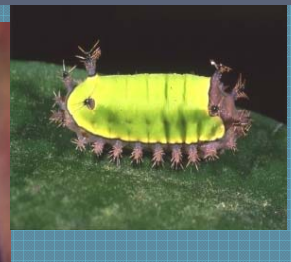
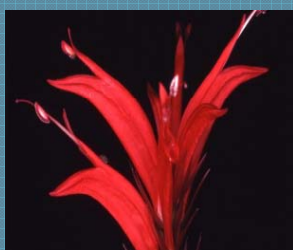


Second DIVERSITAS Open Science Conference "Biodiversity and Society: Understanding Connections, Adapting to Change": Ensuring a Strong Scientific Contribution from the Asia-Pacific Region; Project Leader: Dr. Anne LARIGAUDERIE

- Gathered many perspectives from the natural and social sciences to highlight the causes and consequences of biodiversity change and to discuss solutions to the consequences of this change
- Provided opportunity to early-career scientists from developing countries of the Asia-Pacific to take part in key international science-policy initiative discussions

Ongoing ARCP and CAPaBLE Projects

- Dynamics and Down-stream Linkages in Tropical Streams as Affected by Projected Land-Cover/Land-Use and Climatic Change; Project Leader: Dr. Alan ZIEGLER
- Integrated Prediction of Dipterocarp Species Distribution in Borneo for Supporting Sustainable Use and Conservation Policy Adaptation; Project Leader: Dr. Mui How PHUA
- Intercomparison of Landsurface Process Modeling in Asian Drylands; Project Leader: Dr. Jun ASANUMA
- Community Based Forestry and Livelihoods in the Context of Climate Change Adaptation; Project Leader: Dr. Dharam Raj UPRETY
- Coastal Marine Biodiversity of Viet Nam: Regional and Local Challenges and Coastal Zone Management for Sustainable Development; Dr. Konstantin LUTAENKO
- Dryland Development Paradigm (DDP) Application for the Most Vulnerable to Climate and Land Use Change of Pastoral Systems in the Southern Khangai Mountains of Mongolia (DDPPaS); Project Leader: Dr. Chuluun TOGTOHYN
- Developing the Capacity for Teaching Biodiversity and Conservation in the Asia-Pacific Region; Project Leader: Dr. Mochamad INDRAWAN
- Capacity Building of Biodiversity Research in the Coastal Zones of the Asia Pacific Region: Phycology Taxonomy Analysis Training using Genetic Marker; Project Leader: Prof. Hiroshi KAWAI



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