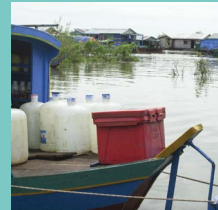
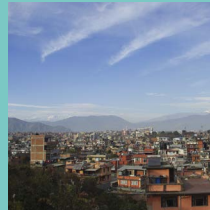
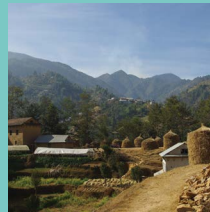




Annual Report

2012–2013



ASIA-PACIFIC NETWORK FOR
GLOBAL CHANGE RESEARCH

APN Annual Report 2012–2013

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1. Satoyama landscape in Hyogo Prefecture, Japan (APN Secretariat); 2. Data collection and interview on community-based forestry in Viet Nam (ARCP2011-04CMY-Paudel); 3. Landscapes of Kusadevi Village, Nepal, where Integrated Pest Management is being implemented for sustainable agriculture (APN Secretariat); 4. Solid fuel made from tomato stem (RUSD2010-02NMY-Sun); 5. Freshwater tanks on a floating home, Tonle Sap, Cambodia (APN Secretariat); 6. The Himalayas seen from Kathmandu Valley, Nepal (APN Secretariat); 7. Entrance to the “Green Village” in Banna, Ayutthaya, Thailand (AOA2012-01NSY-SEA RC)

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MESSAGE FROM THE STEERING COMMITTEE CHAIR & SECRETARIAT DIRECTOR

We are pleased to present you with the APN Annual Report 2012-2013.

Fiscal year 2012 for the APN has been a year of refreshing change and significant milestones. We supported and managed over 40 projects undertaken within and beyond the Asia-Pacific region, including collaborative research and capacity development projects under our core programmes of ARCP and CAPaBLE, as well as new and continuing projects funded through special calls for focused activities.

In terms of climate change mitigation, we launched the Low Carbon Initiatives (LCI) Framework to support the generation and sharing of scientific knowledge for strengthening mitigation efforts for a low carbon, sustainable future.

We introduced the Climate Adaptation (CA) Framework, an important step towards enhancing science-based adaptation activities of our member countries, through a three-pronged approach comprising research, capacity building and partnership development.

Strategic work on developing the Biodiversity and Ecosystem Services (B&ES) Framework culminated in 2012 with the

launch of an opportunity paper, opening a new window for partnership development, regional and international collaboration and contributing to the important work of UNCBD, IPBES and other international processes.

The APN is well positioned to enhance the science-policy interface because of our extensive network of scientists, researchers and policy makers at all levels. Leveraging this unique strength, we organised a Sub-Regional Science-Policy Dialogue on the Challenges of Global Change, in Bangkok, Thailand, in collaboration with START International. The dialogue, which focused on Southeast Asia, was a success and the outcomes were consolidated in a policy brief, which has been disseminated through various channels.

With the active involvement of our members, interaction at the sub-regional level has continued to blossom, bringing members closer in terms of collaboration and knowledge sharing through our sub-regional cooperation mechanism. Temperate East Asia members met in early 2013 and conducted their first sub-regional scoping workshop to find best ways for closer sub-regional ties, drawing from the

experience of the South and Southeast Asia models.

We are pleased to be able to continue providing opportunities for more than a hundred young and early career scientists and practitioners to receive training from renowned experts and scholars in their respective fields in global change. Mechanisms in place to undertake this include our CAPaBLE projects, Proposal Development Training Workshops and activities under our new frameworks. We hope the knowledge and experience will continue to propagate as trainees share their experiences back in their respective countries, organisations and workplaces.


In collaboration with DIVERSITAS, IHDP, UNU-ISP and the Hyogo Prefectural Government, we completed a series of three workshops on “Building resilience with common capital—managing shared resources,” to explore new governance

systems to manage the “new commons” for a more resilient society.


To all APN members, we sincerely thank you for sharing your expertise and experience for the scientific and institutional work of APN. On behalf of APN, we would also like to thank the governments of Japan, United States, Republic of Korea and New Zealand, and all other member countries for their support in cash and in kind that made possible what we have achieved so far.

Last but not least, our heartfelt appreciation to all project leaders and collaborators engaged in the projects implemented in 2012-2013 and to our partners in the global change community for their cooperation. We look forward to working even more closely with you in pursuit of our vision of enabling countries in the region to better address global environmental change challenges through research, capacity development and science-policy linkages.




B. M. U. D. Basnayake
Chair,
APN Steering Committee




Akio Takemoto, PhD
Director,
APN Secretariat

HIGHLIGHTS

2012–2013

PROJECT MANAGEMENT

In fiscal 2012, under its two core programmes—the Annual Regional Call for Research Proposals (ARCP) and Capacity Development (CAPaBLE), APN supported and managed 23 regional research projects and 15 capacity development projects (out of 18 awarded).

In addition, seven projects were funded and managed under the Low Carbon Initiatives (LCI) Framework, a new focused activity to enhance mitigation action across APN developing countries to help achieve a global vision for a low carbon, sustainable future.

Three multi-year focused projects entered their third year, producing noticeable outputs that address two aspects of APN’s Science Agenda: 1) Ecosystems, Biodiversity and Land Use, focusing on forestry and REDD+; and 2) Resource Utilisation and Pathways for Sustainable Development.

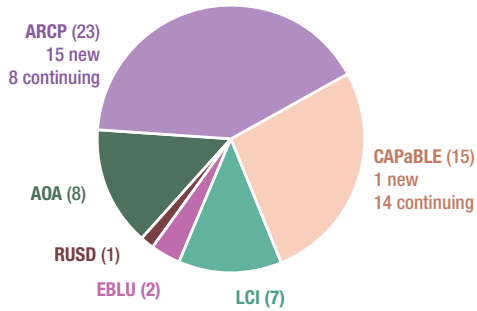
A complete list of projects is included in “2012–2013 Projects” on page 22.

CALLS FOR PROPOSALS

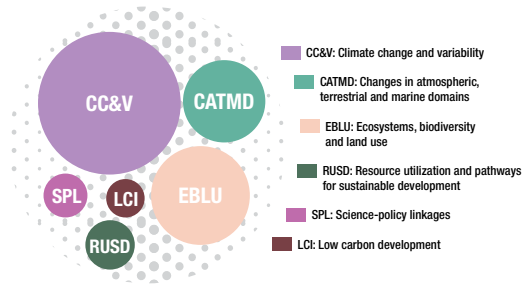
The 2012 Annual Calls for Proposals under the ARCP and CAPaBLE programmes were launched on 7 June 2012. Ninety-nine summary proposals were received; and after two stages of rigorous review by APN’s Scientific Planning Group (SPG) and Capacity Development Committee (CDC), 28 proposals were approved for funding at the 18th IGM in April 2013.

To facilitate the engagement of young and aspiring scientists and practitioners seeking opportunities for collaboration in the region, the APN Secretariat coordinates voluntary advisory service before the summary proposal stage. The aim here is to provide the support needed to engage and compete effectively in the APN network. Such activities as PDTWs and the Voluntary Advisory Service provides advice on scope, potential collaborators, as well as other important networking information.

2012-2013 PROJECTS
BY PROGRAMME

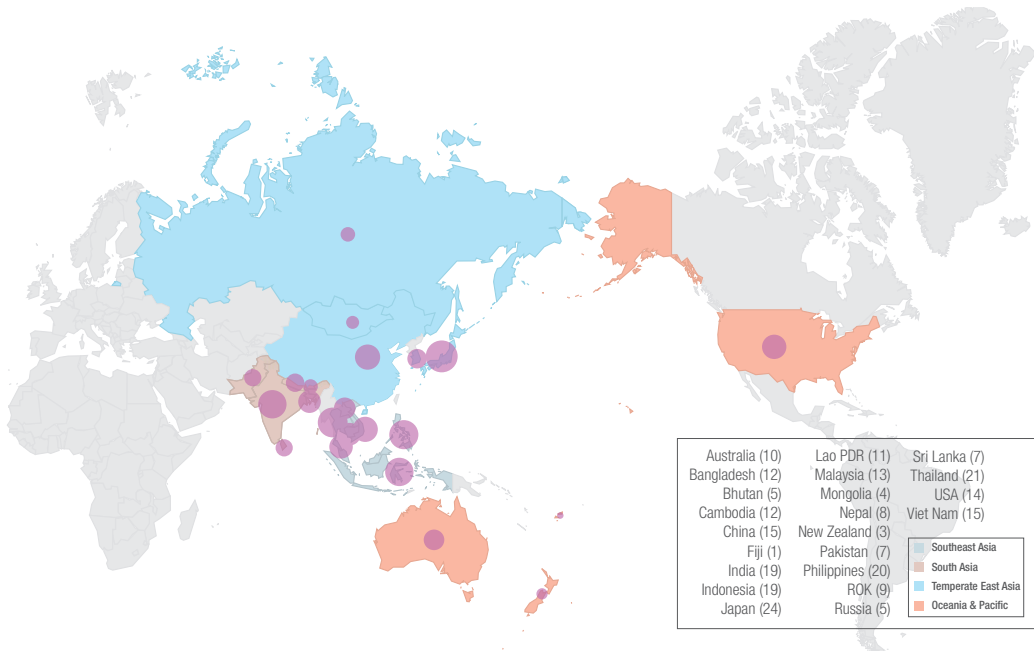


2012-2013 PROJECTS
BY THEMATIC AREA



A GLIMPSE OF COUNTRY INVOLVEMENT:

Number of project leaders and collaborators, grouped by country
(Data from 2012-2013 ongoing projects)



A SHARPER FOCUS

WITH NEW FRAMEWORKS

Climate Adaptation Framework

Climate change adaptation is receiving increasing attention among parties, particularly developing country parties, to the United Nations Framework Convention on Climate Change (UNFCCC). At the COP17 Conference in Durban, South Africa in 2011, parties re-affirmed the Cancun Adaptation Framework, adopted at COP16 the previous year, and decided on the modalities and procedures for an Adaptation Committee.

It is with this background, and with the endorsement of the 17th IGM in March 2012, that the APN launched a series of activities focusing on climate adaptation.

➤ *Scoping Workshop for Enhancing Action of APN Developing Member Countries on Adaptation in the Asia-Pacific Region*

Supported by the Hyogo Prefectural Government, and in collaboration with the Institute for Global Change Adaptation Science (ICAS), Ibaraki University, the APN

conducted a scoping workshop to explore opportunities to enhance action and develop capacity of APN's members on adaptation in the Asia-Pacific region.



▲ *Participants in the scoping workshop.*

The workshop drafted a Climate Adaptation (CA) Framework, with the aim of enhancing science-based adaptation activities of APN developing countries, comprising (1) regional research activities with a capacity building element, (2) capacity building activities at national and sub-national scales, and (3) joint activities with partner organizations and networks.



◀ Forest surrounding Angkor Thom, Siem Reap, Cambodia

regional networks, government agencies, universities and other user communities.

Organisations such as the Asian Development Bank (ADB), Asia-Pacific Adaptation Network (APAN), ICAS, Ministry of Interior, Thailand, United Nations University (UNU), and the World Climate Research Programme (WCRP) has shown keen interest in enhancing collaboration under CAF.

➔ *APN/UN-CECAR Joint Training Programme on Climate Change Downscaling Approaches and Applications*



▲ Training Programme at AIT, Bangkok, Thailand

The workshop identified needs, gaps and lessons for climate adaptation in the Asia-Pacific region. Based on such recognition, a needs-oriented and user-centred approach emerged as a key message. The draft CAF was adopted at the 18th IGM, April 2013.

////////////////////
 Learn more about the Climate Adaptation Framework, including its identified priorities, at:

🔗 www.apn-gcr.org/caf

➔ *Partnership Development*

The workshop recommended that partnerships with local, national, regional and international organisations and networks should be strengthened, and be extended to a variety of stakeholders beyond research institutions, including development agencies,

In partnership with the University Network for Climate and Ecosystems Change Adaptation Research (UN-CECAR), APN supported and engaged in a training programme on climate change downscaling approaches and applications at the Asian Institute of Technology (AIT) in Bangkok, Thailand from 9–20 November 2012, with joint support from ADB and Chulalongkorn University. Over 50 participants joined the training programme and included both scientists and practitioners*.

.....
 * Users of scientific information from ministries and government agencies working in a variety of areas such as environment, natural resources, meteorology, agriculture and forestry, land development and public work.

Low Carbon Initiatives Framework

The APN launched its Low Carbon Initiatives (LCI) Framework in 2012 to enhance mitigation action across countries in the region to achieve a global vision for a sustainable, low carbon future. In July 2012, a special call for expressions of interest (EOIs) was launched for focused activities on LCI. Thirteen proponents out of 44 EOIs were invited to submit a full proposal, with seven approved for funding in early 2013.

Low carbon development, as an integral part of countries' mitigation efforts, requires action from different fields across sectors. This is perfectly manifested by the diversity of the 44 EOIs received through the special call, which encompassed various disciplines ranging from land use and forestry to waste management and integrated assessment modelling. The regional balance and thematic diversity shown also indicates that

options for low carbon development in developing countries differ from one country to another, and that from developed countries' viewpoint, LCI is a new development opportunity through mitigation.

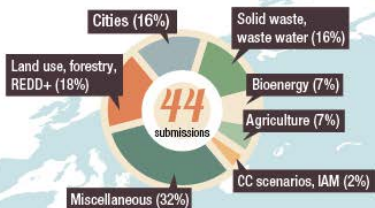


▲ Participants of the first LoCARNet Meeting

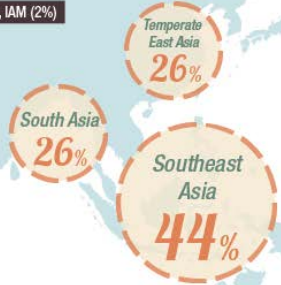
As part of APN's communication/networking under the LCI Framework, APN supported the organisation of the first Annual Meeting of the Low Carbon Asia Research Network (LoCARNet) in October 2012 and contributed to the development of this new international network.

▼ Expressions of Interests received for activities under the LCI framework show the diversity of proposed mitigation options for APN member countries.

THEMATIC DISTRIBUTION
of LCI Submissions



PROJECT COLLABORATOR INVOLVEMENT
by sub-region



LEARN MORE
About LCI projects online



Biodiversity and Ecosystem Services Framework

Acknowledging the need for stronger mechanisms to effectively link biodiversity and ecosystem services to sustainable development and green growth, and to contribute to the ongoing work of the United Nations Convention on Biological Diversity (UNCBD) and the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES), the APN initiated a series of activities over two years culminating in the development of the Biodiversity and Ecosystem Services (B&ES) Framework.

In July 2012, a workshop was held in Bangkok, Thailand to finalise the B&ES Framework, the output of which, in the form of an opportunity paper, was later presented and endorsed at the 18th IGM/SPG Meeting in Kobe, Japan in April 2013.

Under the B&ES Framework, stakeholders are invited to propose and engage in collaborative regional-based research, capacity development and enhancement of the science-policy interface in key areas of biodiversity and ecosystem services for the Asia-Pacific region, especially in developing countries.



Download the Biodiversity and Ecosystem Framework opportunity paper at:

www.apn-gcr.org/bes-paper



▲ Autumn leaves at Kurokawa, Hyogo Prefecture, Japan



LINKING SCIENCE AND POLICY

Science-Policy Dialogue on the Challenges of Global Change

Following the outputs and recommendations by the UNFCCC COP17 in Durban (December 2011), the Planet under Pressure Conference in London (March 2012) and the Rio+20 Conference in Rio de Janeiro (June 2012), the APN partnered with START International to conduct a Science-Policy Dialogue (SPD) in Southeast Asia on Challenges of Global Environmental Change. The SPD aimed to promote informed decision-making on actions to reduce global environmental change vulnerability and promote climate adaptation strategies.

The SPD was held in Bangkok, Thailand, 19-21 July 2012 and attended by close to 100 scientists and policy makers from Southeast Asia. Hosted by the Southeast Asia START Regional Center, the three-day dialogue reaffirmed the need to foster stronger partnerships between the scientific and policy communities, and involve actors from the private

sector to help shape adaptation strategies. Such sustained partnerships would benefit from a range of science-based policy options for both short- and long-term targets.

The dialogue resulted in a policy brief that presents key messages that emerged from the dialogue. The brief has been widely disseminated among member countries and in major international events.

////////////////////////////////////
A policy brief drawn from the
outcomes of the SPD is available
for download at:

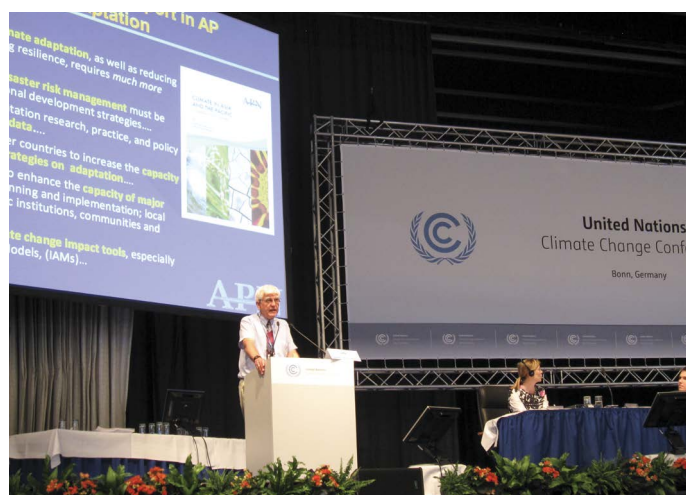
www.apn-gcr.org/sea-spd

A synthesis of the SPD outputs with other similar dialogues in Southeast Asia and Temperate East Asia is expected in 2014 and 2016, respectively.

The APN is mandated to strengthen appropriate interactions among scientists and policy makers, and provide scientific input to decision-making for better-informed policy options. Policy relevance has always been an important criterion for APN in evaluating proposals for funding. In addition, APN has organised and taken part in international events that promote linkages and interaction among the science and policy-making communities.



- ▲ 1) Villagers at Kusadevi Village Development Committee (VDC), Nepal, introduce best practices and novel technology of Integrated Pest Management (IPM) for sustainable agriculture.
- ▲ 2)–5) The first Southeast Asia SPD held in Bangkok, Thailand in July 2012. (Photos: SEA START RC)



▲ Dr. Andrew Matthews, APN Steering Committee member introduces the APN’s latest work at the SBSTA Research Dialogue, Bonn, Germany, May 2012.

UNFCCC Research Dialogue and Workshops

APN contributed to multiple science and policy talks hosted by the UNFCCC, taking the opportunities to share knowledge and best practices from a regional perspective and to engage in dialogues on issues related to global change research, capacity development and science-policy interfacing mechanisms within the Asia-Pacific region.

➤ *SBSTA Research Dialogue*

At the 36th session of the Subsidiary Body for Scientific and Technological Advice (SBSTA 36), Bonn, Germany, 19 May 2012, the APN shared its latest work on synthesising its past and ongoing climate activities and highlighted lessons learned and key recommendations. The APN also introduced its LCI Framework and outcomes of the gap analysis workshop for Biodiversity and Ecosystem Services, particularly those gaps

and potential research themes that have strong links with impacts of climate change.

➤ *Regional Expert Meeting on Loss and Damage*

A regional expert meeting was held in Bangkok, Thailand from 27-29 August 2012 to identify a range of approaches to address loss and damage associated with the adverse effects of climate change, including extreme weather and slow onset events. To address this issue at the national level, APN Secretariat Director, Dr. Akio Takemoto, recommended an approach of mainstreaming scientific knowledge into the formulation and implementation of adaptation plans at national and sub-national scales, reflecting the outcomes of the scoping workshop organised by the APN earlier in Kobe, Japan (See “Climate Adaptation Framework” on page 6).



▲ The APN session at the Adaptation Futures conference, a precursor to the Rio+20 Conference.

Adaptation Futures Conference

In the lead-up to Rio+20, the APN organised a session at the “Adaptation Futures” Conference held from 29–31

May 2012 at the University of Arizona, USA. The session focused on the importance of partnerships and networking to facilitate the adoption of local, national and regional adaptation strategies.

Building on the collective messages that arose from the session, a policy brief was published and widely shared at the Rio+20 Conference and other important international events.

Rio+20 — United Nations Conference on Sustainable Development

Twenty years after the 1992 Earth Summit in Rio de Janeiro, Brazil, world leaders and tens of thousands of participants joined the Rio+20 Conference, short for United Nations Conference on Sustainable Development, to explore ways and share knowledge on how to build a green economy to achieve sustainable development, and for this purpose, how to enhance coordination internationally.

The APN partnered with the Ministry of the Environment of Japan in a side event “Green Growth and the Key Role of Knowledge Networking,” where APN representatives showcased how its activities are contributing to the promotion of regional-based research on sustainable development through knowledge networking within the region.

Key messages were generated from case studies of activities in four member countries. Two common messages were gleaned: the importance of cross-sectoral interactions when



▲ Dr. Amir Muhammed, SPG Member for Pakistan and Dr. Linda Anne Stevenson, APN Secretariat, presenting at the Rio+20 side event on green growth and knowledge networking.

it comes to linking climate and sustainable development; and the important role the human factor plays in successfully strengthening interactions across a region.



▲ Wildfire in the Simcoe Mountains of Washington, USA, captured by Landsat 8. (Photo: NASA Earth Observatory)

Supporting Future Earth Regional Development

Future Earth is a 10-year global initiative on Earth system research that aims to provide comprehensive, multidisciplinary knowledge on responding to global environmental change and achieving sustainability.

It is well understood that this global issue requires region-specific approaches. With this understanding, APN supported the first Future Earth Regional Workshop for Asia and the Pacific, which was organised by ICSU Regional Office for Asia and the Pacific (ICSU

ROAP) as a first step to look at how and what kind of regional approaches are needed for a robust Future Earth.

Key recommendations to ensure a successful Future Earth at the regional level included coordinating learning and capacity development initiatives, and enhancing science-policy and stakeholder interfaces to bring together the scientific community, governments, the private sector and civil society groups.

▼ Participants of the first Future Earth Regional Workshop for Asia and the Pacific, held at Kuala Lumpur, Malaysia. (Photo: ICSU ROAP)



SUB-REGIONAL ACTIVITIES

Sub-regional committees of the APN hit their stride in 2012. The sub-regional approach continues to enhance the flow of information and sharing of knowledge, as countries share common challenges and opportunities on global environmental change issues.

Temperate East Asia (TEA) Sub-Regional Scoping Workshop, Vladivostok, Russian Federation

Representatives from China, Japan, Mongolia, Republic of Korea and the Russian Federation met in Vladivostok, Russian Federation for the first time in a two-day meeting from 25-26 February 2013 under the APN's sub-regional cooperation mechanism in order to to share information and scope collaborative activities that involve each

member country of the Temperate East Asia (TEA) sub-region.

Participants were briefed on sub-regional activities being implemented by Southeast Asia and South Asia committees, and considered whether a similar mechanism will be used by TEA. They shared country experiences and identified a number of research priorities and scientific trends on issues of common interest for Temperate East Asia countries.

Fifth Southeast Asia Sub-Regional Cooperation Meeting (SEA-SRC), Siem Reap, Cambodia

➤ *SEA-SRC Meeting*

Hosted by the Ministry of Environment, Kingdom of Cambodia from 22-26 October 2012, the fifth Southeast Asia Sub-Regional Cooperation (SEA-SRC) Meeting and back-to-back activities brought the Southeast Asia Member Countries a step closer in the aim to jointly address global change challenges in the sub-region.

The meeting reviewed the progress of sub-regional activities, including the first Southeast Asia Science-Policy Dialogue, and discussed future action to strengthen collaboration in areas of common concern among Southeast Asia countries.

Members carefully considered the approach and follow-up action regarding engagement of Myanmar, which paved the way for adding Myanmar officially to the “approved country” list of APN at the 18th IGM in 2013.

➤ *Southeast Asia Climate Adaptation Seminar*

The SRC Meeting was followed by a Climate Adaptation Seminar, where country representatives and experts from the sub-region



3

shared knowledge and experience related to climate adaptation in their countries.

Dr. Preap Visarto, General Directorate of Agriculture, Ministry of Agriculture Forestry and Fisheries (MAFF), Cambodia, and former APN project leader, provided an overview of the natural and socio-economic environment of the sub-region, natural and anthropogenic climate stressors, and best practice examples of climate adaptation activities in Cambodia and across the sub-region.

This was followed by country-specific presentations focusing on major adaptation concerns; current institutional arrangements; policies, strategies and actions to address climate adaptation; and the general landscape of climate adaptation research and the gaps and needs therein.



1



2

- ▲ 1) Mr. Sundara Sem, APN national Focal Point for Cambodia, presenting a certificate for PDTW completion.
- ▲ 2) A young scientist presenting the results of his group’s peer review at the SEA-PDTW.
- ◀ 3) Participants of the Southeast Asia Sub-Regional Meeting.



▲ 1) Participants of the 4th South Asia Sub-Regional Cooperation Meeting and associated workshops. (Photo: SEN)

▶ 2) Hon. Secretary Mr. Keshav Bhattarai, Ministry of Science, Technology and Environment (MoSTE) of Nepal, presenting a certificate to a young scientist for his completion of the PDTW.

▶ 3) Group members and their mentor at a group discussion session of the PDTW.



Fourth South Asia Sub-Regional Cooperation Meeting (SA-SRC), Kathmandu, Nepal

➤ SA-SRC Meeting

The fourth APN South Asia Sub-Regional Cooperation (SA-SRC) Meeting and associated activities were held from 14-18 January 2013, and hosted by the Ministry of Science, Technology and Environment, Nepal with support from the Small Earth Nepal (SEN), a non-governmental organisation based in Kathmandu that promotes sustainable lifestyles through motivating youth and students.

In addition to knowledge sharing and information exchange at the sub-regional level, the meeting decided to contribute, from a sub-regional perspective, to the APN B&ES Framework; develop a concept paper for a South Asia Science-Policy Dialogue, tentatively scheduled for 2014; develop a proposal

focusing on climate adaptation and disaster risk reduction, among other actions.

➤ South Asia Climate Adaptation Seminar

A Climate Adaptation Seminar was organised, where Member Country scientists and national Focal Points shared information and best practices in their respective countries on climate adaptation issues, in particular related to agriculture.

The seminar was attended by APN members and young scientists from South Asia, as well as scientists and policy makers from Nepal whose work is related to climate adaptation. This provided a platform for sharing information, knowledge and best practices among South Asia countries on issues related to climate change adaptation with links to agriculture.



PROPOSAL DEVELOPMENT TRAINING WORKSHOPS

▲ In a peer review session at the SA-PDTW, trainees perform group peer reviews and scored their peers' proposals based on APN guidelines.

46

young/early-career scientists trained



18

Countries in South Asia, Southeast Asia, and Temperate East Asia

Improving the scientific and technical capabilities of countries in the Asia-Pacific region is one of the four goals of APN. Young and early-career scientists and practitioners, in particular, are APN's target groups when working towards the attainment of this strategic goal. Since 2008, APN has been regularly conducting Proposal Development Training Workshops (PDTWs) in countries within the Asia-Pacific region. As of April 2013, 10 PDTWs were conducted in nine countries, involving trainees and mentors from all APN member countries.

In fiscal year 2012, APN organised two Proposal Development Training Workshops (PDTWs) back-to-back with Sub-Regional Cooperation Meetings, creating an enabling environment of learning and networking for 46 young and early-career scientists and practitioners from the Asia-Pacific Region.

COLLABORATION WITH THE HYOGO PREFECTURAL GOVERNMENT

Hyogo Prefecture, where the APN Secretariat is located, is home to many international research projects and programmes whose work covers a wide range of areas, including disaster management and prevention, enclosed coastal seas management, public health and global environmental change, among others.

APN works closely with the Hyogo Prefectural Government and partners in Hyogo Prefecture to support international cooperation events, contributing to knowledge sharing and information dissemination among the research and policy communities as well as the general public.

Workshop Series “Building Resilience with Common Capital—Managing Shared Resources” (Colombo, Sri Lanka and Kobe, Japan)

Satoyama is a Japanese term for a mosaic of ecosystem types—secondary forests, farmland, irrigation ponds and grasslands—along with human settlements, which has been managed to produce bundles of ecosystem services for human well-being.

As a joint initiative by the APN, DIVERSITAS, IHDP, UNU-ISP and Hyogo Prefectural Government, a series of three workshops on “Building resilience with common capital—managing shared resources” was held in Japan and Sri Lanka, bringing together experts from Japan and the international scientific community, to identify new governance systems to manage the “new commons” to regulate ecosystem services and enhance socioecological resilience against climate and ecosystem changes in an efficient and equitable manner.

Following the first workshop held in UNU-ISP in Tokyo, Japan in January 2012, focusing on project scoping and design, two follow-up workshops were held later in the same year, in Colombo, Sri Lanka and Kobe, Japan, respectively.



▲ *Mr. Imanishi, owner of a traditional kikuzumi charcoal kiln in Kurokawa, Hyogo, Japan, introduces sustainable charcoal production to participants of the Kobe workshop during a field visit.*

////////////////////

The project provided a conceptual framework for understanding and managing identified mismatches; laid out key components underlying the concept of the New Commons; and identified the main interlinkages and relationships both within and across scales to address these mismatches. The results are published in *Current Opinion in Environmental Sustainability*:
[🔗 doi: 10.1016/j.cosust.2013.11.031](https://doi.org/10.1016/j.cosust.2013.11.031)



- ▲ 1) Governor Toshizo Ido of Hyogo Prefecture addresses the audience at the opening session.
- ▲ 2) Panel discussion moderated by Dr. Yutaka Suzuki, Director-General of IGES Kansai Research Centre.
- ◀ 3) Mr. Eiji Endo, Director, Global Warming Solutions Division, Hyogo Prefectural Government, presents on best practices of promoting the use of photovoltaics in Hyogo Prefecture.

Symposium on Low Carbon Society in Asia through Dissemination of Renewable Energy Technology

Renewable energy technologies are innovative and promising technologies to achieve low carbon development both in developed and developing countries in Asia. Various types of renewables such as solar, wind power and biomass energy are being, or will be, disseminated in Asia through a variety of policy practices, such as regulatory schemes, target setting and economic incentives, including feed-in-tariffs.

The APN, IGES and Hyogo Prefectural Government organised a symposium on 18 February 2013 to provide the latest information on renewable energy technologies that have been introduced in Japan and developing countries in Asia to the public, and to exchange views among participants on gaps, lessons and solutions to achieve a low carbon society.

Guest speakers from Thailand and Malaysia introduced the renewable energy situation in their respective countries, while representatives of private companies and Hyogo Prefectural Government shared good practices that have successfully introduced renewable energy.

Find out more about how APN works with the Hyogo Prefectural Government:
www.apn-gcr.org/hyogo-activities

COMMUNICATION AND OUTREACH



▲ APN Secretariat staff at the International Forum for Sustainable Asia and the Pacific (ISAP), Yokohama, Japan 2012.

➔ *Redesigned E-Lib*

A major redesign was made to the APN E-Lib (metadata portal) interface. The new structure makes it easier for users to locate project information and publications using a basic/advance search tool, category views, etc. Data migration to the new interface is complete and new project outputs/publications, will be added to the portal as they become available. The E-Lib interface is located at: www.apn-gcr.org/resources.

In implementing the Communications Strategy, new information materials were produced and disseminated through physical and electronic means. This includes APN newsletters, new policy briefs, a generic brochure and posters, among others. Over 20 press releases were prepared and disseminated through the APN website, email list and social media sites.

➔ *Outreach Activities*

The APN was represented in various national and inter-

national events by members and Secretariat staff to showcase APN activities and outputs through presentations and/or booth exhibits. A list of major events is available on page 29.

➔ *Strengthening Institutional Mechanisms*

To strengthen the institutional mechanism of APN, the Secretariat continues to maintain close communication among APN organs and members, through regular information material and updates.

2012-2013 PROJECTS



▲ Vietnamese (foreground) and Cambodian REDD+ teams formulating their policy agenda at the second ASEAN Regional Policy Workshop (Photo: LCI2012-02NSY(C)-Guerreo)

ANNUAL REGIONAL CALL FOR RESEARCH PROPOSALS (ARCP)

ARCP2012-01CMY-Patra/Canadell	Greenhouse gas budgets of South and Southeast Asia	Prabir K. PATRA and Dr. Josep CANADELL, Research Institute for Global Change (JAMSTEC), JAPAN / Global Carbon Project (GCP), AUSTRALIA	CC&V, CATMD
ARCP2012-02CMY-Fortes	Seagrass-mangrove ecosystems: bioshields against biodiversity loss and impacts of local and global change along Indo-Pacific coasts	Miguel FORTES, Marine Science Institute, University of the Philippines Diliman, PHILIPPINES	CC&V, EBLU
ARCP2012-03CMY-Herath	Developing ecosystem-based adaptation strategies for enhancing resilience of rice terrace farming systems against climate change	Anura Srikantha HERATH, Institute for Sustainability and Peace, United Nations University (UNU-ISP), JAPAN	CC&V, EBLU
ARCP2012-04CMY-Salik	Impact of climate change on mangrove ecosystems in South Asia	Kashif Majeed SALIK, Global Change Impact Studies Centre (GCISC), PAKISTAN	CC&V, EBLU
ARCP2012-05CMY-Zhen	Holistic assessment of land-use change and impacts on ecosystem services of wetlands	Lin ZHEN, Chinese Academy of Sciences, CHINA	EBLU, CATMD
ARCP2012-06CMY-IGBP	An International Geosphere-Biosphere Programme synthesis theme on global environment change and sustainable development: needs of least developed countries	Karen SMYTH, International Geosphere-Biosphere Programme (IGBP)	CCI, SPL
ARCP2012-07CMY-Ramanathan	Tracing nitrogen and carbon biogeochemical processes in the inter-tidal mangrove ecosystem (Sundarban) of India and Bangladesh: implications of global environmental change	Alagappan RAMANATHAN, School of Environmental Sciences, Jawaharlal Nehru University, INDIA	CC&V, EBLU
ARCP2012-08CMY-Jung	Impacts of global warming on coastal and marine ecosystems in the Northwest Pacific	Sukgeun JUNG, National Fisheries Research and Development Institute, REPUBLIC OF KOREA	CC&V, EBLU, CATMD, RUSD
ARCP2012-09NMY-Meinke	Improving the robustness, sustainability, productivity and eco-efficiencies of rice systems throughout Asia	Holger MEINKE, University of Tasmania, AUSTRALIA	CC&V, EBLU, CCI
ARCP2012-10NMY-Li	Development of an integrated climate change impact assessment tool for urban policy makers (UrbanCLIM)	Yinping LI, Waikato University, NEW ZEALAND	CC&V, SPL
APCP2012-11NMY-Quynh	Carbon fluxes and emissions from the Red River (Viet Nam and China): human activities and climate change	Thi Phuong Quynh LE, Vietnam Academy of Science and Technology (VAST), VIET NAM	CC&V, CATMD

ARCP2012-12NMY-Roy	Coastal ecosystems and changing economic activities: challenges for sustainability transition	Joyashree ROY, Jadavpur University, INDIA	CATMD, CCI
ARCP2012-13NMY-DeCosta	A study on loss of land surface and changes to water resources resulting from sea level rise and climate change	G. S. DECOSTA, Unitec Institute of Technology, NEW ZEALAND	CC&V, EBLU, CATMD
ARCP2012-14NMY-Carter	Coral reef and water quality status and community understanding of threats in the eastern Gulf of Thailand	R. W. (Bill) CARTER, University of the Sunshine Coast, AUSTRALIA	CATMD, RUSD
ARCP2012-15NMY-Yoo	Toward a fire and haze early warning system for Southeast Asia	Jin Ho YOO, APEC Climate Center, REPUBLIC OF KOREA	CC&V, EBLU, CATMD, RUSD
ARCP2012-16NMY-Yabe	GEOSS/Asian Water Cycle Initiative/Water Cycle Integrator (GEOSS/AWCI/WCI)	Shizu YABE, Japan Aerospace Exploration Agency (JAXA), JAPAN	CC&V, CATMD
ARCP2012-17NMY-Burnett	Assessing the impact of climate change and development pressures on nutrient inputs into the Mekong River and Tonle Sap	William C. BURNETT, Florida State University, USA	CC&V, CATMD
ARCP2012-18NMY-Sase	Dynamics of sulphur derived from atmospheric deposition and its possible impacts on East Asian forests	Hiroyuki SASE, Asia Centre for Air Pollution Research, JAPAN	EBLU, CATMD
ARCP2012-19NSY-Kamal	Assessing climate change impacts on salt marsh and seagrass ecosystems in South and Southeast Asian coasts	Abu Hena Mustafa KAMAL, University Putra Malaysia, MALAYSIA	CC&V, CATMD
ARCP2012-20NSY-Musafer	Sustainable biochar systems in developing countries	Namiz MUSAFER, Practical Action Sri Lanka, SRI LANKA	CC&V, RUSD
ARCP2012-21NSY-Siswanto	Climate change and human impacts on marine biological production in the Asia-Pacific marginal seas	Eko SISWANTO, Research Institute for Global Change (JAMSTEC), JAPAN	CATMD, CCI
ARCP2012-22NSG-Prayitno	Scoping workshop to develop proposal: vulnerability assessment of mangrove biodiversity to climate change in Southeast Asia	Joko PRAYITNO, Agency for the Assessment and Application of Technology (BPPT), INDONESIA	CC&V, EBLU
ARCP2012-23NSG-Crawford	Scoping workshop to develop proposal: human responses to catastrophic monsoon events in South Asia — designing a spatially explicit model in low-lying coastal areas	Thomas CRAWFORD, East Carolina University, USA	CC&V

- ❖ **CC&V:** climate change and climate variability
- ❖ **EBLU:** ecosystems, biodiversity and land use
- ❖ **CATMD:** changes in atmospheric, terrestrial and marine domains
- ❖ **RUSD:** resource utilisation for sustainable development
- ❖ **SPL:** science-policy linkages
- ❖ **CCI:** cross-cutting issues

SCIENTIFIC CAPACITY BUILDING/ENHANCEMENT FOR SUSTAINABLE DEVELOPMENT IN DEVELOPING COUNTRIES (CAPaBLE)

CBA2012-01CMY-Abawi	Building scientific capacity in seasonal climate forecasting (SCF) for improved risk management decisions in a changing climate	Yahya ABAWI, Ariana Consulting Engineers, AUSTRALIA	CC&V
CBA2012-03NMY-Rasul	Impact of climate change on glacier melting and water cycle variability in Asian river basins	Ghulam RASUL, Pakistan Meteorological Department, PAKISTAN	CC&V, SPL
CBA2012-04NSY-Kanie	Exploring effective architecture for emerging agencies in international environmental governance	Norichika KANIE, Tokyo Institute of Technology, JAPAN	CCI
CBA2012-06NSY-Zhang	International workshop: needs assessment for capacity development for integrated marine biogeochemistry and ecosystem research in the Asia-Pacific region	Jing ZHANG, East China Normal University (ECNU), CHINA	CATMD, CCI
CBA2012-07NSY-Arida	ASEAN training workshop on building capacity on ABS	Clarissa C. ARIDA, ASEAN Centre for Biodiversity (ACB), PHILIPPINES	EBLU
CBA2012-08NSY-Hongbo	International workshop on marine invasive species (MIS) problems in Northwest Pacific region	Hongbo SHANG, NOWPAP DINRAC, Policy Research Center for Environment and Economy, CHINA	EBLU, SPL
CBA2012-09NMY-Hashim	Global environmental change and human health: extreme events and urbanisation in the APN region	Jamal Hisham HASHIM, UKM Medical Centre, MALAYSIA	CC&V
CBA2012-10NSY-Zondervan	Governing critical uncertainties: climate change and decision-making in transboundary river basins	Ruben ZONDERVAN, Earth System Governance, SWEDEN	CC&V, SPL
CBA2012-12NSY-Cruz	Enhancing the LGU capacity for implementing conservation farming village and a strategy for climate change adaptation and upland environment	Rex Victor O. CRUZ, College of Forestry and Natural Resources, University of the Philippines Los Baños, PHILIPPINES	EBLU, RUSD, SPL
CBA2012-13NSG-Bora	Capacity building in climate change mitigation through precision agriculture	Ganesh C. BORA, Agriculture and Biosystems Engineering, North Dakota State University, USA	CC&V, RUSD, SPL
CBA2012-14NSG-Adiningsih	Creating a learning network among Asian planning schools for climate change adaptation education and enhancing the interface with the global change science community	Erna Sri ADININGSIH, National Institute of Aeronautics and Space, INDONESIA	CC&V, CI, SPL

CBA2012-15NSY-Hiwasaki	Capacity-building to strengthen resilience of coastal and small island communities against impacts of hydro-meteorological hazards and climate change	Lisa HIWASAKI, UNESCO Jakarta Office, Regional Science Bureau for Asia and the Pacific, INDONESIA	CC&V, CATMD
CBA2012-16NSY-Gordov	Capacity building to study and address climate change induced extremes in Northern Asia	Evgeny GORDOV, Siberian Center for Environmental Research and Training/Institute of Monitoring of Climatic and Ecological Systems SB RAS, RUSSIAN FEDERATION	CC&V, RUSD
CBA2012-17NSY-Pradhananga	Preparation of next generation leadership in sustainability: an approach in the Asia-Pacific region	Dhiraj PRADHANANGA, The Small Earth Nepal (SEN), NEPAL	CCI
CBA2012-18NSY-PAGES	The past: a compass for future Earth — PAGES 2nd Young Scientists Meeting and 4th Open Science Meeting	Thorsten KIEFER, PAGES Past Global Changes, SWITZERLAND	CC&V

FRAMEWORK: LOW CARBON INITIATIVES (LCI)

LCI2012-01NSY(C)-Maeda	Capacity building for implementing a "measurable, verifiable and reportable (MRV)" model in a mid-sized Thai municipality	Toshido MAEDA, Institute for Global Environmental Strategies (IGES), JAPAN
LCI2012-02NSY(C)-Guerrero	Strengthening community voices in REDD+ policy	Maria Cristina GUERRERO, Non-Timber Forest Products Exchange Programme for South and Southeast Asia, PHILIPPINES
LCI2012-01NMY(R)-Vashist	Identification of policy and institutional gaps, drivers and strategies to scale-up low carbon and energy-efficient technology application in the construction and infrastructure sectors in South Asia	Sanjay VASHIST, Climate Action Network South Asia (CANSAs), BANGLADESH
LCI2012-02NMY(R)-Dhakal	Understanding and quantifying the water-energy-carbon nexus for low carbon development in Asian cities	Shobhakar DHAKAL, Asian Institute of Technology, THAILAND
LCI2012-03NMY(R)-Lopez	Assessment of carbon sequestration through vermitechnology in organic farming	Marilou J. Ang LOPEZ, University of the Philippines Visayas, PHILIPPINES
LCI2012-04NMY(R)-Macandog	Integrated sustainability assessment of bioenergy potentials in Asia: An application of a hybrid approach on trade-offs and pathway	Damas B.M. MACANDOG, University of Philippines Los Baños, PHILIPPINES
LCI2012-05NMY(R)-Jupesta	Low carbon urban infrastructure investment: cases of China, Indonesia, and Japan	Joni JUPESTA/Takako WAKIYAMA, United Nations University – Institute of Advanced Studies (UNU-IAS)/ Institute for Global Environmental Strategies(IGES), JAPAN

FOCUSED ACTIVITIES: ECOSYSTEMS, BIODIVERSITY AND LAND USE (EBLU)

EBLU2012-01CMY(R)-Takeuchi	Critical analysis of effectiveness of REDD+ for forest communities and shifting cultivation based on lessons learned from conservation efforts in Laos and Thailand	Kazuhiko TAKEUCHI, United Nations University, JAPAN
EBLU2012-02CMY(R)-Scheyvens	Participatory approaches to forest carbon accounting to mitigate climate change, conserve biodiversity, and promote sustainable development	Henry SCHEYVENS, Institute for Global Environmental Strategies (IGES), JAPAN

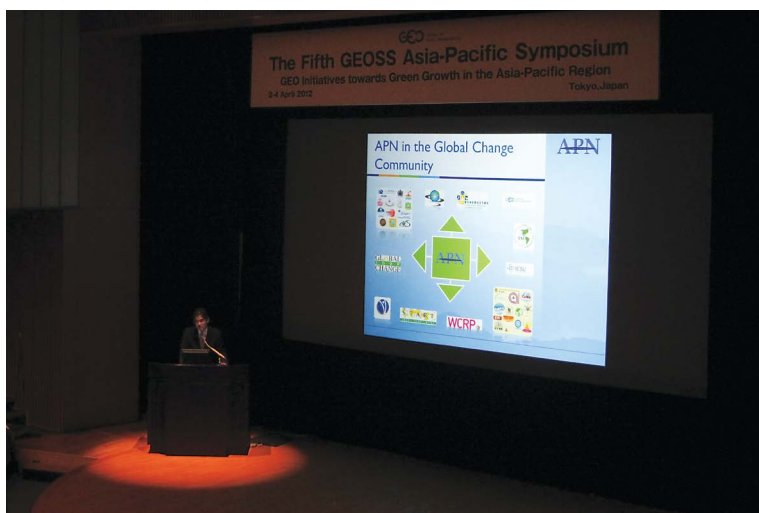
FOCUSED ACTIVITIES: RESOURCE UTILISATION AND PATHWAYS FOR SUSTAINABLE DEVELOPMENT (RUSD)

RUSD2012-01CMY(R)-Surjan	Advancing locally-based green practices to realise establishment of sound material cycle society in Asian cities	Akhilesh SURJAN, United Nations University (UNU), JAPAN
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AOA PROJECTS

AOA2012-01NSY-SEA RC	APN and START science-policy dialogue: meeting the challenges and opportunities of climate change — vulnerability, adaptation and risk management options	Jariya Boonjawat, Southeast Asia START Regional Center (SEA START RC), THAILAND; and APN Secretariat, JAPAN
AOA2012-02NSY-Nishioka	First Annual Meeting of LoCARNet, Bangkok, Thailand	Shuzo Nishioka, Secretary General, LoCARNet, JAPAN
AOA2012-03NSY-Sem	Fifth Southeast Asia Sub-Regional Cooperation (SEA-SRC) Meeting, Climate Adaptation Seminar and Proposal Development Training Workshop (PDTW)	Sundara Sem, Ministry of Environment, CAMBODIA
AOA2012-04NSY-Adrianov	First Temperate East Asia Sub-Regional Cooperation (TEA SRC) Scoping Meeting and Proposal Development Training Workshop (PDTW)	Andrey V. Adrianov, Russian Academy of Sciences, RUSSIAN FEDERATION
AOA2012-05NSY-Herath	UNU-CECAR/UNU-ISP/APN training programme on climate change downscaling approaches and applications	Srikantha Herath, United Nations University – Institute for Sustainability and Peace (UNU-ISP), JAPAN

AOA2012-06NSY-Duwadee	Fourth South Asia Sub-Regional Cooperation (SA-SRC) Meeting, Climate Adaptation Seminar and Proposal Development Training Workshop (PDTW)	Dhiraj Pradhananga, The Small Earth Nepal, NEPAL
AOA2012-07NSY-ICSU-ROAP	Future Earth Regional Workshop for Asia and the Pacific, Kuala Lumpur, Malaysia	Mohd. Nordin Hasan, International Council for Science – Regional Office for Asia and the Pacific (ICSU-ROAP), MALAYSIA
AOA2012-08NSY-Lansigan	International Conference on Climate Change Impacts and Adaptation for Food and Environmental Security	Felino P. Lansigan, University of the Philippines Los Baños (UPLB), PHILIPPINES



▲ *Dr. Akio Takemoto, APN Secretariat Director, presenting at the fifth GEOSS Asia-Pacific Symposium, March 2011, Tokyo, Japan*

LIST OF MAJOR EVENTS

Below is a list of events from April 2012 to March 2013 that are solely or jointly organised by APN, or events which it has taken active part.

April 2012	
5th GEOSS Asia-Pacific Symposium	Tokyo, JAPAN
7th Scientific Steering Committee Meeting of MAIRS	Zhangjiajie, CHINA
May 2012	
6th UN-CECAR International Conference on Renewable Energy	Bangkok, THAILAND
UNFCCC SBSTA36 and Research Dialogue	Bonn, GERMANY
Second APN/ DIVERSITAS/IHDP/UNU-ISP New Commons Workshop	Colombo, SRI LANKA
2nd Adaptation Futures Conference	Tucson, USA
June 2012	
United Nations Conference on Sustainable Development (Rio+20)	Rio de Janeiro, BRAZIL
July 2012	
4th International Forum for Sustainability in Asia and the Pacific (ISAP)	Yokohama, JAPAN
APN/START Science-Policy Dialogue in Southeast Asia on Challenges of Global Environmental Change	Bangkok, THAILAND
August 2012	
Needs Assessment for Capacity Development for IMBER in the Asia-Pacific Region	Shanghai, CHINA
APN/Hyogo/ICAS Scoping Workshop to Enhance the Action of APN Developing Country Members on Adaptation in the Asia-Pacific Region	Kobe, JAPAN
UNFCCC Regional Expert Meeting on a Range of Approaches to Address Loss and Damage Associated with the Adverse Effects of Climate Change, Including Impacts Related to Extreme Weather Events and Slow Onset Events	Bangkok, THAILAND
September 2012	
9th AWCI International Coordination Group (ICG) Meeting and the Workshop on Climate Change Adaptation	Tokyo, JAPAN

October 2012	
IGFA Annual Meeting	Stockholm, SWEDEN
PICES 21st Annual Meeting	Hiroshima, JAPAN
5th Southeast Asia Sub-Regional Cooperation Meeting	Siem Reap, CAMBODIA
South Asia Meeting of CORDEX	Pune, INDIA
November 2012	
Regional Workshop on Future Earth	Kuala Lumpur, MALAYSIA
December 2012	
Third APN/ DIVERSITAS/IHDP/UNU-ISP New Commons Workshop	Kobe, JAPAN
Future Asia Symposium	Kyoto, JAPAN
3rd Environmental Innovators Symposium	Yokohama, JAPAN
January 2013	
4th South Asia Sub-Regional Cooperation Meeting	Kathmandu, NEPAL
Earth System Governance Tokyo Conference	Tokyo, JAPAN
Aid and International Development Forum	Bangkok, THAILAND
February 2013	
Scoping Meeting of APN Temperate East Asia Members on Sub-Regional Cooperation and PDTWs	Vladivostok, RUSSIAN FEDERATION
March 2013	
APAN Asia-Pacific Climate Adaptation Forum	Incheon, REPUBLIC OF KOREA
8th Scientific Steering Committee Meeting of MAIRS	Guangzhou, CHINA

PUBLICATIONS

SELECTED PROJECT OUTPUTS

- Bajpai, V., Kulkarni, G., Han, S. S., & Ramachandra, T. V. (2012). Carbon emissions due to electricity consumption in the residential sector. In *Proceedings of LAKE 2012: National Conference on Conservation and Management of Wetland Ecosystems*. Kottayam: Indian Institute of Science. Retrieved from http://wgbis.ces.iisc.ernet.in/energy/lake2012/fullpaper/vishnu_b_fullpaper.pdf
- Chang, T.-Y., Wang, Y.-C., Feng, C.-C., Ziegler, A. D., Giambelluca, T. W., & Liou, Y.-A. (2012). Estimation of root zone soil moisture using apparent thermal inertia with MODIS imagery over a tropical catchment in northern Thailand. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, 5(3), 752–761. doi:10.1109/JSTARS.2012.2190588
- Duraiappah, A. K., Asah, S. T., Brondizio, E. S., Kosoy, N., O'Farrell, P. J., Prieur-Richard, A.-H., ... Takeuchi, K. (2014). Managing the mismatches to provide ecosystem services for human well-being: a conceptual framework for understanding the New Commons. *Current Opinion in Environmental Sustainability*, 7, 94–100. doi:10.1016/j.cosust.2013.11.031
- Harris, N. L., Brown, S., Hagen, S. C., Saatchi, S. S., Petrova, S., Salas, W., ... Lotsch, A. (2012). Baseline map of carbon emissions from deforestation in tropical regions. *Science*, 336(6088), 1573–1576. doi:10.1126/science.1217962
- Kulkarni, G., Bajpai, V., Han, S. S., & Ramachandra, T. V. (2012). Carbon footprint of municipal solid waste in Greater Bangalore. In *Proceedings of LAKE 2012: National Conference on Conservation and Management of Wetland Ecosystems*. Kottayam: Indian Institute of Science. Retrieved from http://wgbis.ces.iisc.ernet.in/energy/lake2012/fullpaper/gouri_fullpaper.pdf
- Lu, X. X., Li, S., He, M., Zhou, Y., Li, L., & Ziegler, A. D. (2012). Organic carbon fluxes from the upper Yangtze basin: an example of the Longchuanjiang River, China. *Hydrological Processes*, 26(11), 1604–1616. doi:10.1002/hyp.8267
- Patra, P. K., Canadell, J. G., Houghton, R. A., Piao, S. L., Oh, N.-H., Ciais, P., ... Lasco, R. (2013). The carbon budget of South Asia. *Biogeosciences*, 10(1), 513–527. doi:10.5194/bg-10-513-2013
- Patra, Prabir K., Canadell, J. G., & Lal, S. (2012). The rapidly changing greenhouse gas budget of Asia. *Eos, Transactions American Geophysical Union*, 93(25), 237–237. doi:10.1029/2012EO250006

- Paudel, N. S., Khatri, D. B., Ojha, H., Karki, R., & Gurung, N. (2013). Integrating climate change adaptation with local development: exploring institutional options. *Journal of Forest and Livelihood*, 11(1), 1–13.
- Shackley, S., Carter, S., Knowles, T., Middelink, E., Haefele, S., & Haszeldine, S. (2012). Sustainable gasification–biochar systems? A case-study of rice-husk gasification in Cambodia, Part II: Field trial results, carbon abatement, economic assessment and conclusions. *Energy Policy*, 41, 618–623. doi:10.1016/j.enpol.2011.11.023
- Shackley, S., Carter, S., Knowles, T., Middelink, E., Haefele, S., Sohi, S., ... Haszeldine, S. (2012). Sustainable gasification–biochar systems? A case-study of rice-husk gasification in Cambodia, Part I: Context, chemical properties, environmental and health and safety issues. *Energy Policy*, 42, 49–58. doi:10.1016/j.enpol.2011.11.026
- Shin, S. H., & Bae, D. H. (2013). Future projections of Köppen climate shifts in the Asia regions using A2 scenario. *Journal of Korea Water Resources Association*, 46(3), 253–265. doi:10.3741/JKWRA.2013.46.3.253
- Yang, Q., Li, J., Gan, X., Zhang, J., Yang, F., & Qian, Y. (2012). Comparison of landscape patterns between metropolises and small-sized cities: a gradient analysis with changing grain size in Shanghai and Zhangjiagang, China. *International Journal of Remote Sensing*, 33(5), 1446–1464. doi:10.1080/01431161.2011.574161
- Ziegler, A. D. (2012). Water management: Reduce urban flood vulnerability. *Nature*, 481(7380), 145–145. doi:10.1038/481145b
- Ziegler, A. D., Phelps, J., Yuen, J. Q., Webb, E. L., Lawrence, D., Fox, J. M., ... Koh, L. P. (2012). Carbon outcomes of major land-cover transitions in SE Asia: great uncertainties and REDD+ policy implications. *Global Change Biology*, 18(10), 3087–3099. doi:10.1111/j.1365-2486.2012.02747.x

APN REPORTS AND PROCEEDINGS

- Shrestha, M.L., Sterin, A., Stevenson, L.A. (2013). *APN Science Bulletin: Issue 3*. Kobe: Asia-Pacific Network for Global Change Research. Retrieved from: <http://www.apn-gcr.org/resources/items/show/1879>
- Asia-Pacific Network for Global Change Research (APN). (2012). *Proceedings of the 17th IGM/SPG Meeting (2012 Jakarta, Indonesia)*. Retrieved from <http://www.apn-gcr.org/resources/items/show/1850>
- Asia-Pacific Network for Global Change Research (APN). (2012). *Networking beyond Rio+20: Climate Adaptation Partnerships for Sustainable Development—A Policy Brief*. Retrieved from <http://www.apn-gcr.org/resources/items/show/1835>
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VOICES FROM YOUNG SCIENTISTS AND PRACTITIONERS

The present section provides feedback from young scientists/practitioners involved in major APN capacity-building activities during the reporting period.

CBA2012-07NSY-Arida: ASEAN Training Workshop on Building Capacity on Access and Benefit Sharing (ABS)

“This workshop provided me with an update of ABS activities in Southeast Asia under the Nagoya Protocol. I learned more about “biopiracy” and “traditional knowledge,” which are important aspects of benefit sharing. In addition, getting to know my peers’ experiences and opinions in the context of biological conservation is a significant gain from this 3rd Regional Workshop on ABS in Malaysia.

As I am in charge of an ACB-UNEP-GEF ABS project in my country, understanding Access and Benefit Sharing is required for project implementation. Moreover, the workshop benefited me greatly, because utilisation and conservation of genetic resources are an important area of my work at the Biotechnology and Ecology Institute, Ministry of Science and Technology.”

— *Khamphachanh Sihavong, Technical Officer, Biotechnology and Ecology Institute, LAO PDR*

► *Data collection and interview undertaken in a forest-dependent village in Viet Nam, one of the four countries studied by the project ARCP2011-04CMY-Paudel: Community-based forestry and livelihoods in the context of climate change adaptation (Photo: ARCP2011-04CMY-Paudel)*

CBA2012-04NSY-Kanie: Exploring Effective Architecture for Emerging Agencies in International Environmental Governance

“I have had the opportunity to meet and interact with top international experts, and had discussions with them on various aspects of trans-boundary river basin management through regional cooperation. ... I have been successful in sensitising the global scientific community on the emerging need of regional co-operation in trans-boundary water governance in South Asia.

— *Prakash C. Tiwari, Kumaon University, INDIA*

Fifth Southeast Asia Proposal Development Training Workshop (PDTW), Siem Reap, Cambodia

“The overall management was great and the workshop helped us, as young scientists, expand our research network, learn from experts and renowned scientists, interact with international peers, build confidence, develop friendships and create memories. It is a boost to our professional experiences and certainly guides us towards developing more competitive research proposals.

— *Mariche B. Bandibas, Research Assistant, Ecosystems Research and Development Bureau, PHILIPPINES*





▲ Dr. Joni Jupesta (middle) of United Nations University, receives the 2013 Mitra Award.

THE MITRA AWARD FOR GLOBAL CHANGE RESEARCH

The Mitra Award for Global Change Research was established in 2010 in memory of Dr. Ashesh Proshad Mitra, APN SPG Member for India from 1996 to 2007. Dr. Mitra was a doyen in atmospheric research in India, and was recipient of the Padma Bhushan award conferred by the Indian government in recognition of his distinguished service to the nation in the field of scientific research.

Dr. Mitra's work was instrumental for the APN to formulate a strong and effective sci-

entific agenda that has successfully led to the international recognition that APN holds today in global change research.

The award recognises outstanding young scientists conducting global change research in the Asia-Pacific region. It is presented in conjunction with the annual APN IGM/SPG Meetings, where a poster session is organised and the winner is selected by SPG members, nFPs and other esteemed members of the science and policy communities.

WINNERS OF THE MITRA AWARD

- ❖ **2013: Joni Jupesta**, United Nations University – Institute for Advance Studies, Tokyo, Japan: Rio+20 Outcomes into Implementation: Water-Energy-Food Security Nexus in Indonesian Palm Oil
- ❖ **2012: Evi Gusmayanti**, Centre for Wetlands People and Biodiversity, Universitas Tanjungpura, Indonesia: Natural Properties of Carbon Stock in Customary Peat Forest at Danau Sentarum National Park, West Kalimantan, Indonesia
- ❖ **2011: W.G.D. Lakmini**, Faculty of Agriculture, University of Ruhuna, Sri Lanka: Plant Mediator to Tackle Climate Change
- ❖ **2010: Woo-Seop Lee**, Department of Atmospheric Sciences, Kongju National University, Republic of Korea: The Relationships between Absorbing Aerosols and Snow Cover/Snow Water Equivalent over the Himalayas and the Western Tibetan Plateau during Boreal Spring

PEOPLE IN APN

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The Inter-Governmental Meeting (IGM) is the main decision-making body of the APN. The IGM consists of national Focal Points (nFPs) appointed by Member Country governments and approves APN's annual programme of work and budget based on recommendations from the Scientific Planning Group (SPG). The Steering Committee (SC) acts on behalf of the IGM and provides guidance to the Secretariat on scientific, policy and institutional matters. The lists in this section are current at the time of publication.



▲ Participants of the 19th IGM/SPG Meeting, April 2013, Kobe, Japan.

NFP AND SPG MEMBERS

COUNTRY	nFP	SPG Member
AUSTRALIA	<i>(Identifying nominees is in progress)</i>	
BANGLADESH	<i>Faiz AHMED</i> Ministry of Environment and Forests	<i>Md. Giashuddin MIAH</i> Bangabandhu Sheikh Mujibur Rahman Agricultural University
BHUTAN	<i>Peldon TSHERING</i> National Environment Commission	
CAMBODIA	<i>Sundara SEM</i> Ministry of Environment	<i>Veasna KUM</i> Zaman University
CHINA	<i>Chengyong SUN</i> Ministry of Science and Technology	<i>Wenjie DONG</i> Beijing Normal University
FIJI	<i>(Identifying nominees is in progress)</i>	
INDIA	<i>Subodh SHARMA</i> Ministry of Environment and Forests	<i>B.N. GOSWAMI</i> Indian Institute of Tropical Meteorology
INDONESIA	<i>Sabar GINTING</i> Ministry of Environment	<i>Erna Sri ADININGSIH</i> National Institute of Aeronautics and Space
JAPAN	<i>Hiroshi TSUJIHARA</i> Ministry of the Environment	<i>Kensuke FUKUSHI</i> The University of Tokyo
LAO PEOPLE'S DEMOCRATIC REPUBLIC	<i>Sangkhane THIANGTHAMMAVONG</i> Ministry of Natural Resources and Environment	<i>Virasack CHUNDARA</i> Ministry of Natural Resources and Environment
MALAYSIA	<i>Che Gayah ISMAIL</i> Ministry of Science, Technology and Innovation	<i>Fariza YUNUS</i> Malaysian Meteorological Department
MONGOLIA	<i>Bayarbat DASHZEVEG</i> Ministry of Nature, Environment and Tourism	<i>Tsogtbaatar JAMSRAN</i> Mongolian Academy of Sciences

COUNTRY	nFP	SPG Member
NEPAL	<i>Gokarna Mani DUWADEE</i> Ministry of Science, Technology and Environment	<i>Madan Lall SHRESTHA</i> Academy of Science and Technology
NEW ZEALAND	<i>(Identifying nominees is in progress)</i>	<i>Andy REISINGER</i> New Zealand Agricultural Greenhouse Gas Research Centre
PAKISTAN	<i>Syed Mujtaba HUSSAIN</i> Ministry of Environment	<i>Amir MUHAMMED</i> National University of Computer and Emerging Sciences
PHILIPPINES	<i>Eriberto C. ARGETE</i> Department of Environment and Natural Resources	<i>Portia G. LAPITAN</i> Department of Environment and Natural Resources
REPUBLIC OF KOREA	<i>Kyeong Yun JEONG</i> Ministry of Environment	<i>Soojeong MYEONG</i> Korea Environment Institute
RUSSIAN FEDERATION	<i>Andrey V. ADRIANOV</i> Russian Academy of Sciences	<i>Alexander STERIN</i> Russian Research Institute for Hydrometeorological Information – World Data Center
SRI LANKA	<i>B. M. U. D. BASNAYAKE</i> Ministry of Environment	<i>S. H. KARIYAWASAM</i> Department of Meteorology
THAILAND	<i>Chote TRACHU</i> Ministry of Natural Resources and Environment	<i>Jariya BOONJAWAT</i> Chulalongkorn University
UNITED STATES OF AMERICA	<i>Maria UHLE</i> National Science Foundation	<i>Luis M. TUPAS</i> United States Department of Agriculture
VIET NAM	<i>Xuan Bao Tam NGUYEN</i> Ministry of Natural Resources and Environment	<i>Kim Chi NGO</i> Vietnam Academy of Science and Technology

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		<i>Chengyong SUN</i>	nFP for China
		<i>Sabar GINTING</i>	nFP for Indonesia
		<i>Gorkana Mani DUWADEE</i>	nFP for Nepal
		<i>B. M. U. D. BASNAYAKE</i>	nFP for Sri Lanka
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INVITED EXPERTS TO THE SPG

<i>AILIKUN</i>	International Program Office of Monsoon Asia Integrated Regional Study (MAIRS)
<i>Lance Clive HEATH</i>	Australian National University Climate Change Institute
<i>Kanayathu Chacko KOSHY</i>	Centre for Global Sustainability Studies, Universiti Sains Malaysia
<i>Chao Han LIU</i>	Southeast Asia Regional Committee for START (SARCS)
<i>Subramaniam MOTEN</i>	Former SPG Member for Malaysia

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<i>Taniya KOSWATTA</i>	Coordinator	
<i>Yayoi NAGAOKA</i>	Programme Assistant (part-time)	
<i>Natsuki NIIMI</i>	Programme Assistant (part-time)	

FINANCIAL RESOURCES

Statement of income and expenditures fiscal year 2012 (1 April 2012 to 31 March 2013)

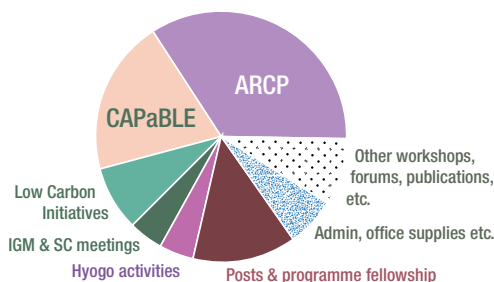
RESOURCES AVAILABLE (US\$)

Total operative cash balance		801,180
Donor contributions		
Japan	Ministry of the Environment	
	Hyogo Prefectural Government	
United States of America	National Science Foundation	3,158,500
	United States Global Change Research Program	
New Zealand	Ministry for the Environment	
Republic of Korea	Ministry of Environment	
<i>Total resources available</i>		3,959,680

USE OF RESOURCES (US\$)

Category	<i>Executed & Committed</i>
Scientific, policy and institutional activities	3,726,680
Administrative/operative costs	165,000
Reimbursement for services	68,000
<i>Total use of resources</i>	3,959,680

BREAKDOWN IN THE USE OF RESOURCES



IN-KIND CONTRIBUTIONS AND MATCHING FUNDS

APN expresses special gratitude to its 22 member country governments and the Hyogo Prefectural Government that hosts the APN Secretariat in Kobe, Japan, for their in-kind contributions including staff time, equipment, supplies and other forms of support.

Additionally, APN members and invited experts spend considerable time on activities directly related to APN, including hosting and participating in APN meetings; reviewing proposals, science activities and

agendas; regularly communicating with the Secretariat on strategic issues and promoting APN at various levels within and outside the Asia-Pacific region.

The Hyogo Prefectural Government generously supports the Secretariat by providing office space and fixtures, etc. This in-kind support amounts to more than US\$ 300,000 per year.

APN also receives substantial in-kind support and additional resources in the form of matching funds from the institutions of project leaders and collaborators.

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Asia Pacific Adaptation Network (APAN), Bangkok, Thailand • **DIVERSITAS**, Paris, France • **Global Earth Observation System of Systems** (GEOSS), Geneva, Switzerland • **Institute for Global Change Adaptation Science** (ICAS), Tsukuba, Japan • **ICSU Regional Office for Asia and the Pacific** (ICSU ROAP), Kuala Lumpur, Malaysia • **International Geosphere-Biosphere Programme** (IGBP), Stockholm, Sweden • **Institute for Global Environmental Strategies** (IGES), Hayama, Japan • **International Human Dimensions Programme on Global Environmental Change** (IHDP), Bonn, Germany • **Low Carbon Asia Research Network** (LoCARNet), Hayama, Japan • **Monsoon Asia Integrated Regional Study** (MAIRS), Beijing, China • **North Pacific Marine Science Organization** (PICES), Nanaimo, Canada • **Southeast Asia START Regional Center** (SEA START RC), Bangkok, Thailand • **Small Earth Nepal** (SEN), Kathmandu, Nepal • **SysTem for Analysis Research and Training** (START International), Washington DC, USA • **University Network for Climate and Ecosystems Change Adaptation Research** (UN-CECAR), Tokyo, Japan • **United Nations University** (UNU), Tokyo, Japan • **World Climate Research Programme** (WCRP), Geneva, Switzerland

ACRONYMS

- ACB (25)**
ASEAN Centre for Biodiversity
- ADB (7)**
Asian Development Bank
- APAN (7)**
Asia Pacific Adaptation Network
- ARCP (4)**
Annual Regional Call for Research Proposals
- AWCI (29)**
Asian Water Cycle Initiative
- B&ES (9)**
Biodiversity and Ecosystem Services
- CAF (6)**
Climate Adaptation Framework
- CAPaBLE (4)**
Scientific Capacity Building/ Enhancement for Sustainable Development in Developing Countries
- CDC (4, 39)**
Capacity Development Committee
- CORDEX (30)**
Coordinated Regional Climate Downscaling Experiment
- EBLU (24)**
Ecosystems, Biodiversity and Land Use
- EOI (8)**
Expression of Interest
- GEOSS (28, 29)**
Global Earth Observation System of Systems
- ICAS (6, 7, 29)**
Institute for Global Change Adaptation Science
- ICSU (14)**
International Council for Science
- ICSU ROAP (14, 28)**
ICSU Regional Office for Asia and the Pacific
- IGBP (23)**
International Geosphere-Biosphere Programme
- IGES (20, 27)**
Institute for Global Environmental Strategies
- IGFA (30)**
International Group of Funding Agencies for Global Change Research
- IGM (35)**
Inter-Governmental Meeting
- IHDP (19, 29, 30)**
International Human Dimensions Programme on Global Environmental Change
- IPBES (9)**
Intergovernmental Platform on Biodiversity and Ecosystem Services
- ISAP (29)**
International Forum for Sustainable Asia and the Pacific
- JAMSTEC (23, 24)**
Japan Agency for Marine-Earth Science and Technology
- JAXA (24)**
Japan Aerospace Exploration Agency
- LCI (8)**
Low Carbon Initiatives
- LoCARNet (8, 27)**
Low Carbon Asia Research Network
- MAIRS (29, 30)**
Monsoon Asia Integrated Regional Study
- nFP (35, 36)**
National Focal Point
- PDTW (18, 30)**
Proposal Development Training Workshop
- PICES (30)**
North Pacific Marine Science Organization
- Rio+20 (13, 29)**
United Nations Conference on Sustainable Development
- RUSD (24)**
Resource Utilisation and Pathways for Sustainable Development
- SA-SRC (17)**
South Asia Sub-Regional Cooperation
- SBSTA (12, 29)**
Subsidiary Body for Scientific and Technological Advice
- SC (35, 38)**
Steering Committee
- SEA-SRC (16)**
Southeast Asia Sub-Regional Cooperation
- SEA START RC (27)**
Southeast Asia START Regional Center
- SEN (17, 26, 28)**
Small Earth Nepal
- SPD (10)**
Science-Policy Dialogue
- SPG (4, 35, 36, 39)**
Scientific Planning Group
- SPG-SC (38)**
SPG Sub-Committee
- START (10)**
System for Analysis Research and Training
- TEA (15)**
Temperate East Asia
- UNCBD (9)**
United Nations Convention on Biological Diversity
- UN-CECAR (7, 29)**
University Network for Climate and Ecosystems Change Adaptation Research
- UNFCCC (12)**
United Nations Framework Convention on Climate Change
- UNU (7, 27)**
United Nations University
- UNU-ISP (19, 23, 28, 29, 30)**
UNU Institute for Sustainability and Peace
- WCRP (7)**
World Climate Research Programme

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.



Ministry for the
Environment
Manatū Mō Te Taiao



United States
Global Change
Research Program