

Guest Article //

FUTURE EARTH

**NEW GLOBAL PLATFORM
FOR SUSTAINABILITY RESEARCH**

Features

FEATURED ORGANISATION:
ASEAN CENTRE FOR
BIODIVERSITY

**FEATURED GLOBAL CHANGE
RESEARCHER:**
DR. JONI JUPESTA: SCIENCE
BEYOND BORDERS

Contents

3	Message from the Director	23	APN Out and About
4	Guest Article	23	Third Environmental Innovators Symposium
4	Future Earth: New Global Platform for Sustainability Research	25	Earth System Governance Tokyo Conference
6	Features	27	Low Carbon Asia Research Network (LoCARNet) In-Depth Meeting on Strategic Action Plan
6	Featured Organisation: ASEAN Centre for Biodiversity	33	Postgraduate Symposium on Renewable Energy and Graduation Ceremony
9	Featured Global Change Researcher: Dr. Joni Jupesta	36	ARCP 2013/14 Projects
11	News from the Secretariat	38	CAPaBLE 2013/14 Projects
11	Building Resilience with Common Capital: Managing Shared Resources	40	APN Country Representatives
11	4th South Asia Sub-Regional Cooperation Meeting and Associated Activities Concluded in Kathmandu	41	APN Committees and Members
13	18th IGM/SPG Meeting Convened in Kobe, Japan	42	Calendar of Global Change Events
16	Launch of APN Science Bulletin 2013 and Policy Brief on Science-Policy Dialogue in Southeast Asia		
17	The APN Biodiversity and Ecosystem Services Framework		
18	New Publications		
21	APN Welcomes New Members		
22	Staff Changes in the APN Secretariat		



Message from the Director



Akio Takemoto

Dr. Akio Takemoto
Director, APN Secretariat

Thank you for downloading this issue of the APN Newsletter. The new fiscal year 2013/14 started in April, and, in accordance with guidance from the 18th Inter-Governmental Meeting (IGM) held here in Kobe, Japan, we have kicked off the planning and preparations for approved activities in the months ahead.

Based on recommendations from the Scientific Planning Group (SPG), the IGM approved funding for 27 research projects and 16 capacity-building projects addressing APN's science agenda for its third strategic phase. My congratulations and heartfelt appreciations go to the successful proponents of approved new projects and leaders of ongoing ones — thank you for the efforts that will take APN one step closer towards the vision of enabling Asia-Pacific countries to address global change challenges through science-based strategies, science and policy linkages, and capacity building.

Under the recently developed Climate Adaptation Framework, APN will develop and launch a series of activities on climate change adaptation, disaster risk reduction, as well as loss and damage, as a regional response to UNFCCC's renewed call for addressing loss and damage associated with climate change impacts, particularly issues outlined in Decision 3/CP.18 contained in the Report of the Conference of the Parties on its eighteenth session. These thematic criteria will be embedded in this year's special calls for research and capacity-

building proposals process, and later into the year we will organise a workshop that involves experts in these areas, including practitioners, researchers, representatives of international organisations, to develop partnerships between APN and relevant organisations, to share needs, gaps and lessons on climate change adaptation, disaster risk reduction, and loss and damage.

Another area of focus for the APN will be activities under the Biodiversity and Ecosystem Services Framework, which aims to enhance collaborative efforts to provide the underpinning science of biodiversity and ecosystem services for informed policy options. Under this framework, APN invites stakeholders to propose collaborative activities that will provide opportunities to engage member countries in a range of comprehensive, regional-based collaborative scientific research, capacity development, and science-policy interaction with regard to the thematic gaps identified in the framework.

I am pleased to inform you that seven regional research and capacity-development projects have been selected under the Low Carbon Initiatives programme, and project activities are well underway. Some preliminary work has been showcased in a poster session during the 18th IGM. Project leaders will be invited to present their work in a special session at the second LoCARNet Annual meeting, which will be held in conjunction with the

International Forum for Sustainable Asia and the Pacific this coming July in Yokohama, Japan.

Other activities approved by the IGM include planning for a series of science-policy dialogues building on the success of the one conducted in Bangkok in 2012; Hyogo Activity events which brings closer collaboration with Hyogo Prefectural Government; continued contribution to the UNFCCC through activities at SBSTA and COP meetings, details of which can be found in the present Newsletter.

I would like to take this opportunity to thank all national Focal Points, SPG members, invited experts, external reviewers and other stakeholders for their invaluable contributions to the APN over the last fiscal year. It is their hard work that enables APN to have formulated this refreshing and exciting work programme ahead of us in 2013. My sincere gratitude goes to all member countries for their trust in the Secretariat and their generous support over the years, in cash and in kind, without which APN could not have developed into what it is today.

Finally, I hope this newsletter is useful for your work and research. Should you have any suggestion or comment, we would love to hear from you.

Future Earth: New Global Platform for Sustainability Research

ICSU Regional Office for Asia and the Pacific

Future Earth is a 10-year international initiative on Earth systems research for global sustainability. The goal of Future Earth is to provide the knowledge required for societies in the world to face risks posed by global environmental change and to seize research and development opportunities in the transition to global sustainability.

The initiative is scientifically sponsored by an alliance of partners, including the International Council for Science (ICSU), the International Social Science Council (ISSC), the Belmont Forum of funding agencies, UNU, UNEP and UNESCO, with the World Meteorological Organization (WMO) as an observer.

It builds on the strength of, and integrates the existing ICSU co-sponsored global environmental change programmes – the International Geosphere-Biosphere Programme (IGBP), the International Human Dimensions Programmes (IHDP), the Earth System Science Partnership (ESSP) together with the World Climate Research Programme (WCRP) as an independent partner.

Future Earth aims to build on, and augment the Earth system science capabilities developed over the last few decades, by incorporating research on the impacts of environmental change on people, developing and assessing strategies for response, and

developing models of adaptation and transformation. It will engage with the broader range of natural and social science disciplines so that the international research community can take the next critical step in providing the knowledge needed. It also recognises that research needs to be co-designed with governments, industry and civil society groups, if pathways to a sustainable future are to be found.

While the scope of Future Earth is global, a number of issues require region-specific approaches to provide robust observations and forecasts of regional environmental changes, assess potential impacts and vulnerabilities, explore mitigation and adaptation pathways, etc. Regions, as early witnesses of environmental changes, have

Future Earth aims to build on, and augment the Earth system science capabilities developed over the last few decades, by incorporating research on the impacts of environmental change on people, developing and assessing strategies for response, and developing models of adaptation and transformation.

therefore a crucial contribution to make in assessing environmental changes and building a global picture for transitioning towards sustainability. As early witnesses of

environmental changes, the regions have important contributions to make in assessing the changes and building of global picture for transitioning towards sustainability. Regions also have a crucial role to play in implementing sustainability research and in facilitating the application of research results.

This is perhaps more true in the Asia-Pacific region than anywhere else. This region holds around 70% of the world population and some of the fastest growing economies. Its rate of urbanisation is faster than the global average. The disparity between the rich and poor is enormous. The Asia-Pacific region is also a major contributor to the world's carbon emissions, this means that the region will play a key role in determining global sustainability. The Asia-Pacific region has the vitality and creativity to blaze a new pathway for sustainability in the world.

The conceptual framework

The conceptual framework for Future Earth (see figure on page 5) describes an interconnected system in which both natural systems and human activity are driving changes in the regional and global environment, with significant implications for human wellbeing.

Changes in wellbeing – such as incomes and health – are affected directly by human and natural drivers. They can also change these drivers,

for example as income and diet changes, energy use, land use, and emissions also change.

Finding solutions and identifying transformations that reduce the risks of negative changes and enhance positive outcomes are central to this conceptual framework and can focus on all or any of the three other elements, altering trajectories of human drivers, mitigating global environmental change, or fostering human wellbeing.

The framework is designed to embrace the range of interdisciplinary and disciplinary expertise, knowledge about society, Earth science, and ecology. The expertise from many regions and sectors are needed to understand and track the dynamics and state of the planet and its people, support development, and advance solutions for a transition to global sustainability.

Future Earth Research Themes

Future Earth's three research themes will function as broad platforms for integrated earth systems research which will involve collaborative projects across disciplines that also include disciplinary projects:

- i) Dynamic Planet – includes observing, explaining, understanding projecting Earth, environmental and societal system trends, drivers and processes and their interactions; anticipating global thresholds risks.
- ii) Global Development – seeks to provide the knowledge for sustainable, secure and fair stewardship of biodiversity, food, water, health, energy, materials and other ecosystem services.
- iii) Transformation toward Sustainability – focuses on understanding transformation processes and options, assessing how these relate to human values, emerging technologies and economic ideas, and evaluating strategies for governing and managing the global environment across sectors and scales.

These research themes will play the role as major integrating units under Future Earth, each hosting a collection of existing as well as new, co-designed international research projects.



Research Framework for Future Earth in Asia-Pacific

The proposed research framework for Future Earth in Asia and the Pacific will aim to maintain and enhance ongoing research programmes that have the potential to be the basis for future work under the Future Earth umbrella. It is crucial that a mechanism be developed that would enable as many ongoing projects as possible be involved in Future Earth while enhancing the conduct of more transdisciplinary / interdisciplinary research at the national and regional levels. Significant pilot projects that would promote such research should be set up as early Future Earth activities. There are many challenges implementing Future Earth in Asia and the Pacific but these also present some new research and development opportunities.

Opportunities and Challenges for Implementing Future Earth in the Region

Many cross-cutting issues and challenges need to be addressed in developing the framework for Future Earth in Asia and the Pacific. These include lack of scientific capacity in many Asia-Pacific countries, brain drain, gaps that exist between policy makers and scientists resulting from ineffective translation of scientific knowledge into policy, poor communication and engagement between the scientific community and the relevant stakeholders, and poor transfer of knowledge from developed countries to less developed countries. Another regional challenge to be address is the fact that not all countries in Asia and the Pacific have programmes affiliated to the Global Environmental Change programmes of ICSU. A mechanism to include such countries in the planning phase of Future Earth will be developed.



Funding

Future Earth will require innovative and opportunistic strategies to reach out to different national, regional and international funding sources. It needs to tap into the resources of various development assistance organisations and regional development banks, private sector companies and foundations, and government agencies, to fund its programmes. Regional funding frameworks will be established through the private-public partnerships to support integrative research in natural and social sciences.

Way Forward

The way forward for Future Earth in the Asia-Pacific region will begin by involving existing GEC-related programmes and networks leaders and their funders in discussions that would enable the establishment of a linkage between the regional Future Earth interface and the governing bodies of Future Earth. It is also very crucial for a regional plan

for the implementation of Future Earth in the Asia-Pacific to be prepared that would clearly define priority research areas and desired outcomes from the region in the first five years of Future Earth.

The regional component is extremely important for Future Earth, and the Asia-Pacific region has the ability to lead the move towards global sustainability under this programme. Through the Future Earth initiative, we will develop a new way of doing research and connecting the knowledge to effective solutions and actions that can help bring about key transformations to the region that will get our societies on a path towards sustainability.

On 18th of June, Future Earth announced the members of its Science Committee. Full details are available at <http://www.icsu.org/news-centre/news/top-news/future-earth-inaugural-science-committee-announced-csiro2019s-mark-stafford-smith-to-be-first-chair>

Featured Organisation: ASEAN Centre for Biodiversity

Mr. Rolando Inciong, Head, Communications and Public Affairs, ASEAN Centre for Biodiversity



Biodiversity is the short way of saying biological diversity, which includes all the various forms of life on Earth. Also referred to as the web of life, biodiversity provides us with air, water, food, medicine, shelter, livelihood and a host of ecosystem services. This web of life, however, is fast becoming endangered due to the demands of growing human population, as well as our wasteful and inefficient consumption patterns.

Biodiversity is the short way of saying biological diversity, which includes all the various forms of life on Earth. Also referred to as the web of life, biodiversity provides us with air, water, food, medicine, shelter, livelihood and a host of ecosystem services. This web of life, however, is fast becoming endangered due to the demands of growing human population, as well as our wasteful and inefficient consumption patterns.

Biodiversity in Southeast Asia

Southeast Asia, also known as the Association of Southeast Asian Nations (ASEAN) region, occupies only three percent of the world's total land area, but it is home to 19 percent of all plant and animal species assessed by IUCN (IUCN Red List of Threatened Species, 2012.2). The region has three of the 17 known

mega-diverse countries (Indonesia, Malaysia and Philippines), but it has four of the world's 34 biodiversity hotspots (Indo-Burma, Philippines, Sundaland and Wallacea).

Southeast Asia is home to 28 percent, almost 70,000 square kilometers, of all known coral reef areas. About 95 percent are at risk from local threats, with almost half in the high and very high threat categories (Burke, et.al, 2011). Out of 12,699 species assessed

in the region, 2,786 are threatened (IUCN Red List of Threatened Species, 2012.2)

Composed of ten Member States (Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand and Viet Nam), the ASEAN region continues to lose many of its plant and animal species due to climate change, deforestation, habitat change, illegal wildlife trade, pollution, population growth, and other causes.

ACB: ASEAN's Response to the Challenge of Biodiversity Loss

The ASEAN Centre for Biodiversity (ACB) is ASEAN's response to the challenge of biodiversity loss. It is an intergovernmental regional centre of excellence that facilitates cooperation and coordination among the ten ASEAN Member States and with relevant national governments and regional and international organizations on the conservation and sustainable use of biological diversity, as well as the fair and equitable sharing of benefits arising from the use of such natural treasures.

ACB's goals are to serve as an effective coordinative body to facilitate discussion and resolution of cross-country biodiversity conservation issues; provide a framework and mechanism for sharing information, experiences, best practices and lessons learned for efficient access of ASEAN Member States; implement a pro-active approach in monitoring and assessing biodiversity conservation status as a strategic approach towards identifying critical issues and future trends; deliver/facilitate conduct of capacity-building services and technology transfer through engaging relevant and appropriate expertise; enhance common understanding of biodiversity conservation issues, strengthening ASEAN regional positions in negotiations and in compliance with relevant multilateral



environmental agreements; promote public and leadership awareness to develop champions and enhance support at different stakeholder levels on biodiversity concerns; and undertake innovative resource generation and mobilization measures to pursue impact activities that will enhance biodiversity conservation in the region

ACB Thematic Concerns

ACB supports ASEAN Member States in the following biodiversity concerns that are of global and regional importance: access and benefit sharing, agro-biodiversity and biosafety, ASEAN Heritage Parks and protected area management, biodiversity information management, business and biodiversity, climate change and biodiversity, ecotourism and biodiversity conservation, Global Taxonomic Initiative, invasive alien species, payment for ecosystem services and valuation of biodiversity, peatlands and wetlands management and biodiversity, and wildlife protection and law enforcement

Major ACB Projects

Biodiversity and Climate Change

Supported by Germany through GIZ, The Biodiversity and Climate Change Project is an initiative that aims to enhance the capacity of ACB in providing ASEAN Member States with advisory services on strategies

and instruments for biodiversity conservation-related intervention measures on climate protection and adaptation to climate change.

Access and Benefit Sharing

The project on Building Capacity for Regionally Harmonized National Processes for Implementing CBD Provisions on Access to Genetic Resources seeks to strengthen ASEAN Member States' and Timor-Leste's capacity to implement the Convention on Biological Diversity (CBD) provisions on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization (ABS) through the development of their national ABS frameworks. It aims to enhance stakeholders' understanding of ABS issues and improve public understanding of the contribution that ABS can make to biodiversity conservation. The project is being funded by the United Nations Environment Programme-Global Environment Facility with the ASEAN Secretariat and the United Nations University-Institute of Advanced Studies as co-executing partners.

Taxonomic Capacity Building

In support of the Global Taxonomy Initiative (GTI), the ACB has recently completed implementing the Expanded Taxonomic Capacity Building and Governance for Conservation and the Sustainable Use of Biodiversity Project in partnership with the East and

Southeast Asia Biodiversity Information Initiative (ESABII) and Japan's Ministry of Environment. The project is developing and enhancing capacities of ASEAN Member States in taxonomic knowledge for strengthening scientific basis in decision-making vital for environmental governance, business and technologies development.

ASEAN Heritage Parks Programme

ASEAN Heritage Parks (AHP) are protected areas of high conservation importance that preserve a complete spectrum of ecosystems representative of the ASEAN region. The ACB, as Secretariat of the ASEAN Heritage Parks Programme, evaluates applications for new AHPs; conducts capacity development activities for AHP managers and staff; organizes AHP conferences; holds promotional activities for the AHP Programme; and facilitates coordination among AHP managers to strengthen the parks as a regional network of protected areas.

Capacity Building on Protected Area Management

While protected areas and community conserved areas abound in the ASEAN region, park managers and workers still need to enhance their technical expertise to effectively manage these key environmental areas. To fill this gap, ACB conducts programmatic courses for enhancing management and conservation skills of protected area workers.

ASEAN Small Grants Programme

The objectives of the Programme are to improve biodiversity protection in line with the interest of the local population directly dependent on selected AHPs and adjacent areas;



to improve the livelihood of local communities directly dependent on selected AHPs and adjacent areas; and to strengthen the role of ACB in promoting biodiversity protection among the ASEAN Member States. The programme is funded by the German Ministry for Economic Cooperation and Development (BMZ) through KfW.

Promoting the Economics of Ecosystems and Biodiversity (TEEB)

ACB and the British Foreign and Commonwealth Office (FCO) recently undertook a project on Disseminating the Values of Ecosystems and Biodiversity to Enhance Climate Change and Biodiversity Strategies in Southeast Asia. The project aims to engage policy and decision makers in recognizing the economic benefits and values of ecosystems and biodiversity, understanding the costs of biodiversity loss, and taking action towards incorporating these values into national plans and budgets.

Wildlife Protection and Law Enforcement



ACB is working with the ASEAN-Wildlife Enforcement Network (ASEAN-WEN) and Freeland Foundation to arrest illegal wildlife hunting in Southeast Asia. Under the collaboration, the partners are implementing a series of capacity building activities aimed at enhancing the understanding by ASEAN Member States of CITES policies, improving the skills of wildlife law enforcers, developing national regulations and policies on wildlife trafficking, and strengthening the capacity of the ASEAN-WEN Programme Coordination Unit in fulfilling its mandates.

Communicating Biodiversity

Biodiversity Information Sharing Service

ACB's Biodiversity Information Sharing Service (BISS) promotes biodiversity information sharing among the ASEAN Member States. The BISS contains an inventory of biological resources of the ASEAN region; houses its historical and



current biodiversity metadata; and serves as a platform that presents a growing collection of knowledge products developed out of the biodiversity data made available by the ASEAN Member States. Additional biodiversity data are likewise sourced from global repositories including the Catalogue of Life, FishBase, SeaLifeBase and the IUCN Red List.

Public Awareness

ACB promotes public awareness of the values of biodiversity by conducting communication, education and public awareness activities targeting a variety of audiences. The Centre produces and distributes various information materials and promotes linkage between media and government to develop a strong partnership in biodiversity conservation advocacy.

ASEAN Champions of Biodiversity

The ASEAN Champions of Biodiversity is a recognition programme for outstanding projects on biodiversity conservation and advocacy in the ASEAN region. The award is aimed at generating greater leadership, public and media awareness of the problems facing the region's rich but highly

threatened biodiversity and the need a concerted effort in biodiversity conservation and advocacy.

Partnerships

ACB has partnership arrangements with strategic international institutions like the ASEAN Foundation, ASEAN-Wildlife Enforcement Network, Asia-Pacific Biodiversity Observation Network, East and South East Asia Biodiversity Information Initiative, FREELAND Foundation, GIZ and KfW of the Federal Republic of Germany, Global Biodiversity Information Facility, Institute of Southeast Asian Studies, International Union for the Conservation of Nature, Japan Business Initiative for Conservation and Sustainable Use of Biodiversity, Partnerships in Environmental Management for the Seas of East

Asia, Secretariat of the Convention on Biological Diversity, Secretariat of the Ramsar Convention, Sirindhorn International Environmental Park Foundation, United Nations Educational, Scientific and Cultural Organization, United Nations Environment Programme-World Conservation Monitoring Centre, and United Nations University-Institute of Advanced Studies, among other institutions.

Managing ACB

The Centre is managed by a Governing Board, which is composed of the ASEAN Senior Officials on the Environment (ASOEN) and the ASEAN Secretary General. Headed by the Chairman of the ASOEN, the Governing Board has overall responsibility and accountability for the operations of ACB.

The ASEAN Working Group on Nature Conservation and Biodiversity provides technical guidance to ACB by recommending the key areas of focus for its work. The Centre works with National Contact Points from each ASEAN Member State to facilitate collaboration in project implementation at the country level.

ACB is headed by an Executive Director who is assisted by highly skilled professionals with international and national experiences in the areas of environment and biodiversity conservation, policy and programme development and coordination, finance and administration, information and knowledge management, and communication. For more details, log on to www.aseanbiodiversity.org.

Featured Global Change Researcher:

Dr. Joni Jupesta: Science beyond Borders

Dr. Joni Jupesta

I was born and raised on a beautiful small island in the Indian Ocean, which was devastated by a high magnitude earthquake in 2005. Later, I moved to Jakarta to pursue a degree in engineering, instead of medicine, which my family wanted me to study. Nevertheless, I never regretted the choice I made. I finished my undergraduate study in Gas and Petrochemical Engineering at the University of Indonesia and took my master studies in Quality, Safety and Environment at the Otto von Guericke University and in Business Administration at Hochschule Esslingen, both in Germany. My MBA thesis describes a market strategy for entering the energy market focused on bioenergy industries, and was written based on the result of my internship at FESTO AG, an automation company in Germany. In October 2007, I started my PhD on modelling the introduction of biofuel in the transportation sector in Indonesia from the perspectives of energy, economics and the environment, at Tohoku University in Japan. The government of Indonesia



started to introduce biofuel into its Energy Mix Policy in 2006, and there was an urgent need for an assessment from multidisciplinary perspectives of the impact of the introduction of biofuel. My PhD dissertation addressed this need and was the first academic integrated assessment of the Energy Mix Policy in Indonesia. The outcome of my PhD work resulted in three papers published in scientific journals, one book chapter, and two forthcoming articles.

After receiving my PhD degree in 2010, I joined UNU-IAS as a Postdoctoral Fellow. The Postdoctoral Fellowship programme at UNU-IAS aims to provide young scholars and policy makers, especially from the developing world, with a multidisciplinary context within which to pursue advanced research and training within the broad area of sustainable development. In 2011, I was awarded a prestigious fellowship at the Japanese Society for the Promotion of Science-United Nations University (JSPS-UNU). This fellowship broadened my research from energy

economics into policy analysis and interdisciplinary perspectives, spanning the fields of energy, economics and environmental studies. I contribute to the policy briefs on green economy focusing on the energy transition in Indonesia, as well as on the institutional framework for sustainable development in climate change governance—both themes central to the Rio+20 discourse. Based on my efforts, I received the prestigious Green Talent Award 2012 from the German Federal Ministry of Education and Research (BMBF) in October 2012 as recognition for my research work on sustainability.

Recently, I started working on the Implementation of Rio+20 Goals into Sustainable Development Goals in the context of the Water-Energy-Food Security Nexus in the palm oil industry in Indonesia. This ongoing research work has been presented during a poster session of the 18th Inter-Governmental Meeting (IGM)/ Scientific Planning Group (SPG) Meeting of APN held on 10-12 April 2013 in Kobe, Japan. The presentation received very positive feedback from many participants and led me to be the recipient of the Mitra Award 2013. More than the title, the most exciting part of this Award for me was the opportunity to present my research work for 20 minutes in front of policy makers and scientists from APN's member countries across Asia-Pacific. Since this is ongoing research work, we will soon publish the preliminary findings as a View Point article in a peer-reviewed journal. We see this is as important way to communicate our research to a broad range of stakeholders and to highlight the potential of a nexus approach towards sustainability of the palm oil industry.

Apart from my research work in sustainability transitions in Indonesia, I am also involved in several projects related to the Green New Deal Policy, Low Carbon Governance in Asia and Green Investment in Asian Cities (Shanghai, Jakarta, and Yokohama). This work involves various stakeholders (business, public, and civil society) in Indonesia, Japan and other Asian countries. Managing development projects is exciting, as I am gaining experience in different scientific fields and many countries. My most recent endeavour is a project funded by the APN since March 2013 under its Low Carbon Initiatives framework. "The Green Investment in Asian Cities", as the project is called, involves nine collaborating researchers across China, Indonesia and Japan. This project will be used as guidance on how cities in selected countries can play a key role in the



green growth agenda, by stimulating growth through smart investment in their urban infrastructure. This effort might be implemented in the development agenda, i.e. by building a physical infrastructure, by financial and tax incentives, energy supply, and heightening society's awareness of a sustainable lifestyle. In this project, I act as co-leader with my colleague Ms. Takako Wakiyama from the Institute for Global Environmental Research (IGES).

Studying and working in Indonesia, Germany and Japan in different settings (academic, industry and think tank) has brought me many advantages. I enjoy the multicultural experience, the high quality of academic programmes and exposure to highly relevant issues in global challenges (climate change, biodiversity loss, depleting natural resources, etc). In my perspective, young scholars are in their prime and their creativity has not yet been limited. It is important that young researchers have not yet been moulded and we, young minds, should always think outside the box. Involvement in fascinating projects is a great opportunity and definitely sparks one's passion, which in turn brings great results at the implementation of a project. Attending seminars and workshops, doing field work, performing surveys, going to trainings and project meetings have made me learn, share and communicate my ideas in an innovative way. Moreover, my wide working experience in several fields and countries enables further collaboration across disciplines, cultures, regions and perspectives. By implementing development projects, global changes researchers act as a hub between the problem faced by society and the action that could be taken by the private and public sectors. They can translate research into action to solve the problems of global challenges such as to mitigate climate change, to halt biodiversity loss, and to pursue sustainable use of natural resources.

Joni Jupesta is a Japan Society for the Promotion of Science-UNU Postdoctoral Fellow at the United Nations University-Institute of Advanced Studies (UNU-IAS) since 2011.



Building Resilience with Common Capital: Managing Shared Resources

The Third Workshop on “Building Resilience with Common Capital: Managing Shared Resources: Meeting the Challenges of a Rapidly Modernizing World under Climate and Ecosystems Change” was held in Kobe, Japan, 3-5 December 2012.

This workshop—the last one of a series of three workshops—was jointly organised by APN, DIVERSITAS, IHDP and the UNU-Institute for Sustainability and Peace. The objective of the workshop was to identify new governance systems overseeing the management of the supply of ecosystem services and enhancement of socioecological resilience against climate and ecosystem changes in an efficient manner across a range of stakeholders.

The APN is grateful for the strong support it received from the Hyogo Prefectural Government, as well as researchers from the Hyogo Museum of Nature and Human Activities. The satoyama ecosystem of Kurokawa in the city of Kawanishi, Hyogo Prefecture, was introduced as an

excellent example of a sound and sustainable way of managing rural production landscapes. An excursion to this area was also organised. Some publications about the outcomes are now under preparations and will be featured as soon as available.



4th South Asia Sub-Regional Cooperation Meeting and Associated Activities Concluded in Kathmandu

18 January 2013, Kathmandu, Nepal — The 4th APN South Asia Sub-Regional Cooperation (SA-SRC) Meeting and associated activities came to a successful conclusion as Hon. Secretary Mr. Keshav Bhattarai, Ministry of Science, Technology and Environment (MoSTE), Government of Nepal, formally concluded a series of lively sub-regional events at the closing ceremony.

The SA-SRC Meeting, followed by a seminar focusing on Climate Adaptation and Agriculture in South Asia and a Proposal Development Training Workshop, were hosted by MoSTE 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.

Sub-Regional Cooperation Meeting

Hon. Minister Dr. Keshab Man Shakya, Ministry of Science, Technology and Environment (MoSTE), Government of Nepal in his opening remarks highlighted the importance of information exchange at the sub-regional level, which is crucial for establishing strong links between nations in South Asia, who share common economic, social and environmental bases. He stressed that the focused topics to be addressed in the SA-SRC meeting are very timely and important to the South Asian Region, which is particularly vulnerable to global environmental change.

Several issues that are relevant in the region were discussed during the meeting and the most important action points were as follows:

- Contribution to the APN Biodiversity and Ecosystems Framework;
- Development, in collaboration with START and other partners, of a concept paper to hold a South Asia Science-Policy Dialogue, tentatively in 2014;
- Development of a proposal for submission to APN focusing on common issues on climate adaptation of all South Asia Member Countries;
- Continue to implement these important sub-regional

cooperation meetings, with the 5th South Asia meeting being in Pakistan, Bangladesh or Sri Lanka.

Climate Adaptation Seminar

A Climate Adaptation Seminar was organised back-to-back with the South Asia Sub-Regional Cooperation Meeting. It focused on keynote presentations from Dr. Krishna Prasad Pant, Joint-Secretary and Chief of the Market Research and Statistics Management Programme from Department of Agriculture, Nepal who shared knowledge and experiences on Climate Change and Adaptation in South Asia; and Dr. Dhiraj Pradhananga, President, Small Earth Nepal shared many of its activities, not least of which is the H2O initiative that will focus on water issues from the Himalayas to the Oceans. During this keynote session, Dr. Linda Anne Stevenson highlighted the APN's Climate Adaptation Framework and key aspects of this framework.

APN Member Country scientists and national Focal Points also shared information and best practices in their respective countries on climate adaptation issues 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. It provided a platform for sharing information, knowledge and best practices among South Asian countries on issues related to climate change adaptation with links to agriculture.

Proposal Development Training Workshop

A very interactive and productive Proposal Development Training Workshop (PDTW) was held on the last two days of the week, during which young scientists worked hard



in groups to develop and review proposals with the guidance of their mentors.

Since 2008, the APN has been conducting PDTWs in different parts of the world, aiming to raise awareness of the APN among young/early career scientists while increasing their capacity to submit competitive proposals to the APN for funding.

on the APN proposal submission process; and for new members to learn about the APN Annual Proposals Process so that they might go back to their respective countries and impart their knowledge.

On the 3rd day, participants visited and met with the Kusadevi Village Development Committee (VDC) in a field visit guided by Mr. Madhu Sudan Paudyal, Senior Plant Protection



"I learned some good information and received valuable inputs from this workshop, and I am planning to submit a proposal to APN in the future with other collaborators from South Asia," said Dr. Erandathie Lokupitiya, Senior Lecturer, University of Colombo, a trainee at the workshop who specialises in global environmental change, greenhouse gas inventorying, and land-atmosphere exchanges.

PDTWs are also designed to allow APN members to provide their knowledge

Officer at District Agriculture Development Office at Kavre. Villagers showed their best practices and novel technology of Integrated Pest Management (IPM) used by local farmers in response to the need for sustainable agriculture under a changing climate. Impressively, the villagers imparted their climate-smart technology through traditional music, song and dance.

18th IGM/SPG Meeting Convened in Kobe, Japan

12 April 2013, Kobe, Japan — The APN 18th Inter-Governmental Meeting (IGM)/Scientific Planning Group (SPG) Meeting and associated committee meetings successfully concluded on 12 April 2013 in Kobe, Japan.

The 18th annual meeting was hosted by the Ministry of the Environment, Japan, and the Hyogo Prefectural Government, in the city of Kobe, where the APN Secretariat is based, five years after the last Japan-hosted IGM/SPG Meeting was held in Kobe in 2008. APN national Focal Points and Scientific Planning Group members from its 22 Member Countries, donor representatives and invited experts participated in this annual gathering.

Observer institutions from the global change community included Hyogo Environmental Advancement Association (HEAA), International Centre for Climate Change and Development (ICCCAD), International Council for Science

Opening Session

Dr. Ryutaro Yatsu, Vice Minister for Global Environment Affairs, Ministry of the Environment, Government of Japan, officially opened the Meeting. Dr. Yatsu welcomed all participants and recalled his experience as Director of the APN Secretariat from 2010 to 2012, noting that the success and international reputation of APN today could not stand without the continued support of donors, the commitment of APN members and the cooperation of stakeholders.

He gave a brief overview of the history of APN and its core programmes and introduced the recent initiatives launched by the Government of Japan in collaboration with the APN as a response to new developments in the international global change arena.



– Regional Office for Asia and the Pacific (ICSU-ROAP), Institute for Global Environmental Strategies – Kansai Research Centre (IGES-KRC), Low Carbon Asia Research Network (LoCARNet), Monsoon Asia Integrated Regional Study (MAIRS), National Institute for Environmental Studies, Japan (NIES), UNEP Northwest Pacific Action Plan (NOWPAP), Research Institute for Humanity and Nature (RIHN), United Nations University (UNU), START Temperate East Asia Regional Center (START TEA-RC), US Global Change Research Programme (USGCRP), and World Climate Research Programme (WCRP).

Specifically, he emphasized the role APN plays in advancing low carbon society through its Low Carbon Initiatives framework; promoting regional research and capacity development on climate adaptation, disaster risk management and loss and damage; and other activities such as the biodiversity and ecosystem services framework that will contribute to regional and international policy decision-making.

Governor Toshizo Ido of Hyogo Prefecture delivered opening address at the inaugural session. Governor Ido recalled the establishment of the APN Secretariat in Kobe in 1999, for which he personally made great efforts to bid

for hosting this international network in Kobe. Governor Ido expressed his gratefulness for having the APN Secretariat in Kobe, because the city has become an important centre for international organisations working on disaster risk reduction and global change research.

He expressed his appreciation for the work undertaken by the APN, and introduced Hyogo's efforts in emission reduction, renewable energy production and disaster reduction and prevention. In this regard, he introduced Hyogo Prefectural Government's achievement of an 8% CO₂ emission reduction compared with the 1992 level, and the need for encouraging emission reduction efforts in the business and household sectors. In addition, he noted that Hyogo is very active in developing sustainable sources of energy, including solar power and wind power, but recognised that being one of the largest energy producers in the Kansai region, Hyogo Prefecture must be conscious of the environment and take proactive measures to achieve sustainability for the well-being of generations to come.

activities undertaken by the APN over the past year, especially the new initiatives approved by the 17th IGM. He particularly emphasised the increasingly important role APN is

of APN Secretariat, in his opening remarks brought participants on a journey through the history of APN, highlighting the three IGM/SPG meetings held in Japan, all of which



Mr. Sundara Sem, APN national Focal Point for the Kingdom of Cambodia and Chair of APN Steering Committee provided opening remarks. Mr. Sem provided a comprehensive summary of

playing to promote collaborations at all levels in the region, and expressed his heartfelt gratitude to the donors, national Focal Points and Scientific Planning Group members, as well as invited experts and all stakeholders of APN for their support, cooperation and contribution throughout the year.

marked major milestones of APN's development. Using an example of climate change impacts on the local sake brewery industry in Kobe, he stressed the importance and timeliness to facilitate research and information sharing in the area of climate change adaptation, disaster risk reduction and loss and damage, which was expected to be a major outcome of the meeting. He also introduced other expected outcomes and expressed his hope that the 18th IGM/SPG meeting would work towards a fruitful outcome, which will better address global change challenges in the region.

Dr. Akio Takemoto,
Director, Director



Highlights of the SPG

The IGM reviewed APN's work undertaken in fiscal year 2012/13 and approved the proposed work programme and budget plan for 2013/14.

Among the major outcomes of the meeting is the approval of 23 regional research projects (including continuing multi-year projects and new proposals) for funding under the Annual Regional Call for Proposals (ARCP) programme and 16 capacity building projects under the Scientific Capacity Building/Enhancement for Sustainable Development in Developing Countries (CAPaBLE) programme.

A number of proposed new and continuing activities were endorsed by the IGM:

Sub-Regional Science-Policy Dialogues. Drawing from the success of the first APN-START Science-Policy Dialogue on Challenges of Global Environmental Change in Southeast Asia, similar events are proposed to be held in South Asia and Temperate East Asia, in 2014 and 2015 respectively, to promote informed decision-making on actions to reduce global environmental change.

Biodiversity and Ecosystem Services Framework. Under this framework, APN will enhance collaboration with key partners to support activities that provide the underpinning science of biodiversity and ecosystem services for policy- and decision-making, contributing to the existing needs, including, as highlighted in the outcome of the Rio+20 conference, The Future We Want.

Involvement in UNFCCC SBSTA and Research Dialogues. Over the past number of years APN has been contributing to the UNFCCC SBSTA research dialogues.

This year, APN will continue to be represented and provide input on APN's work related to SBSTA's agenda, including information sharing on the technical and scientific aspects of ecosystems with high carbon reservoirs.

Joint Activities with Hyogo Prefecture. In collaboration with the Hyogo Prefectural Government, the host of APN Secretariat, APN will organise a number of international events that addresses issues of mutual concern, including on enhanced action for climate adaptation; management of shared resources (new commons); and actions towards low carbon society.

New Activities under the Climate Adaptation Framework, including Disaster Risk Management and Loss and Damage. APN will expand its Climate Adaptation Framework and introduce new focused activities on adaption, disaster risk management and loss and damage associated with climate change impacts in the Asia-Pacific region, with expected outcomes contributing to the 19th Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC COP19). Regional research, capacity building and communication activities will be the three pillars of this framework.

New Focused Publications. A new publication will be published to celebrate the 10th anniversary of the APN CAPaBLE programme, through an all-round review of its achievements over the past decade drawing on successful stories and input from trainees. A number of other publications to showcase APN's new activities are also being planned.

Interactive Sessions

The poster session on Day 1 of the IGM/SPG featured activities under APN's Low Carbon Initiatives framework, and provides an opportunity for young scientists to present their latest work to the APN community. This year, thirteen young scientists from APN Member Countries currently studying or working in Japan were invited to join the poster session. Following an evaluation by IGM participants, Dr. Joni Jupesta of United Nations University-Institute of Advanced Studies, was awarded the "Mitra Award for Global Change Research" in recognition of his outstanding poster presentation.

On Day 3 of the IGM/SPG Meeting, Dr. Jupesta was invited to make an oral presentation at the main session.

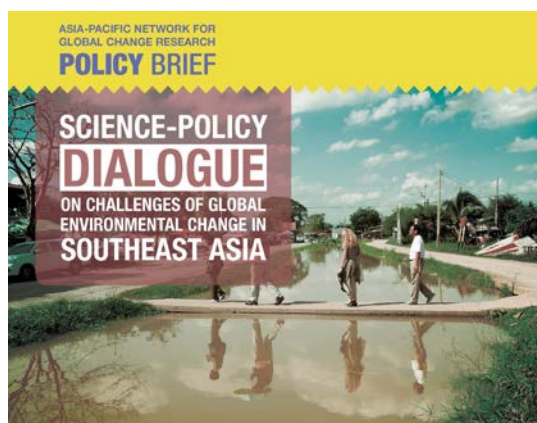
The Mitra Award was created to honour the late Professor Emeritus Dr. Ashesh Proshad Mitra, a prominent member of the APN and SPG member for India from 1996 to 2007, who provided excellent scientific advice to the APN, particularly for its Science Agenda.



Launch of APN Science Bulletin 2013 and Policy Brief on Science-Policy Dialogue in Southeast Asia

The APN Science Bulletin Issue 3 (2013) was released to coincide with the opening of the IGM/SPG Meeting. The 2013 APN Science Bulletin highlights those APN projects either funded and/or completed in fiscal year 2012/13. The Science Bulletin has three main sections: 1) Featured Articles; 2) Regional Research Projects funded under the Annual Regional Call for Research Proposals (ARCP) Programme; and 3) Scientific Capacity Development Projects funded under the CAPaBLE Programme. The Science Bulletin is available for download from the APN E-Lib at <http://www.apn-gcr.org/resources/items/show/1879>.

A supplement to the Bulletin will be published in early summer 2013 and will include a number of important activities supported by the APN outside its core programmes, for example, the development of Future Earth in Asia and the Pacific, Focussed activities under Ecosystems, Biodiversity and Land-Use, A series of Hyogo-funded workshops on the New Commons, among others.



BACKGROUND



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

The SPD, held in Bangkok, Thailand, 19-21 July 2012, was attended by 98 scientists and mid-level policy makers from Southeast Asia, including invited experts on

global change science, senior policy makers in the region, and observers from Temperate East Asia and South Asia.

Hosted by the Southeast Asia START Regional Center with support from APN and START (through a grant from USGCRF), the three-day dialogue confirmed the need for fostering stronger partnerships between the scientific and policy communities, and the need to incorporate others 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-terms.

Also released in conjunction with the IGM/SPG Meeting was a Policy Brief summarising the key messages emerged from the APN-START Science-Policy Dialogue on Challenges of Global Environmental Change in Southeast Asia held in Bangkok, Thailand in July 2012. To download the policy brief, please visit: <http://www.apn-gcr.org/resources/items/show/1880>.

For more information please contact:

Dr. Linda Anne Stevenson, Head, Division of Communication and Scientific Affairs, APN Secretariat, email lastevenson@apn-gcr.org

Mr. Xiaojun Deng, Programme Officer for Communication and Development, email: xdeng@apn-gcr.org



The APN Biodiversity and Ecosystem Services Framework

The APN 18th IGM approved the new framework, which will provide opportunities for important work in the Biodiversity and Ecosystems Services. Some of the important elements of the framework are outlined in the present article and more information can be obtained by contacting Dr. Linda Anne Stevenson (lastevenson@apn-gcr.org) who is Head of Communication and Scientific Affairs at the APN Secretariat.

A series of meetings and workshops since February 2011 has identified important existing gaps for the Asia-Pacific region requiring attention through comprehensive scientific research, capacity development and science-policy mechanisms. With input from key experts from ASEAN Centre for Biodiversity, DIVERSITAS, GEOBON, ICSU, MSU, UNU, among others; the gap analysis report outlines important thematic areas and key activities for the region, and underscores the need for APN to effectively align its scientific theme of Biodiversity, Ecosystems and Land-Use with the international arena, importantly the work of UNCBD, Millennium Ecosystems Assessment such as the impact of degrading ecosystems on the ability to achieve the Millennium Development Goals; UNFCCC through decisions on REDD+ mechanisms, ecosystems-based approaches to climate adaptation, among others; UNCSO Rio+20; and IPBES, especially in this "United Nations Decade on Biodiversity 2011-2020".

APN invites member countries,

stakeholders, the donor and international research communities, to propose collaborative activities that will provide opportunities, particularly in developing countries, to engage in activities under its B&ES Framework.

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

- i. Identification of drivers and pressures for biodiversity change that influence ecosystem services (land-use change; climate change, etc.);
- ii. Assessment of the impacts of biodiversity loss and vulnerability to the shrinking of ecosystem services;
- iii. Prediction of changes in biodiversity and ecosystem services through model-based scenarios; and
- iv. Adaptation, response and mitigation of the depletion of biodiversity and ecosystem services

Some of the key activities related to the above four themes are outlined in the Opportunity Paper that is available from the APN Secretariat. Activities of interest include:

A. Awareness raising and activities that link and/or develop networks: Research on the effectiveness of conservation education/awareness raising and capacity building on

diversity in nature at all levels of biological organisation; Traditional knowledge and culture in nature conservation and management; Joint curriculum development or instructional material development; Updating stakeholders on more recent developments in research on the fundamental importance of diversity in nature and ecosystems; Improving standards of professional environmental practice; Making more visible the connections between losses in diversity at all levels of biological organisation and human well-being.

B. Training: Developing capacity for scenario-development tools, training on predictive modelling and systems analysis at various scales; Training to evaluate diversity and ecosystem services for incorporating into decision-making systems and models.

C. Science-policy mechanisms: Developing appropriate tools and processes to facilitate policy and decision-making based on complex scientific understanding; Research to better understand the needs of policy-makers and the private sector on biodiversity and ecosystem services; Research to better understand how to facilitate engagement and support of the private sector in education on biological diversity and nature conservation; Promoting research that is holistic, integrated and interdisciplinary in approach; Enhancing awareness of different types of uncertainties for model-based forecasts.

New Publications

ARCP2011-04CMY-Paudel:

- **Final Report: Community-based Forestry and Livelihoods in the Context of Climate Change Adaptation Policy Brief: Community-based Forestry and Livelihoods in the Context of Climate Change Adaptation: Bangladesh Experience**
- **Policy Brief: Climate Change Adaptation in Thailand**
- **Policy Brief: Community adaptation to climate change-a recommendation to the activities of research and policymakers (Vietnam)**

<http://www.apn-gcr.org/resources/items/show/1585>

ARCP2012-07CMY-Mathukumalli:

- **Year 1 Progress Report: Tracing Nitrogen and Carbon Biogeochemical Processes in the Intertidal Mangrove Ecosystem (Sundarban) of India and Bangladesh: Implications of Global Environmental Change**

<http://www.apn-gcr.org/resources/items/show/1598>

ARCP2012-05CMY-Zhen:

- **Year 1 Progress Report: Holistic Assessment of Land-use Change and Impacts on Ecosystem Services of Wetlands**

<http://www.apn-gcr.org/resources/items/show/1596>

ARCP2012-04CMY-Salik:

- **Year 1 Progress Report: Impact of Climate Change on Mangroves Ecosystem in South Asia**

<http://www.apn-gcr.org/resources/items/show/1595>

ARCP2011-08CMY-Huda:

- **Year 1 Progress Report: Food Security and Climate Change in the Asia-Pacific Region: Evaluating Mismatch between Crop Development and Water Availability**
<http://www.apn-gcr.org/resources/items/show/1589>

ARCP2011-07CMY-Ha:

- **Year 1 Progress Report: The Impact of Spatial Parameters on GHG Emission: A Comparative Study between Cities in China and India**
<http://www.apn-gcr.org/resources/items/show/1588>

ARCP2010-13NMY-Bae:

- **Year 1 Progress Report: Climate Change Impact Assessment on the Asia-Pacific Water Resources under GEOSS/AWCI**
<http://www.apn-gcr.org/resources/items/show/1576>

ARCP2011-02CMY-Koike:

- **Final Report: River Management System Development in Asia Based on Data Integration and Analysis System (DIAS) under the GEOSS**
<http://www.apn-gcr.org/resources/items/show/1583>

ARCP2011-09CMY-Towprayoon:

- **Workshop Agenda: Capacity Building Workshop on: "Strategic rice cultivation with energy crop rotation in Southeast Asia – A path toward climate change mitigation in the agricultural sector"**
<http://www.apn-gcr.org/resources/items/show/1590>

CBA2011-08NSY-Baker:

- **Workshop Report: Regional Scientific and Technical Capacity Building**

New Publications

Workshop on the World Ocean Assessment

- **Final Report: Towards Engagement in the United Nations Regular Process for Global Assessment of the Marine Environment: Strengthening Capacity of Developing Countries in the Seas of East Asia**

<http://www.apn-gcr.org/resources/items/show/1686>

AOA2012-08NSY-Lansigan:

- **Conference Summary Report: International Conference on Climate Change Impacts and Adaptation for Food and Environmental Security**
<http://www.apn-gcr.org/resources/items/show/1881>

ARCP2009-05CMY-Sellers:

- **Final Report: Peri-Urban Development and Environmental Sustainability: Examples from China and India**
<http://www.apn-gcr.org/resources/items/show/1556>

CRP2011-01CMY-Pereira:

- **Final Report: Strengthening Capacity for Policy Research on Mainstreaming Adaptation to Climate Change in Agriculture and Water Sectors**
<http://www.apn-gcr.org/resources/items/show/1697>

ARCP2008-09CMY:

- **Final Report: Assessing Vulnerability of Communities and Understanding Policy Implications of Adaptation Responses to Flood-Related Landslides in Asia**
<http://www.apn-gcr.org/resources/items/show/1549>

CBA2011-15NSY-Wagan:

- **Final Report: Capability Enhancement of the Local Experts from State Universities and Colleges in Assessing Climate Change Vulnerability and Adaptive Capacity of Crop-based Farming Systems in Various Agroecological Settings**
<http://www.apn-gcr.org/resources/items/show/1693>

EBLU2011-02CMY(C)-Skole:

- **Final Report: Developing an MRV system for REDD+: Scaling up from project level to a national level REDD + MRV systems for Laos and Vietnam**
<http://www.apn-gcr.org/resources/items/show/1708>

ARCP2011-19NSY-Koottatep

- **Final Report: Affordable Sanitation as an Adaptive Strategy to Emerging Waterborne Diseases due to Climate Change**
<http://www.apn-gcr.org/resources/items/show/1600>

ARCP2011-21NSY-Manurung:

- **Final Report: Reconstruction of Sea Level Change in Southeast Asia (RESELECSEA) Waters Using Combined Coastal Sea Level Data and Satellite Altimetry Data**
<http://www.apn-gcr.org/resources/items/show/1602>

CBA2011-09NSY-Aligaen:

- **Final Report: Climate Change Integrated Education Model: Building Adaptive Capacity for the Next Generation (Malaysia, Indonesia, Thailand, Philippines and Lao PDR)**
<http://www.apn-gcr.org/resources/items/show/1687>

ANNOUNCEMENT

2014 Global Land Project Open Science Meeting in Berlin

2014 Global Land Project Open Science Meeting – Land Transformations: Between Global Challenges and Local Realities – will be held at the Humboldt University, Berlin on 19-21 March 2014.

The meeting will synthesize and discuss the role of the land system as a platform for human-environment interactions, connecting local land-use decisions to global impacts and responses.

Main conference themes:

- Rethinking land change transitions: drastic changes in land cover and subtle changes in land management
- Local land users in a tele-connected world: the role of human decision-making on land use as both a driver and response to global environmental change
- Impacts and responses: land systems changes to mitigate global environmental change impacts and adapt to increasing demands for food, fuel and ecosystem services
- Land governance: the ways in which alternative approaches to governance of land resources can enhance the sustainability transition

For further info: <http://www.glp-osm2014.org/>

Fully-Funded Fellowship Opportunity: United Nations / Nippon Foundation Ocean Affairs Fellowship

The United Nations – The Nippon Foundation of Japan Fellowship Programme is a fully funded research Fellowship for developing State ocean professionals. The main objective of the Fellowship is to provide advanced research and training in the field of ocean affairs and the law of the sea, and related disciplines,

to government officials and other professionals from developing States.

Successful candidates will undertake their research/studies in two back-to-back phases: the first, lasting three months, with the Division for Ocean Affairs and the Law of the Sea (DOALOS), UN Office of Legal Affairs; and the second, lasting six months, with a participating academic host institution. Fellowship application deadline is 15 September, and candidates should forward their applications directly to DOALOS.

Additional information, including the application package, detailed application instructions, and a list of participating host institutions, is available on the Fellowship website: www.un.org/depts/los/nippon and www.unfalumni.org.

New Open Access Journal Now Accepting Submissions

Earth Perspectives – Transdisciplinarity Enabled focuses on publishing and promoting integrating approaches to research, analysis and prediction of the Earth System, including the role of humans that either contribute to and/or are affected by the Earth System variability and changes. The journal's intent is to bring together rich scientific knowledge and experience residing within natural and social sciences and humanities towards developing solutions and best practices that can be used in addressing contemporary socioeconomic development challenges facing the nations around the world. This holistic approach to global sustainability requires a transdisciplinary research agenda to be enabled by the scholarly papers published in Earth Perspectives.

Earth Perspectives is accepting submissions; please use the online submission system to submit your manuscript. If you are submitting a manuscript to a particular Special Issue, please refer to its specific name in your covering letter. For all enquiries about the journal, please contact: editorial@earth-perspectives.com

APN Welcomes New Members

Please join the APN Secretariat in welcoming our new members:

National Focal Points:

Ms. Che Gayah ISMAIL

Deputy Director General
Malaysian Meteorological Department
Jana Sultan 46667 Petaling Jaya
MALAYSIA
cgayah@met.go.my

Mr. Faiz Ahmed

Joint Secretary (Administration)
Ministry of Environment and Forest
Bangladesh Secretariat, Dhaka 1000
BANGLADESH
fahmedpkh@gmail.com

Mr. Hendra SETIAWAN

Assistant Minister for Economy
and Sustainable Development
Ministry of Environment, Jakarta 13410
INDONESIA
hendra61@gmail.com

APN Welcomes New Members

Message from the New APN Focal Point for Nepal

Mr. Gokarna Mani DUWADEE

*Joint Secretary at the Ministry of Environment Science and Technology
gduwadee@hotmail.com*

It gives me a great pleasure to join the APN as the national Focal Point (nFP) for Nepal. Currently I am working as a Joint Secretary in the Ministry of Science, Technology and Environment and look after the planning, administration and monitoring division. Previously I worked as a Chief District officer under the Ministry of Home Affairs where I was mainly responsible in maintaining law and order in the region and coordinate, facilitate and support all the developmental agencies, including governmental, non-governmental and community based organisations where the primary concern was environmental governance. Before that I have taken other various roles since 1997 in the ministry of Industry, Commerce and Supply, Ministry of Land Reform and Management, Ministry of Federal Affairs, Constitution Assembly, Parliamentary Affairs and the Culture and other institutions.

Over the past few decades, Nepal has been increasingly vulnerable to climate change. Rising temperatures in the region, and the world at large, is affecting precipitation/ rainfall patterns that directly impacts agriculture which in

turn affects the majority of the people because agriculture is the primary industry and many rely on it for their livelihood. This is a global challenge. Governments and other sectors are concentrating their efforts to address this challenge. Global and regional communities are trying to collaborate and cooperate in

searching alternatives through various scientific researches to enable investigation of change in the Earth's life support systems which identify, explain and predict changes that will contribute to the development of policy options for appropriate responses to contribute to sustainable development.

Nepal has been implementing environmental policies and different strategies to focus its efforts on coping with environmental challenges. Nepal is aware in aligning policies and strategies to the global and to address the global change challenges. Thus, this APN forum is the right platform to join our hands in searching for appropriate responses in this regards.



Message from the New SPG Member for the Republic of Korea

Dr. Soojeong Myeong

*Research fellow at Korea Adaptation Center for Climate Change, Korea Environment Institute
sjmyeong@kei.re.kr*

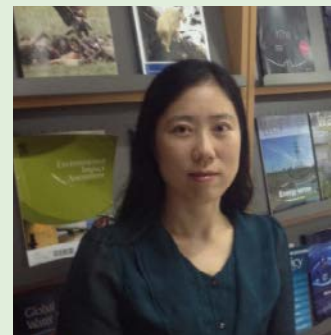
I am honored to be a new member of the APN Scientific Planning Group. I have been familiar with APN activities and understand its purpose of global change research. The Asia-Pacific region, accounting for over 60% of world population, has been suffering from many types of natural disasters and facing great challenges in building resilience. Regional efforts for the Asia-Pacific regions are necessary more than ever. Today's global issues are not just contained to certain areas, but complicated ones involving many disciplines. That's why we need to work together and collaborate.

While working as one of the leader authors for an IPCC special report, Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation, and also working as a delegate for the United Nations Framework Convention on Climate Change on adaptation issues, I re-realized

the importance of international collaboration to tackle today's global changes, such as climate change. I have quite a wide spectrum of academic background including environmental science, urban planning, remote sensing application, and environmental education. This

background and work experience has fostered in me positive and active attitudes towards interdisciplinary approaches, which I hope will facilitate my contribution to solving Asia-Pacific regional issues.

I believe APN activities will greatly help with understanding the dynamics of global changes in both regional and global scales. They will contribute to alleviating global changes, and build resilient societies across the Asia-Pacific region. I am looking forward to the journey of working with international colleagues for the meaningful goals of APN.



Staff Changes in the APN Secretariat



Two years have flown by so fast. It seemed like only yesterday I was flying into Kansai International Airport for the first time, meeting everyone at the Secretariat, and enjoying my office welcome party. It is hardly believable that it has been five weeks since I was enjoying my office farewell party! I have always been known as loquacious in nature but I would like to keep this message brief. There is a lot that I could say however, most importantly, I would like to thank the APN for giving me the opportunity to – not only live and work in Japan, but also for

giving me the opportunity to learn more about the Global Change arena, learn new skills, meet and work with people from all over the world, and help me grow both professionally and personally. It was an educational experience working with the APN Secretariat and I will miss you all greatly. Otsukaresamadeshita!

Ratisya Radzi

Outgoing Programme Fellow for Scientific and Institutional Affairs



Friends of APN might recognise me from my years as a Programme Fellow for Science and Institutional Affairs from 2009-2011. After completing my fellowship successfully, I returned to my country, Mongolia, in 2011, where I was employed as a Program Coordinator for the U.S. Department of Energy in Ulaanbaatar, Mongolia. Within my capacity of coordinator, I worked on bi-lateral government programs dealing with energy and environmental issues, and I enjoyed applying skills that I gained from the APN fellowship, such as program management, networking and negotiation. Through this experience, I am more aware of project coordination at a national level, in which many of the APN-supported project leaders and collaborators carry out their activities.

Institutional Affairs earlier this year and this position was a right match for me. The officer position is the extension of the APN fellowship with broader responsibility and duties. Returning to APN after two years, I notice that APN has extended its horizon in science-policy dialogue and regional collaboration of global change research and capacity building. Ever growing APN-supported activities and projects require my management to be more organised and broader in understanding. In turn, I hope to grow professionally and contribute to the regional network through my experience. I am happy to be a part of the APN family again.

Erdenesaikhan Nyamjav

Programme Officer for Scientific and Institutional Affairs

Incidentally, APN opened a new position of Program Officer for Science and



My name directly suggests that I was born on the 25th day of December. I am a native of the Laguna province in the Philippines, 27 years old, and the newest addition to the APN Secretariat. I graduated with a BS Development Communication degree (major in Science Communication) at the University of the Philippines Los Baños (UPLB) and have been involved in many community-based resource management and conservation programmes. I have a great interest in wildlife biology and biodiversity, and aspire to be a wildlife biologist handling conservation programmes in protected areas and climate change-vulnerable ecosystems. Prior to joining APN, I was finalising my thesis proposal on habitat and species distribution modelling of the critically-endangered Palawan forest turtle (*Siebenrockiella leyensis*) as part of the requirements for my masters. I am

very interested in reptiles and amphibians, particularly the species threatened or at risk to climate change and this is the reason why I took the program MS Wildlife Studies at UPLB.

On an interesting note, I was selected as a Programme Fellow for Communication and Scientific Affairs of APN and provided the international exposure and opportunity to work with researchers, members of the academe, and policy makers. I feel very thankful and excited as I believe I will be able to contribute greatly on issues dealing with global change and of course, in the realization of APN's vision-mission. My working principle is: Always be open for change and continuous learning. Embrace new situations with a creative and resourceful attitude.

Christmas de Guzman

Programme Fellow for Scientific and Institutional Affairs

Third Environmental Innovators Symposium

Xiaojun Deng and Taniya Koswatta, APN Secretariat

The Environmental Innovators Symposium was organised by the Environmental Innovators Program, Keio University in collaboration with Institute for Global Environmental Strategies (IGES) and Asia-Pacific Adaptation Network (APAN). The main theme of the symposium was “Innovation for Resilience and Transformation”, and covered adaptation best practices, development and environmental risks, building resilience in planning and architecture, as well as pathways to a smart society and community-based energy innovation. It was attended by over 50 scientists, practitioners and planners across the Asia-Pacific and Africa, who work in a variety of fields—from remote sensing and monitoring through sustainable construction to adaptation policies, at different levels—from international down to community level.

The APN was represented by Xiaojun Deng and Taniya Koswatta. An oral presentation was made to raise awareness of the APN, especially its recent work in climate change adaptation, including the new Climate Adaptation Framework. A booth was setup for dissemination of APN publications and for networking.

Building Resilience: Innovative Actions

The concepts of adaptation and resilience have seen increasing attention among scientist, policy makers and practitioners engaged in a number of fields including global environmental change research, sustainable development and disaster risk reduction. In many

developing countries in Asia and Africa, adaptation and resilience-building are closely linked with the many facades of development. In Japan, the context of resilience is set to a good extent against the ongoing recovery from the 2011 Tohoku earthquake and the consequential tsunami and the nuclear accident.

These issues, whether arising directly from global environmental change or from other forms of disasters, share similar properties and could be looked at from the perspectives of adapting to a changing environment. This brings into focus the questions of how to better understand the complexity of global change and the inter-connectedness of associated risks and uncertainties; how to bridge the existing gaps—between assessment and action, and between policy and action; what can be learned from the existing tools and best practices, etc.

The objective of the symposium was to share knowledge through presentations and discussion on these issues by looking at innovative actions in practice that advance transformation in relation to both climate change adaptation and resilience building.

Prof. Wanglin Yan, Faculty of Environmental and Information studies, Keio University opened the symposium by welcoming participants to Yokohama, and gave an overview of the structure of and contents the two-day symposium. This was followed by a keynote presentation by Prof. Andries Jordaan, Director, Disaster Risk Management Training and Education Centre for Africa (DiMTEC) at University of the Free State, Bloemfontein, South Africa. In his presentation, he pointed out resources



availability issues in African region and how these resources will benefit present and future sustainable development programmes. Furthermore, he noted that Africa needs knowledge and technology support from developed countries, such as Japan, to practice adaptation and mitigation action towards sustainable development in the region.

The symposium was organised into the following six sessions:

1) Data, tools and narratives for adaptation in Northeast Asia. The session was Chaired by Prof. Yan and focused on the use of data collection tools and data management systems in monitoring and understanding the risks and uncertainties of changing systems, and the dissemination of data and usable information to end users, including decision makers and the public, while giving emphasis on the power of well-developed “narratives” depending on the target audience.

2) Best practices for resilience and adaptation in the Asia-Pacific Region. Chaired by Prof. Masataka Watanabe, Project Professor at Keio University and Chair of APAN, this session comprised of reports from regional and thematic nodes of APAN on their latest activities on adaptation, as well as presentations by major institutions working on adaptation in Asia. Pakistan and Nepal were presented their climate change adaptation activities. Xiaojun Deng provided an overview of the APN, its calls for proposals process and recent activities on adaptation, including the new Climate Adaptation Framework. Panel discussion followed, with the main focus on the broader concept of adaptation for vulnerability, as well as questions on how to evaluate the effectiveness of adaptation and how to differentiate such achievement from the benefits arising from development.

3) Bridging the gap between policy and action for resilience and transformation. As can be inferred from its title, invitees shared their experience on transforming adaptation policy into actions in Japan and other Asian cities. Speakers include policy makers and practitioners from governmental agencies (such as the Ministry of Economy, Trade and Industry, the Ministry of the Environment, the Japan Reconstruction Agency), local communities, the academia and the private sector. A general “mismatch” was observed between the knowledge base and action on the ground, and the need for differentiating different vulnerable groups, while addressing adaptation issues, was also raised.

4) Resilience and adaptation as an opportunity in architecture and urban design. In this parallel session chaired by Prof. Yasushi Ikeda and Prof. Will Galloway, Keio University, speakers from the private sector and academia showcased, with examples of their own work, how sustainable architecture across Asia and Africa contributes to building social resilience.



5) Best practices in community-based energy innovation. Presentations on successful community-based renewable energy projects in Japan, India and Marshall Islands and ensuing discussions delivered the following message: 1) at the community level, government incentives in the forms of feed-in tariff and subsidies etc., are very important to the success of community-based projects; 2) it is the science community's job to sensitise the public about the cost versus benefits of such projects, in a clear and understandable language; 3) Strong leadership and local champions are needed to build consensus and expand the activity towards a sustainable scale.

6) The reality of environmental risk and redevelopment in damaged areas. This session gave a glimpse of how environmental risk management is integrated in the reconstruction efforts across Japan after many anthropogenic and natural disasters, including the mercury pollution at Minamata city, tropical storm Talas in 2011, and great Tohoku earthquake and related nuclear disaster. A common message from all speakers was that reconstruction can be seen as an opportunity for well-informed policies and transformative actions that lead to long-term resilience. Speakers also prompted the interesting topics of how innovative technical, financial and analytical support could help successfully translating policy options into local action.

The symposium ended with an interactive discussion session, in which Prof. Sinkyu Kang from Kangwon National University, Republic of Korea commented that a resilient system, in the ecology field, should have diversity, structural and functional complexity, and a certain level of redundancy. He suggested that the same might be equally applicable to socioeconomic systems, which needs further investigation by the research community. Participants also talked about reassessing the models of development assistance and knowledge/know-how transfer, the challenging need for social capital-based evaluation of adaptation etc.

Finally, participants thanked and congratulated the organisers for successfully planning such an informative, thought-provoking multi-disciplinary symposium, recognising the role of community-level actions and encouraging the cross-fertilization of ideas.

Earth System Governance Tokyo Conference

Akio Takemoto and Taniya Koswatta, APN Secretariat

The Earth System Governance Tokyo conference was held in Tokyo on 28-31 January 2013 for the first time in Asia. This was the fourth conference of the global conference series. The main theme of the conference was Complex Architectures, Multiple Agents. It refers to the “multitude of agents that play a significant role in earth system governance today, ranging from traditional state actors to international organisations, civil society organisations, science networks, city coalitions, or business associations. At the same time, the overall governance architecture, from local to global levels, is becoming more complex as a consequence of ever increasing needs for governance and policy-development”. APN participated in the whole conference as invited speaker and co-sponsored organisation. APN funded 17 participants in the Asia-Pacific region to participate and present their research finding through the CAPaBLE project CBA2012-04NSY-Kanie. The most significant achievement of this conference was to increase the number of Asian participants compare to the last three meetings. However, the number of Asian participants was still low among all participants.

APN director Dr. Akio Takemoto delivered a short speech during the opening reception. In his speech, he expressed his appreciation to the organising committee and introduced APN's core and recent activities such as low carbon initiatives, climate adaptation framework and science policy dialogue. He stressed the need of establishing new mechanisms, such as a mechanism to share needs-oriented data on global environmental issues



among Asia-Pacific countries and the need to enhance capacity of scientists and practitioners for communication techniques through regional cooperation, and in closing, he stressed that he believes the conference would help us develop these mechanisms.

The opening plenary session was focused on introducing earth system governance, conference objectives and keynote speeches. Prof. Norichika Kanie, conference chair and is also an APN project leader, presented the conference objectives and structure of the three-day conference. His presentation mainly focused on six conference themes that include: (1) earth system governance architectures in the 21st century; (2) climate and energy governance architectures; (3) the nexus between architecture and the other “A’s” in Earth System Governance; (4) political dynamics in the interface of agency and architecture; (5) methodological challenges to complex architectures and multiple agents; and (6) special conference stream on nuclear safety and post-disaster governance.

Apart from the main themes, there were three new special activities which comprised of science and policy interaction dialogue with practitioner, writing session, and documentary showing.

Dr. Ryutaro Yatsu, Vice-Minister for Global Environmental Affairs of the Ministry of the Environment of Japan, delivered a keynote speech. He mainly discussed the outcome of COP18 meeting and path for future work, time scale to enforcement of a new legal framework for applicable to all nations in 2020 and key points for post 2020 future framework. He raised five questions at the end of his presentation without having a conclusion. Those questions were as follows: (1) What are the principles and guidelines for regional environmental governance in diversified Asia? How can we establish a common framework?; (2) What is the new concept beyond Rio Declaration? Can we go beyond “Common But Differentiated Responsibility” (CBDR)? What is the new translation of CBDR?; (3) What is the governance for green economy? How can we

create an institutional mechanism for implementation of the programs?; (4) What is the new methodologies on decision-making for global governance beyond consensus or voting?; and (5) What is the relationship between social science and natural science in global governance?

The structure of the conference consist of eight semi-plenary sessions and number of parallel sessions. Semi-plenary session II was focused on governance for Low Carbon Societies in Asian Context. In this session, the panel members stressed that carbon-control policy should be placed in an intermediate position in the whole scope of government function. Though governments are capable of involving low carbon society in the governance, they might face difficulties to enhance the citizen involvement in the process. Another challenge is how to improve the quality of the carbon-control policy without any corruption. Ms. Liana Bratasida, former APN national Focal Point for Indonesia, delivered a presentation on institutional governance towards low carbon society in Asia from the perspective from Indonesia.

During the parallel session on climate adaptation, findings of the APN-funded project "Strengthening Capacity for Policy Research on Mainstreaming Adaptation to Climate Change in Agriculture and Water Sectors (CRP2009-02NMY-Pereira)" was highlighted. In the same session, Dr. Louis Lebel presented "Closing knowledge-action gaps in adaptation to climate change in the Asia-Pacific" and mentioned several previous effects or initiatives that were implemented to close the knowledge gap in the Asia-Pacific. Furthermore, he pointed out that adaptation research funding is an important element in addressing the issues of knowledge gap and stressed the need of both building research capacity to conduct policy research relevant in the developing Asia. In addition, he discussed important international research funding opportunities and mentioned APN as an international organisation supporting research on adaptation.

Semi-plenary III was focused on Post Rio+20 Roundtable: Achievements and Challenges. In the discussion, they agreed that Rio+20 adequately addressed sustainable development and identified that United Nation should play a key role in advancing the sustainable development agenda. Another key achievement from this plenary was the agreement to strengthen the United Nation Environmental Programme (UNEP) as the leading environmental authority in the United Nations System.

As a side event, APN organised a short meeting on 30 January 2013 at the conference hall. It was attended by the APN-funded participants and aimed at introducing APN's past and recent activities. Participants expressed their interest on the APN annual call for proposal programme and requested more information about it. Furthermore, participants acknowledged the APN financial support. Among the APN funded-participants, Mr. Rakyun E. Kim won the 2013 Oran R. Young prize at 2013 ESG Tokyo conference.

The conference concluded with an announcement stating Dr. Heike Schroeder will be the next conference chair. Dr. Schroeder further declared that 2014 ESG Conference will be held on from 1-3 July 2014 at the University East Anglia, Norwich, United Kingdom. The theme of the conference would be "Transformation towards sustainability of Future Earth".



Low Carbon Asia Research Network (LoCARNet) In-Depth Meeting on Strategic Action Plan

13 December 2012, Tsukuba, Japan — The Low Carbon Asia Research Network (LoCARNet) In-Depth Meeting on Strategic Action Plan was organised by the LoCARNet Secretariat on 13 December 2012 at the National Institute for Environmental Studies (NIES) in Tsukuba, Japan. The meeting was financially supported by APN as a networking activity under its Low Carbon Initiative (LCI).

The meeting was attended by over 15 LoCARNet members, who are experts on modelling work from China, India, Indonesia, Japan, Malaysia, Thailand and Viet Nam. Also in attendance were representatives from the Ministry of the Environment, Japan (MOEJ); a donor of the LoCARNet, represented by Mr. Hiroshi Tsujihara; the APN, represented by Dr. Akio Takemoto; and the LoCARNet Secretariat, represented by Dr. Shuzo Nishioka.

The objective of the meeting was to further develop the Strategic Action Plan of LoCARNet for the period between fiscal years 2012 and 2014 as the first phase and beyond 2014 in longer term. The Strategic Action Plan contains the following elements: membership, term of the plan, prioritized activities (low carbon research, capacity building, etc.), the steering group, the secretariat, fundraising, and the way forward.

During the meeting, there were intensive discussions among participants on the above topics related to the Strategic Action Plan. It was announced that the 2nd



Annual Meeting of LoCARNet will be held in July 2013 in Yokohama, Japan. In closing, participants agreed to further develop the Strategic Action Plan towards the 2nd Annual Meeting.

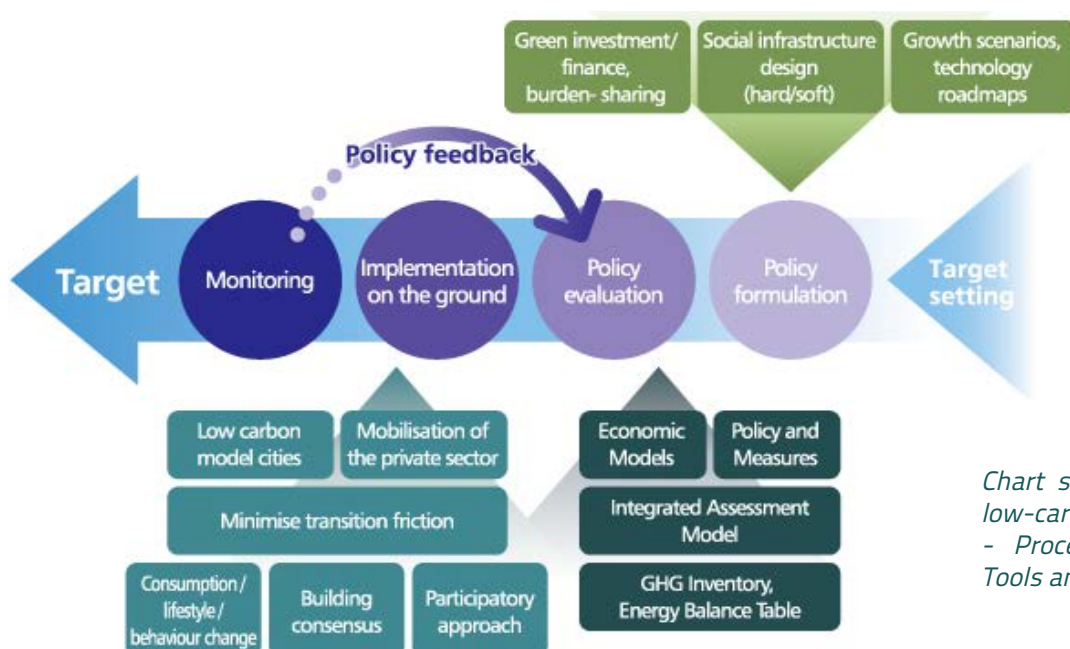


Chart showing formulation of low-carbon growth policies - Process, Data, Knowledge, Tools and Methods

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

18 February 2013 – “All countries should work together towards low carbon development and green growth by enhancing mitigation actions both in developed and developing countries.” Thus, emphasised by the Hyogo Prefectural Government of Japan, which hosts the Asia-Pacific Network for Global Change (APN) Secretariat, during a Symposium on Low Carbon Society in Asia through Dissemination of Renewable Energy Technology held at ANA Crowne Plaza, Kobe, Japan. The Hyogo Prefectural Government, who is also a major financial contributor to the APN, is keen on implementing

mitigation measures on a local scale, including CO₂ emission reduction in public and commercial sectors by way of regulatory, economic and informational measures to encourage conserving energy.

The Institute for Global Environmental Strategies Kansai Research Centre (IGES/KRC), one of the groups present during the symposium is a Hyogo-based research institution that conducts research activities on Business and Environment including experimental studies on low carbon technology transfer in Asia.



The APN, IGES/KRC, and the Hyogo Prefecture benefit from the said event on low carbon development as it facilitates mutual understanding on the latest technology know-how, legal framework and lifestyle with regard to low carbon development. The symposium is also important as it provides a venue for APN to share APN's outcomes to Hyogo Prefecture, which has been supporting the APN for more than 12 years.

Renewable energy technologies are innovative and promising technologies to achieve low carbon development, both in developed and developing countries in Asia. Various types of renewable energy such as solar, wind power and biomass energy are being promoted in Asian countries through policy arrangement such as regulatory schemes, target setting and economic incentives including Feed-in-Tariff.

Overall, the symposium aimed to provide the latest information on renewable energy technologies introduced in Japan and in developing Asian countries to the public, and to exchange views among participants on gaps, lessons and solutions to achieve a low carbon society in these countries. It was organised by the IGES, Hyogo Prefectural Government, and APN and was joined by around 150 participants.



APN at the 3rd Asia-Pacific Climate Change Adaptation Forum

Akio Takemoto and Ratisya Radzi, APN Secretariat

APN was represented at the 3rd Asia-Pacific Climate Change Adaptation Forum in Incheon, Republic of Korea, on 18-20 March 2013.

The main theme of the forum was “mainstreaming adaptation into development,” with a focus on key selected topics, such as adaptation strategies for policy and planning; capacity building strategies for adaptation; adaptation in the context of different systems and places; adaptation for sectors; critical and neglected groups, and knowledge management, among others.



The forum was organised by the Asia Pacific Adaptation Network (APAN) and hosted by the Korea Environment Institute (KEI) in association with the Korea Adaptation Center for Climate Change (KACCC), United Nations Environment Programme (UNEP), Institute for Global Environment Strategies (IGES), Regional Resource Centre for Asia and the Pacific (RRC.AP), and Stockholm Environment Institute (SEI).

Dr. Akio Takemoto, APN Secretariat Director, spoke on Panel 2.4, “Strengthening capacities to access and manage adaptation knowledge.” He provided an overview of APN and its adaptation activities, and shared his views on the key elements for successful scientific capacity development programmes on adaptation, which include “programme continuity; partnerships for sharing financial, human and knowledge resources; customizations based on country needs; and training local trainers.”

On Day 3, Dr. Takemoto gave a talk on Panel 6, “Knowledge management for adaptation,” on organising and sharing relevant and credible information: progress and problems. He shared best practices on organising and sharing information for the benefit of climate adaptation at the community level, and cited an APN capacity-building project for local community in Philippines using future climate simulation model. The project is entitled “Capacity Development on Integration of Science and Local Knowledge for Climate Change Impacts and Vulnerability Assessments (CIA2009-02-Pulhin).”

On data collection and utilisation for implementing adaptation, he outlined the needs and gaps identified at

the climate adaptation scoping workshop held in Kobe, last August 2012, which are as follows:

- capacity development for data collection and data mining;
- development of common data formats;
- integration of downscaled data and local data;
- high-resolution downscaling that is sector-specific and suits user needs;
- capacity development of users, including individuals and institutions.

Dr. Takemoto pointed out the importance of placing themselves in the position of users such as practitioners, policy makers and stakeholders, if scientists and researchers are to organise and share scientific information in a credible way. Meanwhile, common data formats, calibration and validation of regional climate models and improvement of communication skills of scientist and practitioners, among others, are essential in this regard.

Additionally, he emphasised the critical role of local governments in the two-way communication of scientific information on climate change between the local communities and the national government, therefore it is also necessary to enhance their capacity.

APN's presence at the Forum also includes a booth exhibition in the Market Place area, where we showcased our latest activities and publications on climate change adaptation.

8th MAIRS SSC Meeting Forum

Xiaojun Deng, APN Secretariat

The 8th Science Steering Committee (SSC) meeting of Monsoon Asia Integrated Regional Study (MAIRS) was held in Guangzhou, China, 25-26 March 2013. Members of the MAIRS SSC and observers from APN, ICSU Regional Office for the Asia and the Pacific (ICSU-ROAP), International Center for Integrated Mountain Development (ICIMOD), and World Climate Research Programme (WCRP) attended the meeting.

MAIRS Activity Update

Dr. Ailikun, Director of MAIRS International Project Office (IPO), provided an overarching report on the progress of MAIRS activities since the 7th SSC meeting in 2012, particularly those activities conducted under the four key study areas of MAIRS: urban studies, mountain studies, dryland studies, as well as modelling and observations. The urban and mountain workgroups have started drafting new strategic plans for future research under the MAIRS framework.

In her presentation Dr. Ailikun noted the significant efforts MAIRS made over the last 7 years to enable and strengthen integrated research, creating observation networks to coordinating model intercomparison, integrating multiple disciplines across natural and social sciences. However, a lot still needs to be done, she said, to find out how to transfer the research products to users, how to improve the links with social scientists and policy makers, and how to maintain the depth and width of a scientific research in trans-disciplinary studies.

Following her presentation, the workshop was organised into thematic sessions each covering one of the research themes of MAIRS, with presentations by members of the MAIRS SSC and other leading scientists in the respective fields, which was followed by interactive discussions.

Urban Studies

Prof. Ramesh Ramachandran, Director of the National Centre for Sustainable Coastal Management, Ministry of Environment and Forests, Government of India gave a presentation about vulnerability analysis of Indian coastal cities, highlighting a case study of 'hazard line' mapping for the city of Chennai, one of the fastest-growing megacities in the world. Through these examples he explained the major trends in megacity development, the causes of shoreline transformation, the impacts of climate change on coastal megacities, and the different roles of disaster risk reduction (DRR) and climate change adaptation (CCA) in ensuring development and human-wellbeing.

Prof. Tong Zhu of the College of Environmental Sciences and Engineering, Peking University, gave a presentation on urban air pollution, an issue common to large urban agglomerations, and its impacts on human health. By looking at a number of examples, particularly from the city of Beijing, he pointed out the key question that requires further investigation: are there ways for megacities to realise the co-benefits of reducing air pollution and mitigating climate change? How can environmental scientists work closer with urban planners to address this issue?

Prof. Tetsuzo Yasunari, then incoming Director General of the Research Institute for Humanity and Nature (RIHN) based in Kyoto, Japan, introduced the latest development of a Japanese-Chinese cooperative programme investigating the impact of megacity development on local to global climate change. Among other important findings, he noted that aerosol forcing is likely to be the biggest anthropogenic forcing for changing Asian summer monsoon; monsoon onset may become earlier; while the overall monsoon activity may be weakened particularly in certain regions.



Mountain Studies

Dr. Mandira Shrestha, Water Resources Specialist at the International Centre for Integrated Mountain Development (ICIMOD) introduced the study on water security in the Hindu-Kush-Himalayan region, the “water tower” of Asia, in the face of stronger climate change impacts on mountains, and its potential impacts on agriculture and ecosystems. She provides updates on the collaboration between MAIRS and ICIMOD recently developed to look at climate change impact modelling, model evaluation, disaster risk management, and capacity development, among others. Dr. Shrestha noted that the study requires collaborative efforts, and underlined the importance of partnerships with regional and international organisations.

Prof. Prakash C. Tiwari, Kumaon University, Nainital, Uttarakhand, India looked at the natural and socioeconomic impacts of environmental changes in Himalaya. He pointed out the links of climate-induced environmental change with societal changes such as loss of traditional livelihood, increase in school dropout rates, and loss of traditional culture and knowledge, etc., as well as many adverse effects on downstream communities.

Dr. Lance Heath, Business and Project Development Manager, at the ANU Climate Change Institute reported on a series of two workshops working towards improving resilience and adaptive capacity to climate change in the HKH Region. A key outcome is the development of a climate change adaptation toolkit, which will be used to help build local capacity to help communities cope better with those risks and vulnerabilities identified.

Modelling and Observations

Activities undertaken by a number of modelling initiatives were introduced. These include Coordinated Regional Climate Downscaling Experiment (CORDEX) in South Asia; Regional Climate Model Intercomparison Project (RMIP); Monsoon Asian Hydro-Atmosphere Scientific Research and prediction Initiative (GEWEX/MAHASRI), CLIVAR Asian-Australian Monsoon Panel.

A concerted effort by seven participating model groups, CORDEX in South Asia aims to develop multi-model ensemble projections of high-resolution regional climate change scenarios for South Asia, evaluate regional climate projections for use by the Vulnerability, Impact and Adaptation (VIA) community, and develop regional capacity for assessment of regional climate change, among others. The RMIP project started in 1999 to evaluate and improve regional climate model (RCM) simulations of monsoonal climate, under the joint support of the Chinese Academy of Sciences, APN and START. It is now operating under Phase III, evaluating multiple models and using multi-model ensemble for analysing regional climate change, Asian monsoon systems and climate extremes, taking uncertainties into consideration.

The GEWEX/MAHASRI project aims to establish a hydro-meteorological prediction system up to the seasonal time-scale through better scientific understanding of Asian monsoon variability. Some outputs of the project have been used by governments in developing disaster risk reduction plans.

Dryland Studies

The ongoing Asian Dryland Model Intercomparison Project (ADMIP) led by Dr. Jun Asanuma, Center for Research in Isotopes and Environment Dynamics, University of Tsukuba, Japan, is jointly supported by MAIRS, APN and MEXT (Ministry of Education, Culture, Sports, Science and Technology, Japan). The project has built a researcher community for intensive study of models at Asian dryland, and constructed one of the finest data sets for Asian dryland. The procedure of the model intercomparison was also well-documented for future use.

Over the years since its establishment, MAIRS have gradually shifted its focus of activities from mainly fundamental science to “actionable” science that cuts across disciplines. For example, the Dryland Workgroup led by Prof. Jianguo Qi emphasised in his report the importance of integrating biophysical and social processes in studying the land-cover change in Asian dryland. More and more social scientists, including those working in sociology and psychology, were involved in MAIRS activities and meetings.

Future Earth in Asia

A session was allocated to look at the recent development of Future Earth in Asia. Presentations were provided by Dr. Nordin Hasan of ICSU ROAP, Prof. Tetsuzo Yasunari of RIHN, Dr. Ghassem Asrar of WCRP, and Xiaojun Deng on behalf of APN. Prof. Congbin Fu, of the Chinese Academy of Sciences, noted that MAIRS is well-positioned and should take the lead to actively engage in Future Earth activities in China and Monsoon Asia, which also emphasises the co-designing of activities across different disciplines.

MAIRS Open Science Conference 2014

The meeting also discussed at length about the preparation for the first open science conference of MAIRS to be held in April 2014, which was held to celebrate the achievement of MAIRS since its establishment and to pave the way for the future planning of MAIRS. Discussions focus on proposing and selecting session topics and identifying session chairs and keynote speakers. At the time of writing, the first conference announcement has been circulated and the call for session proposals and presentation abstracts is open. More information is available online at <http://www.mairs2014.org/dct/page/1>.

APN at WCRP 24th JSC Annual Meeting

Linda Anne Stevenson, APN Secretariat

Hosted by the Brazilian Ministry of Science, technology and Innovation (MCTI), the Joint Scientific Committee (JSC) of the World Climate Research Programme (WCRP) held its annual meeting in Brasilia, Brazil (27-31 May 2013).

Mandated to provide scientific guidance for the WCRP, the JSC consists of 18 scientists from 15 countries. Members of the JSC are selected by agreement between the three major sponsoring organisations (WMO, IOC-UNESCO and ICSU) and represent climate-related disciplines in atmospheric, oceanic, hydrological and cryospheric sciences. The JSC closely considered WCRP's involvement in Future Earth and listened to a talk from Steven Wilson, Director of ICSU, on the current status of Future Earth.

APN highlighted its upcoming book entitled "Climate in Asia and the Pacific," Climate Adaptation Framework, and partnership with WCRP as well as new opportunities under its core programmes and three new frameworks.

Regional Downscaling Efforts for the Asia-Pacific

APN supports the implementation of WCRP's Coordinated Regional Climate Downscaling Experiment (CORDEX), particularly in Asia and the Pacific, through two grants approved for funding in 2013: (1) Support to early-career scientists to participate in the International Conference on Regional Climate 2013 to be held in Brussels, Belgium later this year (CBA2013-04NSY-WCRP); and (2) Series of three workshops for developing CORDEX at the sub-regional level in East Asia, South Asia and Southeast Asia (ARCP2013-15NMY-Manton).

For more information about the CORDEX 2013 conference or inquiries about sponsorship for young scientist participation, please visit conference website at <http://cordex2013.wcrp-climate.org/>.

WCRP Accomplishment Report 2013

WCRP released its Accomplishment Report 2013, which summarises its work from 2009 to 2013 in regional climate studies, climate system observations, decision maker support, capacity development and partnership building. APN was recognised in the report as an important partner for its long-term success. The report is available at http://wcrp-climate.org/images/documents/reports_flyers/WCRP_report03_2012.pdf

Update from Core Projects

Updates and future plans by representatives of the four core projects, CLIC (Climate and Cryosphere), CLIVAR (Variability and Predictability of the Ocean-Atmosphere System), GEWEX (Global Energy and Water Exchanges Project) and SPARC (Stratospheric Processes And their Role in Climate) was also discussed during the meeting.

Global Framework for Climate Services

Twenty years ago, the concept of climate services was foreshadowed when the research advances in seasonal climate forecasting by the WCRP community were applied in the state of Ceará to help the drought-prone Nordeste respond to the deleterious impacts of drought in the region. Three of the WCRP Grand Challenges are directly relevant to problems such as drought including the provision of skilful future climate information on regional scales, past and future changes in water availability, and science underpinning the prediction and attribution of extreme events. In addition to the various programs and activities under the WCRP umbrella, a number of other organisations were represented at the JSC including GCOS, IOC-UNESCO, among others. The next meeting of the JSC will take place in Heidelberg tentatively from 30 June to 4 July 2014.



Postgraduate Symposium on Renewable Energy and Graduation Ceremony

Linda Anne Stevenson, APN Secretariat

The Postgraduate Symposium and Graduation Ceremony marked the successful end of a four-week long intensive training programme on renewable energy that attracted students from the international community.

Conducted by the United Nations University Institute for Sustainability and Peace (UNU-ISP) and led by Dr. Srikantha Herath, the intensive four-week course on renewable energy was developed under the framework of the University Network for Climate and Ecosystems Change Adaptation Research (UN-CECAR), a collaborative initiative of more than 20 leading universities across Asia.

The renewable energy course was organised with the support of the Graduate Program in Sustainability Science-Global Leadership Initiative (GPSS-GLI) of the University of Tokyo and covered a range of issues on the science, technology, economics and policies of renewable energy. It included hard topics such as small hydropower, solar, geothermal, bio-, wind, marine, fuel cell and hydrogen energy, and soft topics including energy demand and supply, economics, security, and policy. Students received practical training with clean-energy software (RETScreen and HOMER).

Also a partnering organisation with APN under its Climate Adaptation Framework, UN-CECAR is committed to developing postgraduate educational and research programmes on climate and ecosystems change, and sustainability science. Dr. Herath is also a member of the APN's Capacity Development Committee.



International Symposium on Future Asia

Linda Anne Stevenson, APN Secretariat

With the theme "Bridging Science, Technology and Society: Practices of Transdisciplinary Implementation on Sustainability and Environmental Change in Future Asia", an international symposium on Future Asia was held on 13-14 December 2012 at Kyoto, Japan. The event was organised by the Global Environmental Change-Japan/Asia

(GEC-Japan/Asia) Platform, Japan National Committee for International Geosphere-Biosphere Programme (IGBP), World Climate Research Programme (WCRP), DIVERSITAS and International Human Dimension Programme on Global Environmental Change (IHDP), Science Council of Japan and the Research Institute for Humanity and Nature (RIHN). The symposium aimed to: (1) develop an interface to bridge science and

technology and link practices of transdisciplinary implementation of sustainability and environmental change; and (2) enhance regional linkages that engage local, national and international global change issues.

In his opening remarks, RIHN Director-General Tachimoto Narifumi informed that the symposium was to focus Asian particularities with regard



to the implementation of global change programmes and explore how this relates to the new ICSU-led initiative Future Earth. He stressed the “futurability” of the GEC projects will depend on the ability of the GEC programmes to connect with national and global research frameworks. On the other hand, Prof. Yuan Tseh Lee, ICSU President, cited that what Asia decides to do in the next decade will make or break global sustainability. “Future Earth has special relevance to Asia,” he emphasised.

Feedback on Future Earth in Asia and the Pacific

Dr. Linda Anne Stevenson, head of the Communication and Scientific Affairs of APN, served as the moderator of the session on Future Earth in Asia and the Pacific and RIHN-GEC/Asia. The session focused on the follow-up of recent discussions on Future Earth and Belmont Forum Initiatives. To address the issues from the recent workshop on Future Earth in Asia-Pacific held in Kuala Lumpur, Malaysia, Prof. Mohd Nordin Hassan, director of ICSU, provided a brief summary of the outputs of the meetings noting its success at the outset. He highlighted in his presentation that various issues that were taken into consideration and need to be addressed include the following: remaining cross-cutting challenges; linking and involving policy; inter/transdisciplinarity; translational research; and language barriers. In closing, Prof. Hassan stated that the

general feeling is that Future Earth in the region is both welcomed and needed. He added that the interim process has begun and Future Earth is expected to become fully operational by mid-2014.

Regional diversity of transdisciplinary initiatives

The need for an integrated and coordinated approach for Future Earth was discussed by Prof. Toshio Koike, the first speaker of the fourth session. He noted that many countries are working together in observations for decision-making processes. The Group on Earth Observations (GEO) was initiated at World Summit on Sustainable Development in 2002 and its first symposium was held in 2003 in Washington, DC. From GEO, the Global Earth Observation System of Systems (GEOSS) was developed by coordinating a comprehensive and sustained system of observing systems. He added that the next symposium for Asia-Pacific will be in Ahmedabad, India on February 2013, and its focus will be on establishing a data-sharing system in the Asia-Pacific region and finding solutions for societal benefits.

Professor Koike discussed disaster risk reduction and the need for data in this context. There are three main types of data needed, he said, and this is the objective of the International Strategy for Disaster Reduction (ISDR). He further expressed a huge amount

of data needs to be managed and integrated for all societal areas under GEOSS. This cannot be managed by GEOSS alone, and with the support of the Ministry of Education, Culture, Sports, Science and Technology (MEXT), a data integration analysis system is being developed to address this challenge.

Dr. Michael Manton, Monsoon Asia Integrated Regional Study (MAIRS) Chair, provided background information on MAIRS and the work being conducted by MAIRS particularly integrating across various disciplines, sectors, boundaries and activities and the collaboration and capacity building across monsoon Asia underpins all of the activities. He noted the MAIRS themes include the following:

- Multiple stresses in high mountain areas;
- Vulnerable systems in dryland zones;
- Rapid transformation in coastal zones;
- Rapid development of urban zones; and
- Modelling and observations, which underpin the first four themes.

Prof. Gernot Klepper, former Scientific Committee member of the IHDP, provided a background on the national committee on global change research referring to IGBP, DIVERSITAS, WCRP and IHDP. The committee’s mandate is to act as an advisory committee to national

funding agencies, ICSU, European Science Foundation, etc. He noted that while the committee was discontinued this year because of the dissolution of global change programmes, a committee has been formed to focus on how development of a co-designed research framework can support Future Earth.

For transdisciplinarity, he further cited various integrated research works across science disciplines, regions and societal groups. To conduct this efficiently, he noted the importance of involving the academic community, stakeholders and civil society. "Perhaps less is more in the 'research networking' context and perhaps there are too many networks out there," said Klepper. "Co-design and co-production of knowledge requires the involvement of researchers and stakeholders during the entire research process – for the future, we need to practice transdisciplinary research, scientific quality control, and new adapted structures for institutions," he added.

Prof. Soichi Mori of MEXT discussed a comparative perspective towards transdisciplinarity and international sharing of good practices. He underscored the importance of "Green Peas" soup scenario, where scientists for stakeholders make soup. "There is not necessarily a one-to-one contract between scientists and stakeholders," he stated.

Additionally, he stressed the heavy dominance of natural scientists in Japan and minority of social sciences and humanities. In sharing different kinds of interdisciplinary activities, he raised the question concerning when and how to involve and engage stakeholders. He finished his talk by stressing the need for a change and evolution of scientific communities and sharing good practices internationally and trans-continentially should involve the following:

- Transdisciplinary seminars and workshops inviting young scientists

- A global network of transdisciplinary networks
- World transdisciplinary report
- Recommendations to scientists' communities and stakeholders.

Vision for Environmental Change Research and Sustainability

Moderated by Prof. Makoto Taniguchi of RIHN, the wrap-up discussions focused on a future interface for Future Earth-oriented activities. Prof. Taniguchi presented the following four key questions as food for thought:

- Is there any Asian type of "Science-Society Interface?"
- How can we link experiences and efforts from the national base to regional and then to global levels?
- What kind of platform/node is adequate for Future Asia to be a hub for connecting existing networks (data/human institutions)?
- How can we encourage early-career scientists in Asia to be involved in our activities both at Future Asia and Future Earth process?

In responding and geographical to the questions borders in raised for the disciplines and session, Prof. Lee we must ensure stated that we the quality must learn to of science is cross boundaries monitored.

Mr. Takashi Kiyoura, Director for Environmental Science and Technology of MEXT, discussed a number of issues on Future Earth that include sharing of the view of goal setting and ensuring that Japanese stakeholders are aware of the initiative. He also noted that knowledge dissemination of the existence of Future Earth is very important – policy makers, funding agencies and related organisations, the press and the public needs to be approached and engaged. He strongly emphasised the following next steps for Future Earth:

- Workshops/symposia with academic society, users, stakeholders
- Provision of clear messages from members of the academe, funding agencies and policy makers
- Linkage with GEO/GEOSS (stakeholder for Future Earth)

Mr. Takashi Otsuka, principal researcher of IGES, noted that IGES focuses on three main areas of synthesis research, which are: (1) problem-driven and solution-oriented policy research; (2) networking; and (3) strategic operation. He also emphasised that as a mission-driven institute, IGES is working on low-carbon development, natural resources resilience and ecosystem services, and greening economy and business. He cited examples of programmes such as ISAP, LoCARNet and APAN, wherein the APN is involved to some extent.



ARCP 2013/14 Projects

Project Reference	Project Title	Project Leader	Email
ARCP2013-01CMY-Patra	Greenhouse Gas Budgets of South and Southeast Asia	Dr. Prabir K. Patra and Dr. Josep Canadell, Research Institute for Global Change (JAMSTEC), Global Carbon Project (GCP) JAPAN/AUSTRALIA	prabir@jamstec.go.jp
ARCP2013-02CMY-Fortes	Seagrass-Mangrove Ecosystems: Bioshields against Biodiversity Loss and Impacts of Local and Global Change along Indo-Pacific Coasts	Prof. Miguel Fortes, Marine Science Institute, University of the Philippines, PHILIPPINES	miguelfortes@gmail.com
ARCP2013-03CMY-Herath	Developing Ecosystem-Based Adaptation Strategies for Enhancing Resilience of Rice Terrace Farming Systems against Climate Change	Prof. Anura Srikantha Herath, Institute for Sustainability and Peace, United Nation University (UNU), JAPAN	herath@unu.edu
ARCP2013-04CMY-Meinke	Impact of Climate Change on Mangroves Ecosystem in South Asia	Professor Holger Meinke, University of Tasmania, AUSTRALIA	kholger.meinke@utas.edu.au, David.Parsons@utas.edu.au
ARCP2013-05CMY-Li	Development of an integrated climate change impact assessment tool for urban policy makers (UrbanCLIM)	Dr. Yinpeng Li, International Global Change Institute, Waikato University, NEW ZEALAND	yinpengli@climsystems.com
ARCP2013-06CMY-Quynh	Carbon fluxes and emission from the Red River (Viet Nam and China): human activities and climate change	Dr. LE Thi Phuong Quynh, Institute of Natural Product Chemistry (INPC), Vietnam Academy of Science and Technology (VAST), VIETNAM	quynhltp@yahoo.com
ARCP2013-07CMY-Roy	Coastal Ecosystem and Changing Economic Activities: Challenges for Sustainability Transition	Prof. Joyashree Roy, Global Change Programme, Jadavpur University, INDIA	joyashreeju@gmail.com
ARCP2013-08CMY-DeCosta	A study on, loss of land surface and changes to water resources, resulting from sea level rise and climate change	Dr. G.S. DeCosta, Uintec University, NEW ZEALAND	rdecosta@unitec.ac.nz
ARCP2013-09CMY-Carter	Coral reef and water quality status and community understanding of threats in the eastern Gulf of Thailand	Assoc. Prof. RW (Bill) Carter, Sustainability Research Centre, University of the Sunshine Coast, AUSTRALIA	bcarter@usc.edu.au
ARCP2013-10CMY-Yoo	Toward a Fire and Haze Early Warning System for Southeast Asia	Dr. Jin Ho Yoo, APEC Climate Center, REPUBLIC OF KOREA	jhyoo@apcc21.net, yoo.jinho38@gmail.com, ndhorstmann@gmail.com
ARCP2013-11CMY-Ochiai	GEOSS/Asian Water Cycle Initiative/Water Cycle Integrator (GEOSS/AWCI/WCI)	Mr. Osamu Ochiai, Associate Senior Administrator, Japan Aerospace Exploration Agency (JAXA), JAPAN	ochiai.osamu@jaxa.jp
ARCP2013-12CMY-Burnett	Assessing the Impact of Climate Change and Development Pressures on Nutrient Inputs into the Mekong River and Tonle Sap	Prof. William C. Burnett, Florida State University, USA	wburnett@fsu.edu, william.c.burnett@gmail.com
ARCP2013-13CMY-Sase	Dynamics of sulphur derived from atmospheric deposition and its possible impacts on the East Asian forests	Dr. Hiroyuki Sase, Asia Centre for Air Pollution Research, JAPAN	sase@acap.asia
ARCP2013-14NMY-Miyata	Toward CarboAsia: integration and syntheses of terrestrial ecosystem flux data in tropics/subtropics and croplands in Asia by activating regional tower-based observation networks	Dr. Akira Miyata, National Institute for Agro-Environmental Sciences, JAPAN	amiyat@niaes.affrc.go.jp



The Annual Regional Call for Research Proposals (ARCP) is one of the scientific pillars of the APN to encourage and promote global change research in the Asia-Pacific region that has potential, in addition to improving the understanding of global change and its implications in the region, to contribute to the establishment of a sound scientific basis for policy-making with regard to issues for which global change is an important factor. The ARCP is a competitive process launched in April 1998 to select projects for funding under the Science Agenda of the APN.

Project Reference	Project Title	Project Leader	Email
ARCP2013-15NMY-Manton	Coordinated Regional Climate Downscaling Experiment (CORDEX) in Monsoon Asia	Professor Michael Manton, Chair Scientific Steering Committee for Monsoon Asia Integrated Regional Study (MAIRS). Monash University, AUSTRALIA	michael.manton@monash.edu
ARCP2013-16NMY-Li	Assessing Spatiotemporal Variability off NPP, NEP and Carbon Sinks off Global Grassland Ecosystem in respond off Climate Change in 1911-2011	Professor. Jianlong Li, Nanjing university, CHINA	jlli2008@nju.edu.cn; jianlongli@sina.com
ARCP2013-17NMY-Tangang	Southeast Asia Regional Climate Downscaling Project (SEACLID)	Prof. Fredolin Tangang, University Kabangsaan Malaysia, MALAYSIA	ftangang@gmail.com; tangang@ukm.my
ARCP2013-18NMY-Prabhakar	Assessing community risk insurance initiatives and identifying enabling policy and institutional factors for maximizing climate change adaptation and disaster risk reduction benefits from risk insurance	DDr. S.V.R.K. Prabhakar, Institute for Global Environmental Strategies, JAPAN	prabhakar@iges.or.jp
ARCP2013-19NMY-Gamboev	Boreal and tropical (monsoonal) forests and forest-steppes in Asian-Pacific region in territory of Russia, Mongolia and China: a comparative estimation of the contribution to softening of global climatic changes and working out of measures on adaptation to them	Prof. Bair O. Gomboev, Baikal Institute of Nature Management of Russian Academy of Sciences, RUSSIAN FEDERATION	bgom@binm.bscnet.ru
ARCP2013-20NMY-Shrestha	Discharge Scenario and Water Based Adaptation Strategies in South Asia	Dr. Madan Lal Shrestha, The small Earth Nepal, NEPAL	info@smallearth.org.np; madanls@hotmail.com
ARCP2013-21NMY-Yamada	Adaptation of Solid Waste Management to Frequent Floods in Vulnerable Mid-Scale Asian Cities	Dr. Masato Yamada, National Institute for Environmental Studies (NIES), JAPAN	myamada@nies.go.jp
ARCP2013-22NMY-Sellers	Mega-Regional Development and Environmental Change in China and India	Assoc. Prof. Jeffery M. Sellers, University of Southern California, USA	sellers@usc.edu
ARCP2013-23NMY-Sthiannopkao	Developing Scientific and Management Tools to Address Impacts of Changing Climate and Land Use Patterns on Water Quality in East Asia's River Basins	Assistant Prof. Suthipong Sthiannopkao, Dong-A University, REPUBLIC OF KOREA	suthisuthi@gmail.com
ARCP2013-24NSY-Fidelman	Supporting governance institutions for adaptive capacity to environmental change	Dr. Pedro Fidelman, Sustainability Research Centre, University of the Sunshine Coast (USC), AUSTRALIA	pedro.fidelman@usc.edu.au
ARCP2013-25NSY-Shahid	Climate Change Vulnerability and Adaptation in Groundwater-dependent Irrigation System in Asia-Pacific Region	Dr. Shamsuddin Shahid, Universiti Teknologi Malaysia, MALAYSIA	sshahid@utm.my
ARCP2013-26NSY-Patankar	Characterizing Public and Private Adaptation to Climate Change and Implications for Long-Term Adaptive Capacity in Asian Megacities	Assistant Prof. Archana Patankar, KJ Somaiya Institute of Management Studies & Research, INDIA	archana.patankar09@gmail.com
ARCP2013-27NSY-Liu	The impact of global warming on ocean-atmosphere feedback strength at tropical Indian Ocean	Dr. Lin LIU, First Institute of Oceanography, State Oceanic Administration, CHINA	liul@fio.org.cn

CAPaBLE 2013/14 Projects

Project Reference	Project Title	Project Leader	Email
CBA2013-01CMY-Rasul	Impact of Climate Change on Glacier Melting and Water Cycle Variability in Asian River Basins	Dr. Ghulam Rasul, Pakistan Meteorological Department, PAKISTAN	rasulpmd@gmail.com
CBA2013-02CMY-Hashim	Global Environmental Change and Human Health: Extreme Events and Urbanization in the APN Region	Dr. Jamal Hisham HASHIM, UKM Medical Centre, MALAYSIA	shabeh.hasson@gcisc.org.pk, shabeh@gmail.com
CBA2013-03NMY-D'Arrigo	ACRE SE Asia – towards new weather and climate baselines for assessing weather and climate extremes, impacts and risks over SE Asia.	Prof. Roseanne D'Arrigo, Lamont-Doherty Earth Observatory, Columbia University, USA	rdd@ldeo.columbia.edu
CBA2013-04NSY-WCRP/CORDEX	International Conference on Regional Climate CORDEX 2013	Dr. R. Krishnan, Indian Institute of Tropical Meteorology, INDIA	krish@tropmet.res.in, mrixen@wmo.int
CBA2013-05NSY-Sutrisno	The Implementation of Multi sensors Remote Sensing Technology for Sustainable Disaster Managemen	Dr. Dewayany Sutrisno, Indonesian Society For Remote Sensing/ Geospatial Information Agency, INDONESIA	dewayany@gmail.com
CBA2013-06NSY-Shrestha	Enhancing the groundwater management capacity in Asian cities through the development and application of groundwater sustainability index in the context of global change	Dr. Sangam Shrestha, Asian Institute of Technology (AIT), THAILAND	sangam@ait.ac.th, sangamshrestha@gmail.com
CBA2013-07NSY-Dahal	Policy Brief 'writeshop' for Early Career Researcher: An Approach to Promote Greater Science-Policy Interface in South Asia	Assoc. Prof. Khem Raj Dahal, The Small Earth Nepal (SEN), NEPAL	info@smallearth.org.np, smallearthnepal@gmail.com
CBA2013-08NSY-SOLAS	Capacity building on Surface Ocean - Lower Atmosphere Study: The SOLAS Summer School	Dr. Emilie Brévière, SOLAS Executive Officer, Helmholtz Centre for Ocean Research SOLAS IPO Office, GERMANY	ebreviere@geomar.de
CBA2013-09NSY-Schuttenberg	Building Capacity for Socio-Ecological Resilience to Coral Bleaching Events in Indonesia, Malaysia, and Thailand	Dr. HZ Schuttenberg, Commonwealth Scientific and Industrial Research Organisation (CSIRO), AUSTRALIA	Heidi.Schuttenberg@gmail.com



The Scientific Capacity Building/Enhancement for Sustainable Development in Developing Countries (CAPaBLE) programme, which was launched in April 2003, is an initiative to realize parts 107 to 114 of the Johannesburg Plan of Implementation (JPOI) for the World Summit on Sustainable Development (WSSD) and is registered as a WSSD Type II Partnership Initiative. Of particular relevance is Part 111 of JPOI:

"Establish regular channels between policy makers and the scientific community for requesting and receiving science and technology advice for the implementation of Agenda 21, and create and strengthen networks for science and education for sustainable development, at all levels, with the aim of sharing experiences and best practices, and building scientific capacities, particularly in developing countries".

The CAPaBLE programme is enhancing scientific capacity in developing countries to improve decision-making relating to issues that are directly linked to their sustainable development. This effort is being achieved through a two-track process of capacity enhancement for experienced leading scientists and capacity development for early-career scientists under the APN Annual Call for Proposals.

Project Reference	Project Title	Project Leader	Email
CBA2013-10NSY-Visco	Communicating and Operationalizing Site-Specific Climate Change Adaptation Strategies in Selected Vulnerable Upland Communities in Southeast Asia	Dr. Roberto G. Visco, Philippine Agroforestry Education and Research Network, PHILIPPINES	secretariat@pafern.org.ph
CBA2013-11NSY-Pakharkova	Scale in Earth System Governance: Local Case Studies and Global Sustainabilityw	Dr. Nina Pakharkova, Siberian Federal University, RUSSIAN FEDERATION	nina.pakharkova@yandex.ru
CBA2013-12NSY-MAIRS	Promoting the Sustainability Science in Monsoon Asia	Dr. AILIKUN, International Program Office, Monsoon Asia Integrated Regional Study, Institute of Atmospheric Physics, Chinese Academy of Sciences, CHINA	aili@mairs-essp.org
CBA2013-13NSY-Varma	Building Capacity for Adaptive Governance through Participatory Modelling: Rural and Urban Flooding in India	Mr. Navarun Varma, The Energy and Resources Institute (TERI), INDIA	navarun@teri.res.in
CBA2013-14NSY-Barik	Promoting Algaeculture in Trapped Waters as Sustainable Aquafarming and Adaptive Climate Mitigation in Inundated Coastal Areas	Ms. Jyotiskona Barik, South Asian Forum for Environment, INDIA	safeinch@gmail.com
CBA2013-15NSY-Heinrich-Sanchez	Building Capacity on Marine Litter Management in the NOWPAP (Northwest Pacific Action Plan) Region	Mr. Eduardo (Edo) Heinrich-Sanchez, NPO Okinawa Ocean Culture and Environment Action Network, JAPAN	edo@okinawaocean.org, chiefnavi@gmail.com
CBA2013-16NSY-Dargantes	Strengthening the Capability of Colleges of Agriculture in Incorporating Food and Water Security and Climate Change and Climate Variability into Curricular Programs, Research and Extension Projects and Teaching Modules	Prof. Dr. Buenaventura B. Dargantes, Institute for Strategic Research & Development Studies (ISRDS), Visayas State University, PHILIPPINES	vsu_iwrm_program@yahoo.com.ph, vsuwaterresearch@yahoo.com.ph

APN Country Representatives

AUSTRALIA

(FP/SPG) Identifying nominees is in progress

BANGLADESH

Faiz AHMED

Joint Secretary (Administration)
Ministry of Environment and Forests,
Bangladesh Secretariat
Dhaka-1000, BANGLADESH
Tel: +88-02-9514766
Email: fahmedpkh@gmail.com

Md. Giashuddin MIAH (SPG)

Professor
Department of Agroforestry and
Environment, Bangabandhu Sheikh
Mujibur Rahman Agricultural University
Tel: +880-2-9205327
Email: giash1960@gmail.com

BHUTAN

Peldon TSHERING (FP)

Head, Policy Coordination Services
National Environment Commission
Tel: + 975-2-323384
Email: Peldon@nec.gov.bt

Peldon TSHERING (SPG)

Head, Policy Coordination Services
National Environment Commission
Tel: + 975-2-323384
Email: Peldon@nec.gov.bt

CAMBODIA

Sundara SEM (FP)

Director
Department of ASEAN and International
Cooperation
Ministry of Environment
Tel: +855-23-213-462
Email: semsundara@yahoo.com;
moe_dic@yahoo.com

Veasna KUM (SPG)

Professor
Department of Environmental Science,
Royal University of Phnom Penh
Tel: +855-78-536-353
Email: veasna_kum@yahoo.com

CHINA

Chengyong SUN (FP)

Deputy Director General
Department of Social Development
Ministry of Science and Technology
Tel: +86-10-5888-1437
Email: suncy@most.cn

Wenjie DONG (SPG)

Executive Associative Dean
State Key Laboratory of Earth Surface
Processes and Resource Ecology
College of Global Change and Earth
System Science, Beijing Normal
University
Tel: +86-10-5880-2219
Email: dongwj@bnu.edu.cn

FIJI

(FP/SPG) Identifying nominees is in progress

INDIA

Subodh SHARMA (FP)

Adviser
Ministry of Environment and Forests
Tel: +91-11-2436-0861
Email: subodh.kumar@nic.in;
subodh14@yahoo.com

B.N. GOSWAMI (SPG)

Director
Indian Institute of Tropical Meteorology
Tel: +91-020-2589-3924
Email: goswami@tropmet.res.in

INDONESIA

Hendra SETIAWAN (FP)

Executive Secretary, The State Ministry
of Environment
Tel: +62-21-8580112
Email: hendra61@gmail.com

Erna Sri ADININGSIH (SPG)

Director
Aerospace Analysis and Information
Centre
National Institute of Aeronautics and
Space
Tel: +62-21-31927982
Email: ernas@japan.go.id; ernasri@
yahoo.com

JAPAN

Hiroshi TSUJIHARA (FP)

Director
Research and Information Office, Global
Environment Bureau
Ministry of the Environment
Tel: +81-3-5521-8247
Email: hiroshi_tsujihara@env.go.jp

Kensuke FUKUSHI (SPG)

Associate Professor
Integrated Research System for
Sustainability Science and Department
of Urban Engineering, University of
Tokyo
Tel: +81-3-5841-1542
Email: fukushi@ir3s.u-tokyo.ac.jp

LAO PEOPLE'S DEMOCRATIC REPUBLIC

Sangkha THIANGHAMAVONG (FP)

Deputy Director General
Natural Resources and Environment
Institute, MONRE
Email: th.khan@yahoo.com

Bounyaseng SENGKHAMMY (SPG)

Acting Director
Environment Research Center
Natural Resources and Environment
Institute, MONRE
Tel: +85-620-22484092
Email: bounyaseng@gmail.com

MALAYSIA

Che Gayah ISMAIL (FP)

Director-General
Malaysian Meteorological Department
Tel: +60-3-7967-8003
Email: cgayah@met.gov.my

Subramaniam MOTEN (SPG)

Head of Research Division,
Malaysian Meteorological Department
Tel: +60-3-8787-2161
Email: subra@met.gov.my

MONGOLIA

Bayarbat DASHZEVEG (FP)

Secretary for National Committee to
Combat Desertification, Ministry of
Nature, Environment and Tourism
Tel: +976-51-264627
Email: bayarbt@yahoo.com

Tsogtbaatar JAMSRAN (SPG)

Director of GeoEcology Institute of
Mongolian Academy of Sciences
Tel: +976-11-325487
Email: geoeco@magicnet.mn

NEPAL

Gokarna Mani DUWADEE (FP)

Joint Secretary, Ministry of Environment,
Science and Technology
Tel: +977-1-4211996
Email: gduwadee@hotmail.com

Madan Lal SHRESTHA (SPG)

Academician, Nepal Academy of
Science and Technology
Tel: +977-1-4241403
Email: madanls@hotmail.com;
malashre@gmail.com

NEW ZEALAND

(FP) Identifying nominees in progress

Andy REISINGER (SPG)

Deputy Director (International), New
Zealand Agricultural Greenhouse Gas
Research Centre
Tel: +64-21-613125
Email: andy.reisinger@nzagrc.org.nz

PAKISTAN

Syed Mujtaba HUSSAIN (FP)

Deputy Secretary (Climate Change)
Ministry of Environment
Tel: +92-51-924-5537
Email: hussainmujtaba@hotmail.com

Amir MUHAMMED (SPG)

Rector
National University of Computer and
Emerging Sciences
Tel: +92-51-285-5032
Email: amir.muhammed@nu.edu.pk;
amir.muhammed@gmail.com

PHILIPPINES

Eriberto C. ARGETE (FP)

Planning and Policy Studies Office
Department of Environment and
Natural Resources
Tel: +63-2-925-2328
Email: ecappodir@yahoo.com

Marcial AMARO Jr. (SPG)

Director
Ecosystems Research and Development
Bureau (ERDB)
Tel: +63-49-536-3628
Email: erdb@denr.gov.ph

REPUBLIC OF KOREA

Kyeong Yun JEONG (FP)

Director
Global Environmental Office
Ministry of Environment
Tel: +82-2-2110-6557
Email: tempus99@hotmail.com

Soojeong MYEONG (SPG)

Research Scientist
Korea Adaptation Centre for Climate
Change
Korea Environment Institute
Tel: +82-2-380-7701
Email: sjmyeong@kei.re.kr

RUSSIAN FEDERATION

Andrey V. ADRIANOV (FP)

Institute of Marine Biology
Far East Branch, Russian Academy of
Sciences
Email: inmarbio@mail.primorye.ru

Alexander STERIN (SPG)

Deputy Director
Russian Research Institute for
Hydrometeorological Information,
World Data Centre (RIHMI-WDC)
Tel: +7-499-795-2467
Email: sterin@meteo.ru

SRI LANKA

B.M.U.D. BASNAYAKE (FP)

Secretary
Ministry of Environment
Tel: +94-11-2877290
Email: eeconga@yahoo.com

S. H. KARIYAWASAM (SPG)

Director General
Department of Meteorology
Tel: +94-11-2694104
Email: meteo1@slt.net.lk; meteo@slt.lk;
meteo2@slt.lk

THAILAND

Chote TRACHU (FP)

Permanent Secretary
Ministry of Natural Resources and
Environment
Tel: +662-278-8544
Email: chote.t@mnre.mail.go.th

Jariya BOONJAWAT (SPG)

Associate Professor
Southeast Asia START Regional Centre
Chulalongkorn University
Tel: +662-218-9466
Email: jariya@start.or.th

UNITED STATES OF AMERICA

Maria Uhle (FP)

Program Director for International
Activities
Directorate for Geosciences, National
Science Foundation
Tel: +1-703-292-2250
Email: muhle@nsf.gov

Luis M. Tupas (SPG)

Division Director, Global Climate Change
Institute of Bioenergy, Climate and
Environment
National Institute of Food and
Agriculture
US Department of Agriculture
Tel: +1-202-401-4926
Email: ltupas@nifa.usda.gov

VIET NAM

Xuan Bao Tam NGUYEN (FP)

Deputy Director General
International Cooperation Department
Ministry of Natural Resources and
Environment
Tel: +84-4-7734263
Email: baotam@monre.gov.vn

Kim Chi NGO (SPG)

Head of Research and Development
Department on Natural Resource
Processing and Environmental
Protection
Institute of Natural Products Chemistry
Vietnam Academy of Science and
Technology
Email: chikimngo2008@gmail.com

APN Committees and Members

APN STEERING COMMITTEE (SC) MEMBERS

Elected members

1. **Bhutan:** Peldon TSHERING
2. **China:** Chengyong SUN
3. **Indonesia:** Hendra SETIAWAN
4. **Nepal:** Gokarna Mani DUWADEE
5. **Sri Lanka:** B.M.U.D. BASNAYAKE

nFP for the host of the 19th IGM

1. **Cambodia:** Sundara SEM

Ex-officio (SPG Co-Chairs)

2. **Russia:** Alexander STERIN
3. **USA:** Luis TUPAS

Co-opted members

1. Louis BROWN (invited expert)
2. Roland John FUCHS (invited expert)
3. Kyeong Yun JEONG (donor member)
4. W. Andrew MATTHEWS (invited expert)
5. Kazuhiko TAKEMOTO (invited expert)
6. Hiroshi TSUJIHARA (donor member)
7. Maria UHLE (donor member)

INVITED MEMBERS TO THE APN SCIENTIFIC PLANNING GROUP (SPG)

Ailikun

Director, International Program Office of Monsoon Asia Integrated Regional Study (MAIRS)

CHINA

Email: aili@mairs-essp.org

Congbin FU

Director, START Regional Committee for Temperate East Asia

CHINA

Email: fcb@tea.ac.cn

Lance Clive HEATH

Project and Business Development Manager, Australian National University Climate Change Institute

AUSTRALIA

Email: lance.heath@anu.edu.au

Kanayathu Chacko KOSHY

Professor, Centre for Global Sustainability Studies, Universiti Sains Malaysia

MALAYSIA

Email: kanayathu.koshy@gmail.com

Chao Han LIU

Chairman, Southeast Asia START Regional Committee

CHINESE TAIPEI

Email: chliu@cc.ncu.edu.tw

APN CAPACITY DEVELOPMENT COMMITTEE (CDC) MEMBERS

Madan Lal SHRESTHA, SPG Co-Chair, NEPAL

Email: madanls1949@gmail.com

Alexander STERIN, SPG Co-Chair, RUSSIA

Email: sterin@meteo.ru

Roland John FUCHS, invited expert (Senior Fellow, East-West Centre)

Email: fuchsr@eastwestcenter.org

Srikantha HERATH, invited expert (Senior Academic Programme Officer, United Nations University)

Email: Herath@unu.edu

W. Andrew MATTHEWS, invited expert

Email: wa.matthews@gmail.com

Harini NAGENDRA, invited expert (Faculty Fellow, Ashoka Trust for Research in Ecology and the Environment)

Email: nagendra@atree.org; nagendra@indiana.edu

Hiroshi TSUJIHARA, nFP for Japan/donor member

Email: hiroshi_tsujihara@env.go.jp

APN SCIENTIFIC PLANNING GROUP (SPG) SUB-COMMITTEE

Alexander STERIN, SPG Co-Chair, RUSSIA

Email: sterin@meteo.ru

Luis TUPAS, SPG Co-Chair, USA

Email: ltupas@nifa.usda.gov

Kensuke FUKUSHI, SPG Member, JAPAN

Email: fukushi@ir3s.u-tokyo.ac.jp

Jariya BOONJAWAT, SPG Member, Thailand

Email: jariya@start.or.th

Amir MUHAMMED, SPG Member, Pakistan

Email: amir.muhammed@nu.edu.pk; amir.muhammed@gmail.com



Calendar of Global Change Events

June 2013

3-14	38th Session of the Subsidiary Body for Implementation and Scientific Body for Scientific and Technological Advice (SBSTA)	Bonn, GERMANY
9-11	International Expert and Stakeholder Workshop on the Contribution of Indigenous and Local Knowledge System to IPBES: Building Synergies with Science	Tokyo, JAPAN
12	ICCAD Loss and Damage Workshop	Bonn, GERMANY
18-20	AWCI Training Course on Improved Bias Correction and Downscaling Techniques for Climate Change Assessment including Drought Indices	Tokyo, JAPAN

July 2013

16-17	28th GEO Executive Committee Meeting	Geneva, SWITZERLAND
23-24	5th International Forum for Sustainable Asia and the Pacific (ISAP 2013)	Yokohama, JAPAN
24-25	2nd LoCARNet Annual Meeting	Yokohama, JAPAN
29 to March 3	Temperate East Asia 1st SEA-SRC Meeting,	

March 2013

14-18	APN Fourth South Asia Sub-regional Cooperation Meeting	Kathmandu, NEPAL
21-26	First Meeting of IPBES Plenary	Bonn, GERMANY
28-31	Earth System Governance Tokyo Conference (CBA2012-04NSY-Kanie)	Tokyo, JAPAN

August 2013

21-23	APN Climate Adaptation Workshop on Loss and Damage	Kobe, JAPAN
26-30	6th International Ecosystem Partnership (ESP) Conference	Bali, INDONESIA



APN Secretariat

East Building, 4F, 1-5-2 Wakinohama Kaigan Dori,
Chuo-ku, Kobe 651-0073, JAPAN
Tel: +81-78-230-8017, Fax: +81-78-230-8018
Website: www.apn-gcr.org

Views expressed in this newsletter do not necessarily represent those of the APN.

Executive Editor:

Linda Anne Stevenson

Editors:

Xiaojun Deng, Stephen
Bascomb, Christmas de Guzman

Design and layout:

Christmas de Guzman

The APN Newsletter is a quarterly electronic publication that provides updates on APN projects and activities, and articles on global change research.

To subscribe to this publication and other APN announcements please visit our website.

To share your articles or announcements please email info@apn-gcr.org.