



# APN Newsletter

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Summer Edition (July 2010)

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## Message from the Director



cooperation in APN's activities.

This Newsletter Issue covers the major activities of the APN in the past quarter. I am pleased to report that we launched a Special Call for Proposals for Focussed Activities and our Annual Calls for Proposals under the ARCP and CAPaBLE Programmes. Our Climate Synthesis is well underway and we are scheduled to hold the main Climate Synthesis Workshop at the end of August just preceding our 16<sup>th</sup> Steering Committee Meeting.

APN engaged in strategic events and continues to interact with policy bodies (UNFCCC, UNCBD, SBSTA, IPCC, IPBES, etc.). A number of publications were produced by the Secretariat and the projects we support. These were disseminated via the APN website and the electronic mailing list (EML). We also welcomed new member country representatives from Bhutan, China, Japan and Sri Lanka. Please log on to the APN website ([www.apn-gcr.org](http://www.apn-gcr.org)) for more updates.

As you know, we released the Evaluation Report of the APN's Second Strategic Phase and also the APN's 3<sup>rd</sup>

I would like to thank our contributors to our Summer Edition including our project leaders/collaborators, our members and our key partner organisations in the global change community. We are grateful for your continued support and

Strategic Plan last April. Outstanding projects of the second phase were selected based on their strengths and key outcomes. I wish to congratulate again the project leaders and collaborators of those projects that were considered outstanding among the 80 projects sets that were evaluated under the APN second phase.

This Newsletter Edition features how project-related activities of five of the eight selected outstanding projects have developed since funds were awarded by the APN. The milestones achieved by the project and follow-up activities implemented or being planned are highlighted. We would also like to share with you the success of an APN project partner who was awarded the 'Ten Outstanding Filipino Researchers.'

Updates from ongoing projects as well as announcements from APN's key partner organisations from the global change community are contained in this Edition as well as our updated calendar of upcoming events relevant to the APN community.

Should you also wish to contact our member country representatives, please note that we regularly compile an updated list of members, committees and experts in the Newsletter. I encourage you to contribute to the next Edition and thank you very much for your continued readership. I hope you will find this Newsletter Issue informative and useful in your endeavours.

## Across

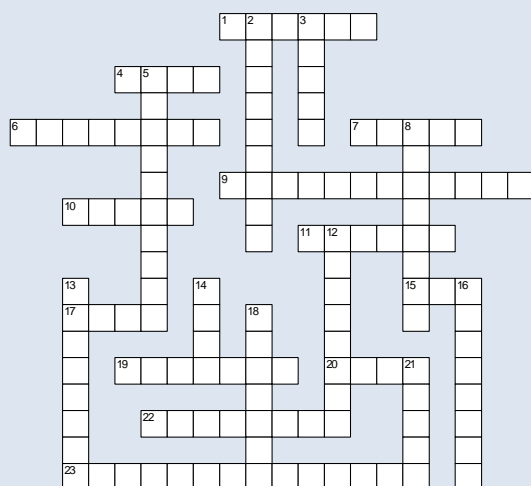
- 1 Projects under \_\_\_\_ of the APN CAPaBLE Programme were synthesised in a poster presented at the International Climate Change Adaptation Conference
- 4 Organiser of the Search for 'Ten Outstanding Filipino Researchers of 2009'
- 6 A Conference named after the venue and organised as part of a global series carried out by the Earth System Governance Project, a ten-year research program under the auspices of IHDP
- 7 Lead institution implementing the APN Project on 'GHG and Aerosol Emissions under Different Vegetation Land Use in the Mekong River Basin Sub-region'
- 9 The focus of the new developed webpage as contribution to CBD COP10 in Nagoya, Japan and in celebration for the IYB
- 10 Host of the 3<sup>rd</sup> ad hoc intergovernmental and multi-stakeholder meeting on IPBES
- 11 The delta which is considered Viet Nam's rice basket and facing great environmental challenges
- 15 A kind of mechanism that uses the sustainable management, conservation, and restoration of ecosystems to provide services that enable people to adapt to the impacts of climate change
- 17 It is developing a 50-year vision for the Mekong Delta that integrates national development priorities, climate change scenarios, and land use options and that can strengthen resilience to climate change while providing important co-benefits in terms of livelihoods and biodiversity
- 19 Head of Water Resources, National Environment Commission, Bhutan and appointed APN nFP

- 20 Main organiser of the APN project stakeholders' meeting held in Dhulikhel, Nepal to discuss the importance of community forests in land use change, biodiversity and carbon deposit
- 22 The Science and Implementation Plan of the IHDP Earth System Governance Project is now available in \_\_\_\_ and Spanish
- 23 An internet-based carbon Measurement, Reporting and Verification (MRV) project management application created under an APN-funded project

## Down

- 2 Involvement of this sector is crucial to ensure short and the longer term forest biodiversity conservation
- 3 An APN project partner who tops the search for 'Outstanding Filipino Researcher' (last name)
- 5 Main focus of the synthesis bulletin produced by APN and distributed at the International Conference organised by NCCARF in Australia
- 8 Publisher of the book "Carbon Sequestration in Agroforestry: Processes, Policy, and Prospects" to be released this year
- 12 Chicago Climate \_\_\_\_ is the largest trading platform in the voluntary carbon market
- 13 It was found that \_\_\_\_ and biomass-burning activities are major sources of GHG and aerosol emissions from land-use change in the Mekong River Basin Sub-Region
- 14 IUCN and \_\_\_\_ released the Guidelines for the Conservation and Sustainable Use of Biodiversity in Tropical Timber Production Forests
- 16 A network established in 1999 to focus on the development of collaborative observations and research on carbon, water, and energy cycles of key ecosystems in Asia
- 18 Which among the APN member countries is now the world's second largest rice exporter?
- 21 An IPCC-like mechanism for biodiversity and ecosystems services

## CROSSWORD CHALLENGE



## Message from the Steering Committee Chair



Dear Members of the Asia-Pacific Network for Global Change Research,

First of all, I am very pleased that the APN is becoming more actively engaged in participating at various strategic events in the global change community and in interacting with

policy bodies.

As you are well aware, the APN Secretariat Director, Mr. Tetsuro Fujitsuka and Steering Committee Member, Dr. Andrew Matthews attended the 32<sup>nd</sup> Session of the Subsidiary Body for Scientific and Technological Advice (SBSTA32) held in Bonn, Germany last June 2010 on behalf of the APN. They shared our knowledge and experiences on global change research and showcased the outcomes of the projects and activities we support.

Also, the APN Secretariat represented by Executive Science Officer, Dr. Linda Anne Stevenson, attended the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) 3<sup>rd</sup> Ad-hoc Intergovernmental and Multi-stakeholder

Meeting held in Busan, Republic of Korea on 7-11 June 2010. I appreciate all the efforts to promote the activities of the APN. I heard that the number of Letters of Intent received for the Annual Call for Proposals increased by 25% compared to last year. I believe it is the result of such efforts to increase the APN profile and visibility. I am glad that the APN is receiving zealous support in the Asia-Pacific region.

The 16<sup>th</sup> Steering Committee (SC) Meeting will be held in Kobe, Japan on 30-31 August 2010. In particular, during the meeting I expect that there will be discussions on ways to enhance our interactions with various international/intergovernmental science and policy bodies that are closely related to global change research such as the United Nations Framework Convention on Climate Change (UNFCCC), UN Convention on Biological Diversity (CBD), Intergovernmental Panel on Climate Change (IPCC), and the IPBES, which will be established in near future. I expect that through such discussions, the APN will be more vigorously involved in external activities in the region. I ask full support of our members, particularly the SC Members.

I wish you and your families' good health and continued happiness. Thank you.

SC Chair  
Suho SEONG

The Asia-Pacific Network for Global Change Research (APN) is an international network of Governments whose mission is to enable investigations of changes in the Earth's life support systems and their implications for sustainable development in the Asia-Pacific region. The APN, therefore, supports investigations that will:

1. Identify, explain and predict changes in the context of both natural and anthropogenic forcing;
2. Assess potential regional and global vulnerability of natural and human systems; and
3. Contribute, from the science perspective, to the development of policy options for appropriate responses to global change that will also contribute to sustainable development.

*APN defines "global change" as the set of natural and human-induced processes in the Earth's physical, biological, and social systems that, when aggregated, are significant at a global scale.*

## News from the Secretariat

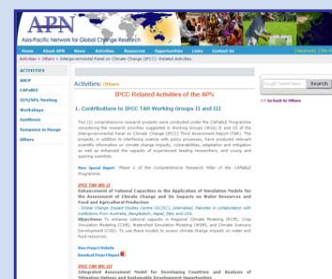
### Major Updates on the APN Website

In the last quarter, the APN launched a Special Call for Proposals for Focussed Activities and its Annual Calls for Proposals through the APN website. A number of updates and announcements were also posted that are related to global/climate change and particularly to APN programmes and project activities. Many publications have been uploaded: final project reports, synthesis bulletin, poster, proceedings of training workshops/meetings, brochure, etc. The calendar is regularly up-to-date and new pages are developed to disseminate more information as extensively as possible.

The APN announced, through a new developed webpage (<http://www.apn-gcr.org/newAPN/activities/others/2010/biodiversityActivities.htm>), its biodiversity activities and products for 2010 as contribution to the Convention on Biological Diversity (CBD) 10<sup>th</sup> Meeting of the Conference of the Parties (COP10) to be held in Nagoya, 2010 and to actively take part in celebrating the International Year of Biodiversity, 2010.



Another webpage has been created to highlight the APN activities that contribute to the IPCC. Visit: [http://www.apn-gcr.org/newAPN/activities/others\\_IPCC\\_related.htm](http://www.apn-gcr.org/newAPN/activities/others_IPCC_related.htm).



Posters, presented at the Global Change Community and Young Korean Scientists' Poster Session of the APN 15<sup>th</sup> Inter-Governmental Meeting (IGM)/Scientific Planning Group (SPG) Meeting, are available for download from this link: <http://www.apn-gcr.org/newAPN/news/apnUpdates/2010/apnUpdates-001-1.htm>.





# News from the Secretariat

## APN New Publications



### Bulletins

*Bulletin No. 1* highlights APN major activities and publications in 2009/2010 and approved continued and new projects under the Annual Regional Call for Research Proposals (ARCP) and Scientific Capacity Building/Enhancement for Sustainable Development in Developing Countries (CAPaBLE) Programmes in 2010/11. The list of projects provides the reference number, project title, project leader and his/her

email address so readers can contact directly for more project-related information.



*Bulletin No. 2*, which is available only in Japanese, highlights the major outcomes of former biodiversity seminars that the APN co-organised with the Hyogo Prefectural Government, Japan and other partners, in Kobe. Copies were distributed to around 300 participants at a Seminar organised by the Hyogo Prefectural Government Environmental Policy Division on Environment Day in Hyogo on 5 June 2010. This publication was also

prepared as a contribution to the Convention on Biological Diversity 10<sup>th</sup> Conference of the Parties (CBD COP10).



*Bulletin No. 3* is a synthesis bulletin of APN adaptation activities in the Asia-Pacific Region. It features selected ongoing and completed APN projects on climate impacts and adaptation under the ARCP and CAPaBLE Programmes. Copies were distributed at the International Climate Change Adaptation Conference – Climate Adaptation Futures: Preparing for the Unavoidable Impacts of Climate Change, held in Queensland, Australia, 29 June-1 July 2010.

*The above publications are available for download from the APN website 'Resources' section.*



*Bulletin No. 4*, like Bulletin No. 2, also highlights the major outcomes of the former series of biodiversity seminars that the APN organised. It also features selected APN biodiversity-related projects under the ARCP and CAPaBLE Programmes. Copies will be distributed at the: 1) APN/Hyogo International Symposium: Coexistence with Nature – Biodiversity and People – Hyogo Dialogue for the Future, 9 September 2010, Kobe, Japan; 2) International Conference on

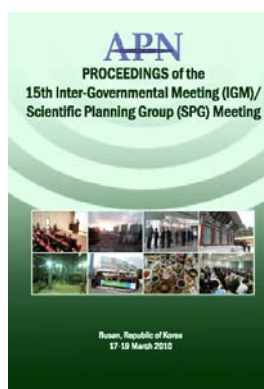
Forestry Education and Research for the Asia-Pacific Region, 23-25 November 2010, Manila, Philippines; and other events as appropriate.



### Synthesis Poster

The poster was presented by Dr. Linda Anne Stevenson, on behalf of the APN, at the International Climate Change Adaptation Conference in Australia. The title of the poster presentation is *Synthesis of APN Adaptation Activities in the Asia-Pacific Region*. It highlights the seven national and regional projects under the Focus Activity: Scientific Capacity Building for Climate Impact and Vulnerability Assessments (SCBCIA) of the CAPaBLE

Programme. These projects aim to develop scientific capacity for impact and vulnerability assessments at the user, policy and community levels.



### Proceedings of the 15<sup>th</sup> IGM/SPG Meeting

This publication compiles the relevant documents of the 15<sup>th</sup> IGM/SPG Meeting that successfully convened in Busan, Republic of Korea, 17-19 March 2010. Contained in the Proceedings are: chairperson's summary and important attachments; opening and welcome remarks of distinguished guests; main item papers discussed during the meeting, poster and presentation of the 2010 *Mitra*

*Awardee for Global Change Research*; and slides presented at the Low Carbon Green Growth and Development Session.

## APN seeks Biodiversity Experts from the Asia-Pacific Region

The APN will shortly convene a scoping workshop (early 2011) to discuss a synthesis of Biodiversity activities that have been undertaken in the Asia-Pacific region in the context of Global Environmental Change. If you are interested in taking part in this scoping exercise, please send a Letter of Intent to Dr. Linda Anne Stevenson, APN Executive Science Officer at [l Stevenson@apn-gcr.org](mailto:l Stevenson@apn-gcr.org) by 01 October 2010. The Letter should include details of your expertise and involvement in Asia-Pacific based activities.

## APN seeks external mail reviewers

If you are interested in reviewing global change proposals submitted under APN's Annual Regional Call for Research Proposals (ARCP) and scientific capacity development proposals submitted under its Scientific Capacity Building and Enhancement for Sustainable Development in Developing Countries (CAPaBLE) Programme, please visit this page for more information:

<http://www.apn-gcr.org/newAPN/opportunities/seekingReviewers.htm>

## News from the Secretariat

### APN Welcomes New Country Representatives

Please join the APN Secretariat in welcoming our new member country representatives:

#### Bhutan

As the newest member country of the APN, Bhutan recently appointed its national Focal Point (nFP), **Mr. G. Karma Chhopel** and Scientific Planning Group (SPG) Member, **Ms. Peldon Tshering**. Mr. Chhopel is the Head of Water Resources, National Environment Commission while Ms. Tshering is the Head of Policy Division Services, National Environment Commission, Bhutan.

The APN wishes both of them the best in their respective new roles and looks forward to Bhutan's continued support to APN's activities under their leadership. For official correspondence, you may contact [gkchhopel@hotmail.com](mailto:gkchhopel@hotmail.com) and [Peldon@nec.gov.bt](mailto:Peldon@nec.gov.bt).



#### Sri Lanka

**Dr. Ranepura Hewage Samantha Samaratunga** is the new Secretary of the Ministry of Environment, Sri Lanka and in this capacity was nominated as the new nFP for Sri Lanka. The APN members welcome Dr. Samaratunga on board and extend their sincere gratitude and appreciation to Mr. Jayatillake, the outgoing nFP, who has been supportive of the APN's activities since becoming involved in February

2007. For official correspondence, you may contact [secoffice@menr.lk](mailto:secoffice@menr.lk).



#### China

The new nFP for China, **Mr. Sun Chengyong**, is the Deputy Director General at the Department of Social Development, Ministry of Science and Technology, China. He is the successor of Mr. Xuedu Lu, who has been very supportive of the APN's activities since 1997. The APN wishes to express its sincere gratitude to Mr. Lu and is eager to strengthen its partnership with China under

the leadership of Mr. Chengyong. For official correspondence, you may contact [suncy@most.cn](mailto:suncy@most.cn).



#### Japan

The APN is pleased to welcome the new nFP for Japan, **Mr. Yutaka Matsuzawa**. He succeeded Mr. Hiroshi Ono, former Director of Global Environment Research Office, Ministry of the Environment, Japan. Mr. Ono was appointed APN nFP for Japan in July 2008 and huge and warm thanks is extended to him for his active engagement in APN activities not just in

his two years as nFP, but in his active participation many years beforehand as well. Mr. Ono is also affectionately known within the APN Family as the "Godfather of the CAPaBLE Programme" following dedicated action to ensure its launch in April 2003 and continued success today. For official correspondence, you may contact Mr. Matsuzawa in this address: [yutaka\\_matsuzawa@env.go.jp](mailto:yutaka_matsuzawa@env.go.jp).

### Recent APN Project-related Outputs and Activities

In keeping its members, stakeholders and the general public updated with new project developments such as release of reports/publications, developed or updated project websites, and events' schedule, the APN announces such through its electronic mailing list (EML) and the APN website. To subscribe to APN EML, please log on to: <http://www.apn-gcr.org/newAPN/opportunities/subscribeToEml.htm>.

#### Project outputs

##### *Brochure*

- "Recognising the Potentials of Agroforestry and Climate Change Mitigation and Adaptation" (CBA2009-08NSY-Almoite, Scaling-Up Agroforestry Promotion towards Mitigating Climate Change in Southeast Asia)

##### *Final Project Reports*

- ARCP2009-09NSY-Skole: Developing Smallholder Agroforestry Carbon Offset Protocols for Carbon Financial Markets – Twinning Sustainable Livelihoods and Climate Mitigation
- CBA2009-03NSY-Bishry: Project Scoping and Training Workshop for Reduced Emissions from Deforestation and Degradation (REDD) in Indonesia, Cambodia, and Lao PDR
- CBA2009-07NSY-Larigauderie: Second DIVERSITAS Open Science Conference (OSC) – Biodiversity and Society: Understanding Connections, Adapting to Change
- ARCP-2008-09CMY-Espaldon: Assessing Vulnerability of

Communities and Understanding Policy Implications of Adaptation Responses to Flood-related Landslides in Asia

- ARCP-2008-10CMY-Sheikh: Development and Application of Climate Extreme Indices and Indicators for Monitoring Trends in Climate Extremes and their Socio-Economic Impact in South Asian Countries
- CBA-2008-07NSY-Schmidt: Social Challenges of Global Change: The 7<sup>th</sup> International Science Conference on the Human Dimensions of Global Change (IHDP Open Meeting 2009)
- CBA-2008-11NSY-Bai-Rechkemmer: 6<sup>th</sup> Biennial International Human Dimensions Workshop (IHDW) on Global Change Research: A Series of Capacity Building Training Seminar
- CBA-2009-05NSY-Salinger: International Workshop on the Content, Communication and Use of Weather and Climate Products and Services for Sustainable Agriculture
- CBA-2009-08NSY-Almoite: Scaling-up Agroforestry Promotion Towards Mitigating Climate Change in Southeast Asia

##### *Proceedings*

- Proceedings of the "Training in the Concepts of Climate Change Impacts and Vulnerability Assessments" (CIA2009-02-Pulhin: Capacity Development on Integration of Science and Local Knowledge for Climate Change Impacts and Vulnerability Assessments)

*continued on page 20 ...*



## APN Out and About

### APN Joins GC Partners at SBSTA Dialogue on Research Developments Relevant to the Convention

The Asia-Pacific Network for Global Change Research (APN) engaged in a dialogue with the global change (GC) community on emerging scientific findings and other developments in climate change research activities on 3 June 2010, during the 32<sup>nd</sup> Session of the Subsidiary Body for Scientific and Technological Advice (SBSTA32) in Bonn, Germany.

Dr. Matthews summarised the progress of projects under of the APN umbrella 'Scientific Capacity Development for Climate Impact and Vulnerability Assessments' (SCBCIA) that was announced at SBSTA30 last year. APN reported that with seven projects under SCBCIA, the activities are being conducted in China, Indonesia, Philippines, Pakistan, Viet Nam and Thailand. He pointed out that the importance of the



Opening APN's presentation at SBSTA 32 on 3 June 2010



Dr. Mama Konate, Chair of SBSTA (UNFCC) with APN's Dr. Andrew Matthews

Some 150 participants attended the *SBSTA Dialogue on Developments in Research Activities Relevant to the Needs of the Convention*. The session started with an overview talk by Prof. Rik Leemans, Chair of the Earth System Science Partnership (ESSP) Scientific Committee on climate change science issues; reducing uncertainty, attempting to establish tipping points, what are adaptation limits, etc. This was followed by two specialist talks, one on downscaling climate models and improvements in seasonal and decadal climate forecasting by Dr. Ghassem Asrar, Director of World Climate Research Programme (WCRP) and another on ocean acidification by Dr. Sybil Seitzinger, Executive Director of International Geosphere-Biosphere Programme (IGBP).

A presentation by Dr. Ottmar Edenhofer, Co-Chair of Working Group (WG) III for the Intergovernmental Panel on Climate Change 5<sup>th</sup> Assessment Report (IPCC AR5) on the structure of this report, the overwhelming support in terms of potential participation in its writing and the process that is being proposed to minimise errors in this next report and restore confidence in the credibility of IPCC climate science.

Three other presentations were given on regional climate change science and capacity building activities relevant to the Convention. Dr. Andrew Matthews, representing APN, led off this section of the Dialogue. He set the context for two new APN activities by stating that APN had just completed a strategic review of its programme and, in addition, was responsive to issues raised by the SBSTA32 and by the Copenhagen Accord. The two new programmes, launched in April 2010, of (1) activities relevant to 'Reducing Emissions from Deforestation and Forest Degradation (REDD/REDD-Plus) and (2) 'Resources Utilisation and Pathways for Sustainable Development: Reduce, Reuse, Recycle (3Rs) and Material Flow' have already generated considerable interest.

involvement of developing country scientists in international climate research programmes and the need to train more scientists in developing states had been specifically mentioned by the delegations from Thailand and the European Union earlier in the week at this SBSTA meeting. Dr. Matthews concluded his presentation by stating that APN is proactive in its engagement with the Group on Earth Observations (GEO) and International Council for Science Committee on Data for Science and Technology (ICSU CODATA) on issues of data management, access and metadata. In closing, he highlighted that a regional climate synthesis report is being prepared by the APN, based on the outcomes of more than 50 climate-related projects that APN has supported over the last 10 years. It is envisaged that this publication will be peer-reviewed and published in time to be useful for AR5.

The APN presentation was followed by a presentation by Dr. Elizabeth Lipiatou, from the European Commission Research Directorate-General on climate change regional projects in the EU Seventh Framework Programme and then a report by Dr. Jon Padgham of Global Change System for Analysis, Research and Training (START) International, on their 'Science Dialogues' programme in developing states, particularly Africa. The formal presentations concluded with country contributions from Belize, European Union, Japan, Mali, and the United States.

The Chair then took questions from the floor and the participants said how pleased they were to have had the opportunity to see the presentations and participate in the dialogue and encouraged SBSTA to continue this activity.

For more information:  
<http://www.apn-gcr.org/>  
<http://unfccc.int/2860.php>  
<http://www.iisd.ca/climate/sb32/>

## APN Out and About

### APN at the 3<sup>rd</sup> and Final Meeting of an IPCC-like Platform for Biodiversity and Ecosystem Services

Realising the importance of establishing an Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), the APN attended the IPBES 3<sup>rd</sup> Ad-hoc Intergovernmental and Multi-stakeholder Meeting, 7-11 June 2010, Busan Republic of Korea. There are clearly potential synergies for APN's future engagement with IPBES as indicated in the report from Dr. Linda Anne Stevenson, who participated in the Meeting on behalf of the APN.

#### Introduction: What is IPBES?

If established, an IPBES will be an IPCC-like mechanism for biodiversity and ecosystem services. The new panel would provide a long overdue forum in which scientists engaged in research on biodiversity and ecosystem services, and their links to economics and human wellbeing could provide policy-makers and other stakeholders with the independent, authoritative, peer-reviewed scientific information needed to promote more sustainable, nature-friendly development. The panel would provide regular assessments of the condition of, and trends in, biodiversity and ecosystem services, and develop a common terminology and indicators. It could also organise information by biome – enabling research and exchange between scientists and policy-



makers for ecosystems such as grasslands, mangroves, woodlands and deserts. Such a panel could also improve knowledge on the links between climate change and ecosystem change, and facilitate sharing of ecosystem management and climate change adaptation strategies.

*continued on page 7 ...*

### 2010 PAGES Regional Workshop in Japan, 5-6 June 2010, Nagoya, Japan

As part of APN's efforts to align its scientific research agenda with the global change research programmes, Ms. Kristine Garcia, Coordinator, APN Secretariat, participated at the 2010 PAGES Regional Workshop held in Nagoya University on 5-6 June 2010. The workshop was organised by IGBP Core Project "Past Global Changes" (PAGES) and Nagoya University Global Center of Excellence "From Earth System Science to Basic and Clinical Environmental Studies." It provided Japanese palaeoscientists a platform to present results of their research studies and an opportunity to interact with the Scientific Steering Committee (SSC) Members of PAGES.

The workshop posters and presentations were structured based on the Scientific Foci and Cross-Cutting Themes (CCT) of PAGES: Focus 1-Climate Forcings; Focus 2-Regional Climate Dynamics; Focus 3-Global Earth System Dynamics; Focus 4-Past Human-Climate-Ecosystem Interactions; CCT1-Chronology; CCT2-Proxy Development Calibration Validation; CCT3-Modeling; and CCT4-Data Management. The SSC Members of PAGES delivered keynote speeches for each Focus and Theme followed by presentations from Japanese paleoscientists. In general, the workshop was dynamic as the participants actively engaged in asking questions and providing

suggestions after each presentation. Thus, the workshop served as a mechanism to exchange new ideas and insights in palaeoscience research. PAGES' ongoing and future international efforts in coordinating and promoting past global change research were also reported to the participants.

Ms. Garcia gave a short presentation about the APN and its activities. She highlighted the synergies between the science agenda of the APN and PAGES. She also emphasised that the APN is keen on reviving the relationship between the two organisations. In the past, the APN provided support to some of the PAGES' events that were held within the Asia-Pacific region. Ms. Garcia thanked Dr. Thorsten Kiefer, Executive Director of PAGES International Project Office (IPO) for the invitation and the opportunity to introduce the APN to Japanese palaeoscientists and the PAGES SSC Members. Dr. Kiefer expressed similar interest in resuming the collaborative efforts between PAGES and APN.

PAGES (<http://www.pages-igbp.org>) was founded in 1991 as a Core Project of the International Geosphere-Biosphere Programme (IGBP).





## APN Out and About

from page 6 - APN at the 3<sup>rd</sup> and Final Meeting ...



### Opening of the Meeting

The third *ad hoc* intergovernmental and multi-stakeholder meeting on an intergovernmental science-policy platform on biodiversity and ecosystem services (IPBES) opened on Monday 7<sup>th</sup> June in Busan, Republic of Korea.

Achim Steiner, United Nations Environment Programme (UNEP) Executive Director, identified two key roles for an IPBES: providing a platform for intense dialogue and collective action needed to achieve an urgent and significant shift in addressing biodiversity loss; and enhancing the capacity of developing countries to contribute to global efforts. Lee Maanee, Minister of Environment, Republic of Korea, summoned delegates to support the establishment of an IPBES, promising that in the future the international community will remember them as “the heroes of that moment.” Hur Nam-sik, Mayor of Busan, expressed the hope that this meeting would strengthen international cooperation on biodiversity. The elected Chair and Vice-Chair were Mr. Chan-woo Kim, Director-General, Ministry of Environment, Republic of Korea, and Dr. Robert T. Watson, Chief Scientist and Director for Sustainable Development at the World Bank, respectively.

### Highlights of the Meeting

- Strengthening the science-policy interface on biodiversity and ecosystem services;**  
 Delegates discussed three different options: to create a new intergovernmental platform that would not duplicate or substitute the mandates or programmes of work of existing MEAs or UN bodies; to focus solely on strengthening existing science-policy structures of MEAs and UN bodies; or to create a new intergovernmental platform that would not duplicate or substitute the mandates or programmes of work of existing MEAs or UN bodies, and to work to strengthen, and improve coordination between, those existing structures.
- Processes that a new platform should support;**  
 Delegates considered four options, wherein an IPBES would respond to requests from governments conveyed through: CBD; the six biodiversity-related conventions; MEAs; or MEAs, in addition to requests from all relevant stakeholders, such as international scientific organisations, non-governmental organisations and the private sector.
- Function or work programme of the new platform.**  
*Generation of knowledge:* Delegates discussed four options, wherein an IPBES: identifies and prioritises key scientific information but does not undertake work to generate new knowledge; identifies and prioritizes key scientific information and facilitates dialogue to catalyse efforts to generate new knowledge, but would not directly undertake work to generate new knowledge; or would play no active role in knowledge generation.



Mr. Suho Seong (right), ROK Delegate and his colleague



Chair, Mr. Chan-woo Kim

*Regular and timely assessments:* Delegates considered three options, wherein an IPBES would: carry out regular and timely assessments, including comprehensive global and subglobal assessments and thematic issues at appropriate scales; carry out regular and timely assessments, which would include comprehensive global, subglobal, subregional and national assessments and thematic issues at appropriate scales; or have no active role in undertaking regular and timely assessments.

On day two, delegates nominated Dusan Ognjanovic (Serbia) as fourth vice-chair and during the day reviewed options for: the function, or work programme, of a new platform. On Wednesday, after hearing the reports from the drafting group on the Busan outcomes document and from the contact group on options for processes, IPBES III participants engaged in negotiation on text for the function or work programme of the new platform. In the afternoon, delegates continued negotiating text on assessments, policy formulation and implementation, and building capacity.

Two contact groups met during the day to forward discussions on the function or work programme of the new platform and on outstanding issues on generation of knowledge and regular and timely assessments; its legal basis, governance and implementation structure; funding; and need for, location and host of a secretariat. They also engaged in a second reading of the processes that a new platform should support. A drafting group on an outcomes document and a contact group on options for the processes convened in the evening.

On Thursday morning, IPBES III participants negotiated text on building capacity and funding; and on negotiated text prepared by the Contact Group on processes that a new platform should support. At the end of the morning session, the chair convened a “friends of the chair group” to draft text on the chapeau and announced that the drafting group would meet to discuss the structure of the outcomes document. In the afternoon and into the evening, negotiations continued on the legal status of an IPBES, the draft Busan outcome document and its chapeau.

### Conclusion of the Meeting

After another long day of negotiations, the Secretariat introduced the draft Busan Outcome, which was adopted with some amendments. On the role of UNDP, after some debate, delegates agreed to note the interest of UNDP in IPBES and its important role in capacity building. Delegates also agreed to introduce language whereby they “conclude” that an IPBES should be established to strengthen the science-policy interface for the conservation and sustainable use of biodiversity, long-term human wellbeing and sustainable development.

On the question of how to communicate the conclusions to the UN General Assembly, the EU suggested that the UN General Assembly be invited to endorse the conclusions of the present meeting and take

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appropriate actions for the establishment of an IPBES. Algeria objected, noting it is going beyond the mandate of this meeting to make a recommendation to the UN General Assembly. Kenya proposed that the UNEP Executive Director, on behalf of the UNEP Governing Council, forward the agreement reached, including outcomes and recommendations, to the UN General Assembly for its consideration.

After listening to concerns of delegations, the EU sought clarification as to whether this meeting can make recommendations. The Secretariat explained that the UNEP Executive Director is authorised by the UNEP Governing Council to transmit the results of the meeting to the UN General Assembly on its behalf. The US proposed that the UNEP Executive Director, on behalf of representatives of governments to IPBES III, forward the agreement to the UN General Assembly, as mandated by the UNEP Governing Council. Colombia proposed recommending that the UN General Assembly take actions appropriate regarding the establishment of an IPBES in consideration of the outcomes of this meeting.

After a brief consultation, Australia and the EU proposed that the UN General Assembly be invited to consider the conclusions of the meeting and, in the spirit of compromise, Kenya withdrew its proposal. In the text agreed by the plenary, it is recommended that the UN General Assembly is invited to consider the conclusions and the UNEP Governing Council invites UNEP, with UNESCO, FAO and UNDP, to continue facilitating the process.

### **Busan Outcome**

The representatives of the governments to IPBES III, inter alia:

- acknowledge the importance of: terrestrial, marine, coastal and inland water biodiversity and ecosystem services and that the science-policy interface must be strengthened; and ensuring the quality and independence of the science made available;
- note the interest of UNDP in IPBES and its important role in capacity-building; and
- conclude that an IPBES should be established to strengthen the science-policy interface for the conservation and sustainable use of biodiversity, long-term human wellbeing and sustainable development.

On consideration of the function of an IPBES, the representatives of the governments to IPBES III agreed that it should:

- respond to requests from governments, including those conveyed to it by MEAs, related to biodiversity and ecosystem services as determined by their respective governing bodies; and establish a process in plenary to receive and prioritise requests;
- identify and prioritise key scientific information needed for policymakers at appropriate scales and to catalyze efforts to generate new knowledge;
- perform regular and timely assessments of knowledge on biodiversity and ecosystem services and their interlinkages, which should include comprehensive global, regional and, as necessary, sub-regional assessments and thematic issues at appropriate scales and new topics identified by science and as decided upon by the plenary. The Outcome provides that these assessments must be scientifically credible, independent and peer-reviewed, including identifying uncertainties, and there should be a clear transparent process for sharing and incorporating relevant data;
- support policy formulation and implementation by identifying policy-relevant tools and methodologies, such as those arising from assessments, to enable decision makers to gain

access to those tools and methodologies, and where necessary to promote and catalyze their further development;

- prioritise key capacity-building needs to improve the science-policy interface at appropriate levels and then provide and call for financial and other support for the highest priority needs, related directly to its activities, as decided by the plenary, and catalyze financing for such capacity-building activities by providing a forum with conventional and potential funders; and
- be established as an independent intergovernmental body administered by one or more existing UN organisations, agencies, funds and programmes.

They also agreed that the plenary should: be open to participation by all member states of the UN and regional economic integration organisations; and in general take decisions by consensus by government representatives; have one chair and four vice-chairs, ensuring geographic balance; and establish a core trust fund to receive voluntary contributions from governments, UN bodies, the GEF, other intergovernmental organisations and other stakeholders, such as the private sector and foundations.

According to the principles expressed in the Outcome, an IPBES should, inter alia:

- collaborate with existing initiatives on biodiversity and ecosystem services;
- be scientifically independent and ensure credibility, relevance and legitimacy through peer review of its work and transparency in its decision-making processes;
- use clear, transparent and scientifically-credible processes;
- integrate capacity-building; and
- take an inter- and multi-disciplinary approach.

The representatives also agreed that the efficiency and effectiveness of an IPBES would be independently reviewed and evaluated on a periodic basis. They recommended that: the UN General Assembly be invited to consider the conclusions of the meeting and take appropriate action for the establishment of an IPBES; and the UNEP Governing Council invites UNEP, in cooperation with UNESCO, FAO and UNDP, to continue to facilitate any ensuing process of implementing the IPBES until such time that a secretariat is established.

### **Closing**

During the closing plenary late Friday evening, Chair, Mr. Chan-woo invited delegates to adopt the Busan Outcomes document. Rapporteur Spencer Thomas (Grenada) then presented the report of the meeting (refer to IPBES/3/L.1), which was adopted by acclamation.

Vice-chair Mr. Watson applauded delegates for their flexibility and spirit of compromise, noting this agreement puts the governance of biodiversity and climate change on an equal footing. The EU expressed satisfaction with the successful outcome and noted that several member states and the European Commission have indicated their willingness to provide funding and institutional support for the new platform. Norway offered to host a secretariat on capacity building, while Kenya called for the IPBES secretariat to be hosted at UN headquarters in Nairobi. The Republic of Korea pledged to contribute to the successful launch of the IPBES and beyond.

Chair Mr. Chan-woo thanked all delegates for finalising this historic agreement in Busan in the International Year of Biodiversity and, noting the participants as "heroes of the moment" brought the meeting to a close at 22:51.



## APN Out and About

### APN at the Public Debate on Biodiversity Conservation in Human Influenced Areas



Committed to active engagement in strategic biodiversity events, the APN attended the public debate on biodiversity conservation in human influenced areas that convened in Yokohama, Japan on 15 June 2010.

The International Tropical Timber Organization (ITTO), the International Union for the Conservation of Nature (IUCN), and the Japan International Cooperation Agency (JICA) hosted this event as a contribution to the debates leading to the Convention on Biological Diversity 10<sup>th</sup> Conference of the Parties (CBD COP10) to be held in October 2010 in Nagoya, Japan and under the framework of the International Year on Biodiversity, 2010. About 70 representatives from environmental agencies, interested non-governmental organisations (NGOs) and experts in Japan participated in the event.

APN Secretariat Executive Science Officer, Dr. Linda Anne Stevenson and Programme Officer for Communications and Development, Ms. Peryl Pulhin, used the opportunity to identify potential resource persons for an International Seminar that APN is organising in September 2010. They also displayed the APN biodiversity-related activities during the Open Forum and promoted its programmes through dissemination of information materials. Dr. Stevenson and Ms. Pulhin liaised with biodiversity experts for future partnerships noting that APN just launched a focussed activity on Forestry and Reducing Emissions from Deforestation and Forest Degradation (REDD)-Plus under Theme 2 of its scientific research agenda on Ecosystems, Biodiversity and Land Use.

Highlights of the event were as follows: 1) discussion on the ITTO/IUCN Guidelines for the conservation and sustainable use of biodiversity in tropical timber production forests; 2) sharing of relevant examples and best practices on biodiversity conservation in human influenced areas; and 3) discussion on the opportunities for biodiversity conservation in human influenced landscapes.

Representatives from the main organisers gave welcome address: Mr. Emmanuel Ze Meka, ITTO Executive Director; Mr. Naoya Furuta, Global Policy Unit, IUCN Senior Officer; and Mr. Shinji Yoshiura, JICA Yokohama International Centre Director General. Presentation from experts followed.

An overview of the 'ITTO/IUCN Guidelines for the conservation and sustainable use of biodiversity in tropical timber production forests' was presented by Dr. Jeffrey Sayer, visiting professor at James Cook University, Australia and former Director of Center for International

Forestry Research (CIFOR) and of the IUCN Forest Conservation Programme.

An expert from Burung Indonesia, Ms. Ani Mardiasuti reported about 'Conserving and Restoring Forest Habitat in Production Forest: Harapan Rainforest'.

In his presentation, Ian Rowland, Tropical Forest Conservation Manager, The Royal Society for the Protection of Birds (BirdLife International, United Kingdom), cited a good example of forest restoration concessions in Indonesia.

Ms. Fumiko Nakao, Fellow at United Nations University, Institute of Advanced Studies (UNU-IAS), presented on '*Satoyama* Initiative: conserving biodiversity in human influenced landscapes'.

A facilitated debate on best practices to promote biodiversity conservation in human influenced areas ensued. It was stressed that there are a number of challenges in implementing the ITTO/IUCN guidelines and among these are: 1) need for greater and more creative promotion and dissemination mechanisms; 2) reaching people who are not yet "converted"; 3) need to consolidate, simplify or cross reference information as there are too many guidelines available that are cross-cutting; 4) collaboration with other organisations to help attract peoples' attention.

It was also emphasised that there is a need to improve understanding of how and why deforestation happens and it is important to ensure that both natural and residual forests are protected as they are necessary for biodiversity conservation. Local people directly benefit from forest resources. However, people tend to convert logged over forests and this conversion leads to biodiversity loss.

The debate also raised whether the location of the forests and the type of forests are more important than the size and mix for biodiversity conservation. Looking at high-value resources and service, it was noted that processed products warrant that community values the forests. To ensure short and the longer term forest biodiversity conservation, community involvement is crucial; but without assured benefits, it would be difficult to engage the community.

There is great value to lessons learning and sharing on sustainable use of natural resources for biodiversity conservation. These lessons include issues such as depopulation of areas, *Satoyama*-like landscapes in Japan as an example. It is important to address the challenge in information generation and sharing and how this is faced in different cultures and countries to improve and sustain such ecological-production landscapes and biodiversity altogether.

*Satoyama*-like landscapes and their contribution to wider biodiversity conservation beyond just the traditional protected areas and species conservation efforts have great potentials and should be looked into more closely. This kind of practice could link up fragmented ecosystems and address pressures from development.

Closing remarks was given by Mr. Kikuo Nakagawa, Director General, Global Environment Department, JICA.

For more information, you may log on to:  
[http://www.ito.int/en/workshop\\_detail/id=2341](http://www.ito.int/en/workshop_detail/id=2341)

## APN Out and About

### APN at the 2010 International Climate Change Adaptation Conference- Climate Adaptation Futures: Preparing for the Unavoidable Impacts of Climate Change, 29 June - 01 July 2010, Gold Coast, Queensland, Australia



The '2010 International Climate Change Adaptation Conference – Climate Adaptation Futures: Preparing for the unavoidable impacts of climate change' was organised by the two leading research institutions of Australia: the National Climate Change Adaptation Research Facility (NCCARF) and the National Climate Change Adaptation Research Flagships of the Commonwealth Scientific and Industrial Research Organisation (CSIRO). According to the Conference International Steering Committee, about 1000 participants from more than 55 countries attended the Conference. Over 500 presenters/researchers from Australia and around the world shared and discussed a wide range of climate impacts and adaptation research.

The Conference is one of 'the first international forums to focus on climate impacts and adaptation,' as NCCARF noted. It was a highly significant Conference as it engaged active collaboration and communication among climate adaptation researchers in an early journey of adaptation activities. The APN participation was highlighted through poster presentations by Dr. Linda Anne Stevenson (APN Executive Science Officer) and Mr. Erdene Nyamjav (APN Programme Fellow), Dr. Linda Peñalba (former project leader) and Dr. Yinpeng Li (former project collaborator).

#### Adaptation Challenges Workshop

A closed workshop, *Adaptation Challenges Workshop* was held on 28 June 2010. Dr. Stevenson was invited and attended the workshop. The workshop identified collective and priority actions for the social, scientific and policy concerns facing Australia in response to future climate change.

#### Plenary Talks

The Conference began with Opening Plenary. The participants were welcomed by Hon. Penny Wong, Minister for Climate Change, Energy Efficiency and Water; Mr Graham Dillon, Kombumerri elder; and Conference convenors Dr. Jean Palutikof, NCCARF and Dr. Andrew Ash, CSIRO. Hon. Wong's presence at the opening session demonstrated a high recognition from the Australian government.

Dr. Joseph Alcamo, Chief Scientist of the United Nations Environment Programme (UNEP) noted that climate impact and adaptation research is a key for climate science but lacks an umbrella organisation. Dr. Alcamo announced the UNEP proposal for a new institution, the Programme of Research on Climate Change Vulnerability, Impacts and Adaptation (PRO-VIA) which will provide a focal point for the research community concerned with vulnerability, impacts, and adaptation to climate change. PRO-VIA is by scientists and for scientists.

Dr. Rajendra K. Pachauri, Chair, Intergovernmental Panel on Climate Change (IPCC) sent a welcome remark by a video message, and Dr. Jean-Pascal van Ypersele, Vice Chair, IPCC gave a presentation on 'Climate Change, Adaptation, and IPCC'. Further in a presentation 'The Challenge for Adaptation: The Legacy from Copenhagen', Prof. Martin Parry, Imperial College, UK summarised position of adaptation

in climate change discussions and asked to optimise efforts towards a better adaptation within the objectives set in global negotiations.

Sharing the youth perspectives on climate change adaptation, Johanna Mustelin and Laura Canevari urged everyone to collectively work towards adaptation in their daily lives and emphasised that science needs to be integrated into practice.

Further plenary sessions touched on important issues such as frontiers in adaptation science, science-policy interface, and cases studies in adaptation. Detail of each session is described in the conference programme and handbook.

The 'Closing Plenary: Looking Forward' included two main talks and a panel discussion. Dr. Chris Field, Co-Chair, Working Group II, IPCC delivered an informative summary of coming work of IPCC Fifth Assessment Report (AR5) in his talk, 'Towards IPCC AR5.' Dr. Field introduced a wide range of additions to IPCCAR5. Cross cutting themes, regional perspective and inclusion of developing country inputs are a few among the major chapters and sections of the report.

Reflecting on the Conference, Dr. Tony McMichael summarised insightful examples from conference presentations and posters.

In the panel discussion, the speakers expressed satisfaction on successful Conference implementation and urged to work on collective and open communication of adaptation science. Following the Conference are a number of consequential conference/meeting initiatives tentatively planned by some participants. The next year's Climate Adaptation Conference will be hosted by the University of Arizona, USA.

From the APN family, the former Scientific Planning Group Member of Japan, Dr. Nobuo Mimura spoke at the plenary session: 'The science/policy interface.' Dr. Mimura talked about 'Climate Change Adaptation in a Post-Copenhagen World: View from Japan.'



Dr. Linda Anne Stevenson, APN Executive Science Officer with Prof. Nobuo Mimura, former SPG Member for Japan

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## APN Out and About

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The Conference also provided interesting talks and meetings, such as the one delivered by Dr. Tim Flannery, Australia's leading thinker and writer, on 'Climate Change: A Personal View of Adaptation and Mitigation in the Australian Context.' Many other activities took place during the Conference as outlined in the Conference programme.

### Parallel Sessions

The parallel sessions offered an opportunity to listen to specific oral presentations and discuss with the global speakers about a wide range of adaptation research activities. The oral presentations were allocated 24 parallel session slots in six threads: Understanding and communicating adaptation, Adaptation by sectors, Adapting from the grassroots, Frameworks for adaptation, Adaptation at the edge, and Human welfare and adaptation. Detailed abstracts and authors/speakers of all parallel session can be found in the Conference handbook.



### APN Representation

On behalf of APN, Dr. Stevenson, submitted an abstract to the Conference and was accepted for poster presentation. The APN poster, entitled 'Synthesis of APN Adaptation Activities in the Asia-Pacific Region,' was featured in Session 8: National and International Adaptation Activities.

For this event, the APN Secretariat produced a press release, 'APN Responds to Challenges in Climate Impacts and Adaptation' and a bulletin, 'Synthesis of APN Adaptation Activities in the Asia-Pacific Region: Responding to Challenges in Climate Impacts and Adaptation.' In addition, APN distributed CD-ROMs containing APN information materials and a general bulletin that highlights its major activities in 2009/2010 and approved projects in 2010/2011.

Along with Secretariat representation, a number of current and former APN project leaders and collaborating institutions showcased their research activities that were successfully selected among a large pool of applicants. Dr. Peñalba (Project Reference: CBA2008-09NSY-Peñalba) shared the results of her capacity development activities at the Conference. She was represented by Ms. Dulce Elazegui and the poster is entitled, 'Building the Climate Change Response Capability of Local Government Units in the Philippines'.

APN-funded comprehensive research project (Project Reference: CRP2008-02CMY-Yan, CRP2007-02CMY-Yan, CRP2006-02NMY-Yan) showcased the outputs in a poster presentation entitled, 'Toward the Synthesis of Implications of Climate Change for Regional Food Security: Modelling Approach and a Case Study'. The poster was presented by Dr. Yinpeng Li from the International Global Change Centre, the University of Waikato, New Zealand.

Presenting on research results of their respective institutions, some APN project leaders who attended the Conference included: Dr. Joanne Elizabeth Luck from the Primary Industries, Victoria, Australia; Dr. McGregor from CSIRO Centre for Australian Weather and Climate Research, Australia; and Dr. Patrick Nunn from the University of the South Pacific, Fiji.

## Abstracts

### Synthesis of APN Adaptation Activities in the Asia-Pacific Region

*LA Stevenson*

Scientific understanding of climate change is advancing at a significant rate, with new information emerging about the likely impacts of climate change, the options to adapt to these changes, and new approaches to mitigative options. Through many national and international fora, it is becoming clear that climate is one of the most, if not *the* most, pressing issues in the political arena today. The most recent 34<sup>th</sup> G8 Toyako Summit underscored its commitments to climate change, adaptation and mitigation as well as the need to support developing countries for financing, transferring technology and capacity building activities for these nations to be able to respond effectively to a changing climate.

The Asia-Pacific Network for Global Change Research (APN)'s growing strength lies in its uniqueness to facilitate underpinning scientific research and capacity building that is systematically targeted for the needs of the Asia-Pacific region as identified by its government-appointed national Focal Points and scientists who, together, develop the science, policy and institutional agendas of the APN. With this, the APN welcomes the continuing opportunity to inform SBSTA of research, capacity development and science-policy interfacing within the Asia-Pacific region relevant to the convention.

Most APN member countries continue to identify climate vulnerability, impacts, and adaptation and/or mitigation assessments as their priority

concerns. GHG emissions, inventories, and the capacity to conduct activities in these areas are also considered important, particularly in the least developed nations. Climate change projections, uncertainties and modelling, particularly downscaling GCMs, are important as is access to/and the sharing of data across national borders for climate research.

Taking on board the challenges presented in climate impacts, vulnerabilities and adaptation, this is major interrelated issue for the UNFCCC and post-Kyoto agreements where skills in scenario development and impact quantification for climate sensitive systems will be needed. Particularly challenging for APN countries is the development of systematic efforts to implement adaptation strategies in various sectors likely to be affected by climate change. Currently, many APN member countries are developing adaptation strategies (and in some cases implementing them) in many sectors and all countries see the adoption of adaptation strategies as important to counter impacts and reduce vulnerabilities.

Citing an example from Indonesia in adaptation strategies for future climate risks, fostering a co-evolution of interdisciplinary science is a major challenging strategy that is currently underway. In this regard, there is a need to enhance cross-sectoral governmental communication

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and coordination, improve education and increase public awareness. In this regard, the APN's capacity development programme, *CAPaBLE*, is successful in that it can contribute to the process of developing effective climate information systems which meet client needs and are provided to the appropriate users in a timely fashion, allowing them to use this information to assist their decision making.

While the integration of various elements such as climate risk assessments, sectoral adaptation plans and international cooperation is seen as a systematic, coherent and sound basis for developing appropriate adaptation strategies, it is very clear that many APN developing countries lack the human and institutional capacity to plan and adopt such adaptation strategies. There are many limiting factors and developing countries, in particular, have yet to conduct much-

needed vulnerability and impact assessments in many areas/sectors in order to plan appropriate adaptation strategies and mainstream these into national policy and plans. The most vulnerable sectors are agriculture, fisheries, water (floods and drought), forests, health and social welfare, transportation, coastal zones, mangroves and maritime resources.

Recognising this, the APN is conducting seven national and regional projects in China, Indonesia, Philippines, Pakistan, Thailand and Viet Nam that are focused specifically on scientific capacity development in areas of impacts vulnerability and adaptation strategies and assessment in the scientific, user and policy-communities levels. Key activities and results will be shared at the Climate Adaptation Futures conference.

## Building the Climate Change Response Capability of Local Governments Units in the Philippines

*L Peñalba, D Elazegui, J Pulhin, R Cruz*



Ms. Dulce Elazegui

In the Philippines, local government units (LGUs) have significant role in climate risk management (CRM). However, many LGUs and their constituents have limited understanding of the climate change phenomenon as well as limited capacity to undertake appropriate climate change adaptation

measures. While the existing disaster risk management framework specifies the "Preparedness-Prevention-Mitigation" pattern, strategies have been mainly reactive and rarely guided by science-based vulnerability assessment and adaptation planning.

Thus, it is important to enhance the LGU's capacity and strengthen their alliance with scientists to harness science-based climate change planning and policy-making. This paper presents the results of a participatory action research geared towards this objective. With five municipalities in four provinces as study sites, the paper discusses the capacity building processes and the LGU-scientist interface towards the formulation of the climate change adaptation plan (CCAP).

A team of LGU planners and scientists was organised in each municipality and based on the capability assessment results in each site; awareness raising and capacity building activities were undertaken. The training included members of the civil society and local legislative councils whose commitment is critical to the CCAP implementation. Learning and alliance building opportunities were maximised through participatory research, coaching and interactive discussion about climate change issues.

Capacity building activities covered data collection and interpretation, situational analysis and understanding the various elements of adaptation

programmes and policies. Hands-on training on vulnerability assessment and CCAP preparation made use of local data as well as information provided by the community residents. The SCU partners further validated results of consultations with government records and led the preparation of the vulnerability assessment report. Team workshops were conducted to prepare their respective CCAP. The LGU staff appreciated the training, thus facilitating the integration of the CCAP into the local development plan.

Research findings revealed that: 1) the actual adaptive capacity of the LGUs was much lower than their perceived level due to their limited understanding of preparedness and adaptation principles; 2) the communities noted increasing frequency of intense typhoon, flooding and dry spell; 3) coastal residents noticed sea level rise, saline water intrusion and ground subsidence; and 4) the climate events affected the agriculture and fishery sectors, salt-making industry, general public and LGUs themselves.

The CCAP also pointed out socio-economic and institutional constraints to adaptive capacity enhancement. Recommendation to overcome these include: 1) strengthening public information and education campaigns on CRM; 2) formulating national policy requiring LGUs to conduct vulnerability assessment; 3) organising the community for collective action; 4) establishing linkages with the private sector and non-government organisations; 5) livelihood diversification and appropriate agricultural technology options; and 6) integrating climate risk management in local development programmes.

The project created a platform for sharing experiences, lessons learned, and 'best practices' thereby enhancing LGUs respective capacity to appropriately respond to climate change issues. Results of this project were communicated to various stakeholders through forums and scientific conference and circulation of adaptation planning guide.

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### APN 2010 General Presentation

To download the presentation (PPT and PDF versions) that summarises the APN activities, milestones, strategies and challenges, visit the APN website 'Resources' section:

<http://www.apn-gcr.org/newAPN/resources/promotionalMaterials.htm>.



## Featured Scientist/Researcher

### APN Project Partner Tops the Search for Outstanding Filipino Researcher



Out of 55 nominees from 27 colleges and universities in the Philippines, **Dr. Rogelio D. Cosio** ranked first among the 'Ten Outstanding Filipino Researchers of 2009.' This success is partly attributed to his involvement in the APN Project *CBA2008-09NSY: Enhancing the Climate Change Adaptation Capacity of Local Government Units and Scientists in the Philippines*, led by *Dr. Linda M. Peñalba*.

Dr. Cosio is the scientific partner from the Local Government Unit (LGU) of Guagua, Pampanga, Philippines and currently a Professor at the Pampanga Agricultural College (PAC), Magalang, Pampanga. He led the preparation of the vulnerability assessment report under the supervision of the University of the Philippines, Los Baños (UPLB) research team and with support from Guagua LGU. This vulnerability assessment report was presented to the local government officials of Guagua, Pampanga and the project was the first climate change research undertaken by the Pampanga Agricultural College. The final

report of the project is available at <http://www.apn-gcr.org/newAPN/resources/list2008capableprojects.htm>.

On 5<sup>th</sup> December 2009, the President of the Philippine Association of Institutions for Research (PAIR), Dr. Genaro V. Japos officially announced that Dr. Cosio was chosen by the board of judges as one of the 'Ten Outstanding Filipino Researchers of 2009.' The board of judges was headed by the Commission on Higher Education (CHED) Region 10 Director, Dr. Zenaida G. Gersana, with five other members. The award-giving body based the selection on the following set of criteria: expertise (25%), peer-reviewed international and national publications, as peer reviewer and member of the editorial board (30%); leadership and awards (20%); and advocacy in international and local research presentations (25%).

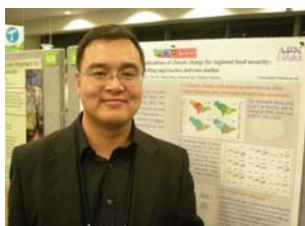
The award ceremony took place on 12<sup>th</sup> December 2009 during the 4<sup>th</sup> National Research Forum held at Aklan State University in Banga, Aklan, Philippines. In the Forum, Dr. Cosio presented a paper entitled, *Climate Change Vulnerability and Adaptive Capacity of the Guagua Community in Pampanga*, which won the '2<sup>nd</sup> Best Publishable Paper.' The same research won 'Best Paper' during the agency in-house review of completed and ongoing research PAC projects in June 2009.

Dr. Cosio obtained his PhD in Agricultural Science with major in Agricultural Economics at Iwate University, Japan in 2002. He graduated with a BSc in Agricultural Economics from PAC in 1991, *summa cum laude*. He is currently the Director for External and International Affairs of PAC aside from being a faculty researcher working on climate change.

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### Toward the Synthesis of Implications of Climate Change for Regional Food Security: Modelling Approach and a Case Study

*Y Li, W Ye, M Wang, C Yin*



*Dr. Yinpeng Li*

This paper presents a modelling approach to investigate the synthetic impact of climate change on regional food security. An integrated model system, Food and Water Security Integrated Model (FAWSIM) was developed to assess the climate change impact on food security in different scales from global to local.

The system integrated a suite of tools, including, drought risk assessment index (DRI), Food Security Index (FSI) crop model DSAT, and food balance models, etc. These tools were employed to assess the synthetic impact of climate change on food security in Jilin Province, China.

Using the drought risk assessment tool, from the ensemble of 120 runs (6 Special Report on Emission Scenarios 20 global climate model change patterns), the results showed, at global level, a consistent projection of higher drought disaster frequency (DDF) than that of baseline for most world cropland. It indicated an overall enhanced drought risk in future. Both drought affect area and drought intensity tended to increase with rising global temperature. The median value of ensemble for the drought disaster-affected area increased from 15% of baseline to 44% by 2010/ the average cropland drought risk index (DRI) doubled from baseline 52.45 to 104.60 in 2050, and continue increased to 129.40 in 2100. Correspondingly, the drought affected areas of yield reduction of major crops increased significantly, more than 50% in 2050 and almost 90% in 2100.

Regionally, food production risk investigated Decision Support System for Agrotechnology Transfer (DSSAT) maize model. From DSSAT result, Jilin's maize yield was highly likely to decline in the western and central, the high productivity are at present, but to increase in the current marginal growing areas in the east. The major phonological reason for such decline was due to the reduced growing season in the west and central, leading to a shortened grain filling period. The average maize yield in the west and central was projected to decrease 15% or more by 2050 as predicted by 90% of the 120 samples.

The FSI focusses on regional and local scales food availability, accessibility, and utilisation, which took 13 food security related local aspects as indicators. The model results showed relative high values of present and future climate conditions for most cities and countries in the central Jilin, indicating a high resilience of these areas' food security to climate change impact. Most countries in the west and a few in the east showed consistent low FSI values at baseline and future climate conditions, indicating relative high vulnerable situation of these areas.

Two potential adaptation strategies, increase irrigation and shift of maize cultivar, were identified from the vulnerability assessment and tested for Jilin. Increase total irrigation helps maintain the current production level but only if the warming trend is under certain threshold, while the improvement of maize cultivars provides a more resilient solution against the future warming climate for the region in the long term.

## Selected Outstanding Projects of the APN's 2<sup>nd</sup> Strategic Phase Evaluation

### Development and Application of Climate Extreme Indices and Indicators for Monitoring Trends in Climate Extremes and their Socio-Economic Impacts in South Asian Countries

The project was conceived in 2004. It was a time when the South Asia region, like other countries globally, was being subjected to the increased intensity and frequency of extreme weather events such as floods, droughts, severe tropical cyclone storms, extreme temperatures etc. This particularly was observed in the last decade of the previous century, being the warmest decade ever recorded.

The Third Assessment Report (TAR, 2001) of the Intergovernmental Panel on Climate Change (IPCC) was released that time which projected that over the period 1990 to 2100, the average global temperature would increase by 1.4 to 5.8 °C and would be subjected to increased frequency and intensity of extreme climatic events. The World Meteorological Organisation (WMO) released a study in 2003 which stated that the world was experiencing record numbers of extreme weather events such as droughts and tornadoes and laid the blame firmly at the feet of global warming. To address the situation, a project for South Asia region was jointly initiated by Global Change Impact Studies Centre (GCISC) and Pakistan Meteorological Department (PMD) in line with the project already completed for Southeast Asia (SEA), Temperate East Asia (TEA) and Oceania region by the Bureau of Meteorology Research Centre (BMRC), Australia in 2004.

The APN project was first awarded as a one year activity for South Asian countries comprising Bangladesh, India, Nepal, Pakistan and Sri Lanka in 2005, which on its successful completion, was later extended for another two years in 2007. Limited data used in the first year was replaced by an expanded network of stations by the participating countries. All of the 27 Expert Team on Climate Change Detection and Indices (ETCCDMI) core climate extreme indices were used in the analysis (Figure 1). Trend graphs, histograms and spatial patterns were developed to see the trends in climate extremes and study their behaviours over South Asia as a whole, and its different sub-regions (Figures 2, 3, and 4).

The project eventually led to new areas of collaboration, coordination and research synergies among the participating scientists and the developed country experts. Four workshops were held that contributed substantially to the capacity building of the

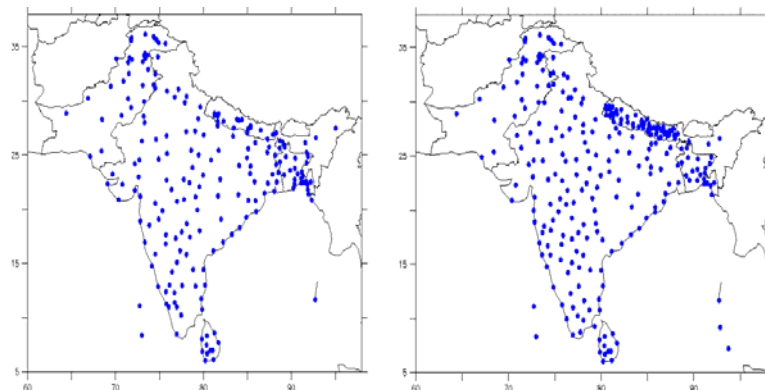


Figure 1. (a) Network of temperature stations and (b) network of precipitation stations

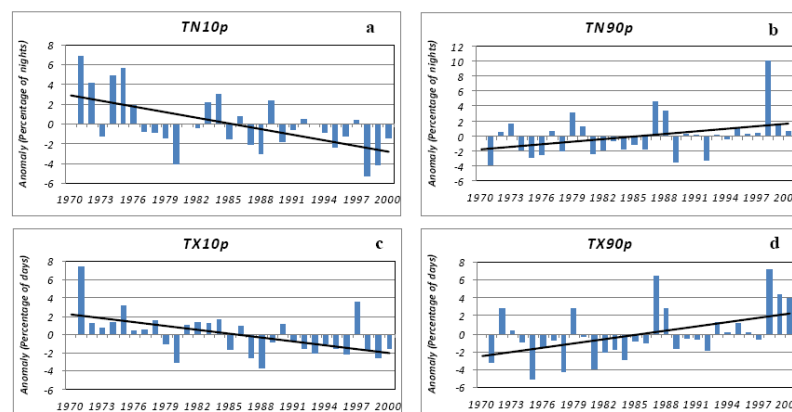


Figure 2 (a-d): Trends in (cool nights) TN10P, warm nights (TN90P), cool days (TX10P) and warm days (TX90P) averaged over South Asia

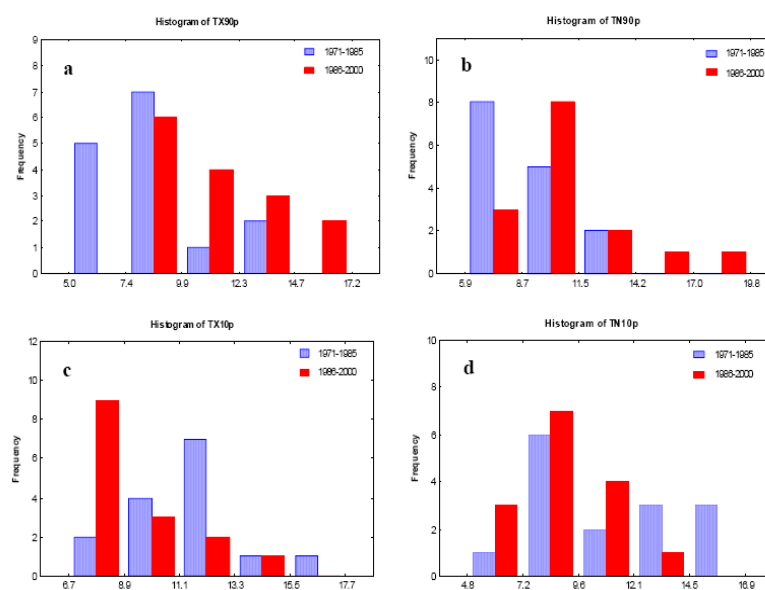


Fig. 3 (a-d): Frequency analysis for (cool nights) TN10P, warm nights (TN90P), cool days (TX10P) and warm days (TX90P) averaged over South Asia

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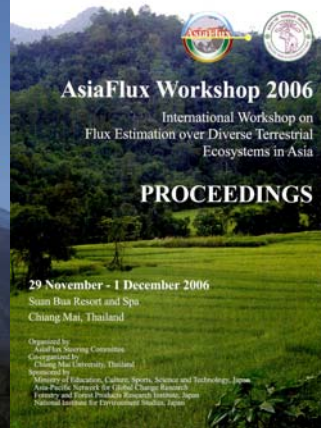
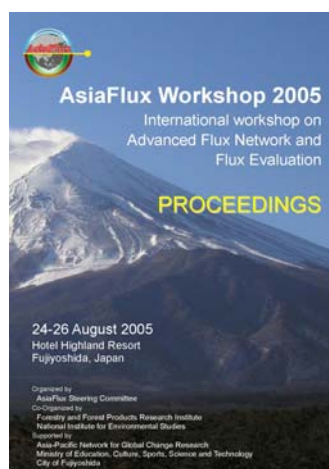
## Selected Outstanding Projects of the APN's 2<sup>nd</sup> Strategic Phase Evaluation

### Standardisation and Systematisation of Carbon Budget Observations of Asian Terrestrial Ecosystems Based on the AsiaFlux Network

The project was initiated in 2005 with the aim to promote information exchange and improve flux observation methodologies and data analyses among participating countries in order to provide much more reliable carbon budget data on Asian monsoon terrestrial ecosystems. Another purpose of this project was to promote systematic carbon budget observations in Asia and encourage observational activities in Asian countries along with the development of the AsiaFlux network. This network was established in 1999 to focus on the development of collaborative observations and research on carbon, water, and energy cycles of key ecosystems in Asia. Since then, sufficient budget to promote these activities has been secured.

In 2005, efforts to find sufficient funding were successful. The financial support of the Japanese Ministry of Education, Culture, Sports, Science and Technology (MEXT) was concurrently secured with APN funding. The following two major AsiaFlux activities were organised: conducting the AsiaFlux workshop and hosting the AsiaFlux training course on micrometeorology.

Every year, programmes were held in Asian countries using APN funds to help manage the workshop and prepare a technical manual for use in the training course. These mutually complemented budgets



were used as recommended by APN, which was clearly stated in their strategies. Two AsiaFlux workshops were jointly hosted by the MEXT and the APN.

Preeminent experts and young scientists from both inside and outside Asia were invited to discuss the current situation and tasks to be undertaken in Asian countries. A technical manual prepared for the APN project was used as a textbook in the training course conducted in the MEXT project framework. This training course was especially useful for young scientists aiming to strengthen their capacity in flux observation and analysis. All foregoing AsiaFlux activities were successfully concluded as expected.

The national level network of China was not involved in the APN project, and this lack of participation was stated as our "only possible failure" in the APN evaluation report. However, China formed a national level network soon after project completion and has been contributing to Asian regional collaborations within the current project network. Finally, AsiaFlux intends to better understand Asian terrestrial ecosystems by observational as well as synthetic approaches and eventually use scientific knowledge to establish sustainable development in Asia.



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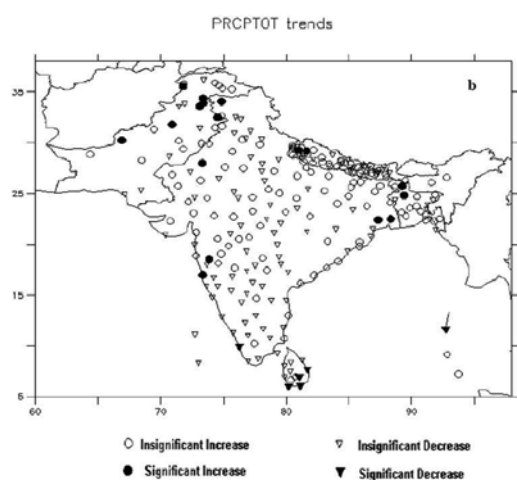


Fig. 4: Trends in Total Precipitation (PRCPTOT) for the period 1961-2000

scientists and helped achieved the project objectives. Preparation of research papers are underway and one has been completed: 1) Trends in extreme daily rainfall and temperature indices over South Asia; 2) Impact of altitude on extremes; 3) Extremes in climatic zones in South Asia; 4) Impact of urbanisation on extremes; and 5) Relationships between Climate Extremes and Synoptic Large-scale Modes. The first paper was sent for publication to an international journal. Two project-related studies were published as follows:

- 1 Baidya, S., Shrestha, M. and Sheikh, M.M. 2008. Trends in Daily Extremes of Temperature and Precipitation in Nepal. *Journal of Hydrology and Meteorology*, 5(1): 38-51.
- 2 Siraj ul Islam, Nadia Rehman and Muhammad Munir Sheikh. 2009. Future Change in the Frequency of Warm and Cold Spells over Pakistan Simulated by the PRECIS Regional Climate Model. *Climatic Change*, Vol. 94, Numbers 1-2 / May, 2009.

Besides the project team's efforts, the success/achievement is also attributed to APN's quick, timely and explicit responses in queries related to the project management.

## Selected Outstanding Projects of the APN's 2<sup>nd</sup> Strategic Phase Evaluation

### Greenhouse Gas (GHG) and Aerosol Emissions under Different Vegetation Land Use in the Mekong River Basin Subregion

In 2007, this one-year capacity building project commenced under APN CAPaBLE Programme. This project was undertaken by the Joint Graduate School of Energy and Environment (JGSEE) as lead institution with the support of partners from four different countries including: 1) National Institute of Environmental Studies (NIES), Japan; 2) Center for Environmental Science of the Monash University, Australia; 3) the Department of Civil Engineering of the Lamar University, USA; and, 4) Ministry of Environment, Cambodia.

This project focussed on measurement and evaluation of greenhouse gases and aerosols emissions from forests and paddy fields in the Mekong River Basin Sub-Region (MRBSR) and on the transfer of methodologies and field measurements procedures developed in Thailand to scientists in Cambodia, Viet Nam, Lao PDR and Myanmar. To ensure dissemination of knowledge and information gained, a network of over 30 scientists and policy-makers from the MRBSR was constituted and know-how was provided via a training workshop organised by JGSEE in Bangkok, in May 2007.

It was found that biogenic and biomass burning activities are major sources of GHG and aerosol emissions from land-use change in the region. Better knowledge and understanding of these processes were seen needed in order to improve the regional and national emission inventory and also to update the national communications on GHG inventory, which is part of the commitments of the project-contributor countries to the United Nations under the United Nations Framework on Climate Change Convention (UNFCCC).

The methodologies and experimental procedures developed in Thailand and reproduced in Cambodia were sufficiently simple and effective to be well-assimilated, and efficiently implemented by scientists in each country of the MRBSR. Also, the regional network of scientists and policy-makers established as part of this project for inventory of GHG and aerosol emissions from biogenic and biomass burning activities enabled to answer to the regional needs for improvement of the corresponding emission inventory.

Following this project and the network that has been established, project contributors from JGSEE and partner institutions have been involved in several training activities nationally and in the region, e.g. Lao PDR and Myanmar, aiming at assessing land use and land use change



Biogenic emissions measurements from paddy fields

related GHG emissions based on specific cultivation management practices. Another example, contributors from JGSEE have been involved in public awareness raising campaigns, providing training and guidance to governmental organisations in Thailand such as the Division of Forest Fires Control-Department of Natural Park, Wildlife and Flora Conservation, the Department of Agricultural Extension, and Pollution Control Department, in order to investigate the impact of forest fires and agricultural burning on air quality and on ASEAN transboundary haze formation.

In addition, they were invited by the United Nations Environment Programme (UNEP) and Stockholm Environment Institute (SEI) to contribute to the formulation and review of GHG inventory manuals of Atmospheric Brown Cloud and Global Forum Projects. Also, a publication reporting the main results obtained from the project related to agricultural burning in the MRBSR or Greater Mekong Subregion (GMS), entitled "Air Pollutant Emissions from Paddy Residues Open Burning and their Potential for Bioenergy in the Greater Mekong Sub-Region (Cambodia, Lao PDR, Thailand and Viet Nam)" by S. Garivait, S. Bonnet and O. Kamnoed, was issued in GMSARN International Journal 2 (2008), p. 169 – 174.

Project contributors from Thailand and Cambodia were granted with projects related to measurements of GHG emissions from rice cultivation practices and forest fires by their respective governmental funding agencies, e.g. National Research Council of Thailand (NRCT) and Ministry of Natural Resource and Environment of Cambodia, which offered them great opportunities in continuing the implementation of the knowledge and know-how developed during the one-year APN CAPaBLE project.

As a recent additional follow-up activity, the contributors from JGSEE, Thailand are furthering their involvement with scientists and policy-makers in the GMS region and with extension to the whole Southeast Asian Nations (ASEAN) via a new APN-funded project under the Annual Regional Call for Research Proposal (ARCP) Programme. It is leading on "Strategic Rice Cultivation for Sustainable Low Carbon Society Development in Southeast Asia", which aims to promote sustainable agriculture through mitigation of GHG emissions, with Indonesia as partner for regional implementation.



Field training in Cambodia



## Selected Outstanding Projects of the APN's 2<sup>nd</sup> Strategic Phase Evaluation

### Carbon Financial Markets, Rural Poverty, and Global Climate Change in Southeast Asia - Scoping Workshop, Training and Project Site Development

The project focussed on capacity building and the identification of potential agroforestry carbon offset projects in the region. The training workshop was the beginning of a longer term initiative and the foundation for moving forward with specific carbon offset project activities in Thailand, Lao PDR and Viet Nam. The capacity building component centred on three areas for the project participants and local communities: basic understanding of carbon cycle science and the fate of carbon as it cycles through the atmosphere, biosphere and hydrosphere; understanding carbon financial markets and the concept that carbon can be sold on a market similar to other farm commodities; and how to measure and monitor carbon sequestered in biomass.

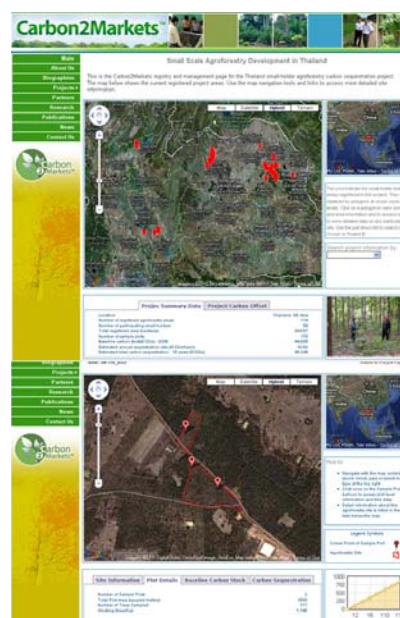
Since the initial training workshop in January 2008 in Vientiane, Lao PDR and follow-on site visits in 2008 under the project, the collaborators have developed five forest carbon offsets projects and created an Internet-based carbon *Measurement, Reporting and Verification* (MRV) project management application called carbon2markets ([www.carbon2markets.org](http://www.carbon2markets.org)). There are two projects in Thailand, two in Lao PDR and one in Viet Nam with interest to develop more in each of these countries as well as other countries in the region. Currently, the project team is working with colleagues from the Philippines, Indonesia, and China to develop forest carbon offset projects and to provide technical training in measuring and monitoring carbon sequestration. In addition, the APN has supported the development of new agroforestry carbon market protocols under project ARCP2009-09NSY-Skole, "Developing Smallholder Agroforestry Carbon Offset Protocols for Carbon Financial Markets-Twinning Sustainable Livelihoods and Climate Mitigation".

The most recent milestone achieved by the project collaborators since the completion of the scoping workshop in 2008 is a 284 hectare smallholder teak agroforestry carbon offset project in Thailand. This project includes 89 individual households and 114 smallholder teak areas with an average size less than 3 hectares. The 114 teak areas are spread across five provinces. The carbon2markets MRV systems, however, include an aggregation function using Web-based Geographic Information System (GIS) which can accommodate a carbon offset project made up of disperse smallholder farms.

The Thailand smallholder teak carbon offset project is estimated to sequester more than 45,000 tons of carbon dioxide in the next 15



Smallholder teak agroforestry carbon site in Thailand - measuring biomass



Carbon2Markets MRV carbon offset management system

years. In addition to establishing the teak project, a new agroforestry carbon market protocol has been drafted. Both the project and new protocol are under review by the Chicago Climate Exchange (CCX), the largest trading platform in the voluntary carbon market. A paper describing this project is expected to be published later this year in a book on "Carbon Sequestration in Agroforestry: Processes, Policy, and Prospects" to be edited by B.M. Kumar and P.K.

Nair and published by Springer in their Advances in Agroforestry series.

A *Standard Operating Procedures: Field Measurements, Data Collection and Reporting* manual for agroforestry carbon offset projects was also written, as well as a number of field survey instruments for agroforestry carbon data collection. In the coming months, carbon offset project implementation documents (PIDs) will be submitted to the CCX for the project activities in Rubber Agroforestry and Fruit Tree Orchards in Trat Province, Thailand; Multi-species Agroforestry in Northeast Thailand (Inpang Community Network); Smallholder Teak in Luang Prabang, Lao PDR; and Litchi Fruit Agroforestry in Bac Giang, Viet Nam.

#### APN-funded participant's feedback/testimonies

I've found the participation in the APN projects, together with scientists from USA and other Southeast Asian countries (Thailand, Lao PDR etc.), incredibly useful and fruitful in terms of knowledge (of newly emerged field as carbon finance and market) gained and enhanced project organisation and implementation skills. Both ARCP2007-09NSY and ARCP2009-09NSY-Skole projects gave us an opportunity to explore new approach to link the problem of combating climate change and rural poverty problem to sustainable development in our countries. It is my pleasure to express appreciation for the support from the APN Secretariat and hope for further cooperation.

*Do Xuan Lan*

Department of Science Technology and Environment  
Ministry of Agriculture and Rural Development, Viet Nam  
Co-Investigators APN ARCP2007-09NSY and APN  
ARCP2009-09NSY-Skole

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## Selected Outstanding Projects of the APN's 2nd Strategic Phase Evaluation

### Capacity Building for Greenhouse Gases Inventory Development in Asia-Pacific Developing Countries

The project was carried out from April 2003 to March 2006 (covering 3 Japanese Fiscal years) by team members: Hideaki Nakane, Tomoyuki Aizawa, Cisa Umemiya (National Institute for Environmental Studies-NIES, Japan), Sirintornthep Towprayoon, Amnut Chidthaisong (The Joint Graduate School of Energy and Environment-JGSEE, King Mongkut's University of Technology Thonburi, Thailand), and Sum Thy (Ministry of Environment of Cambodia, Cambodia); collaborating with Gen Inoue, Hiroshi Sato, Masato Yamada (NIES), Kiyoshi Sawano (Global Environmental Forum), Nobuya Mizoue (Kyushu University), with support by Secretary, Masako White (NIES).

The highlights of the project were:

1. Pilot studies in Thailand using new methane emission measurement methods in rice paddy fields and waste landfills;
2. Capacity building for developing greenhouse gases (GHG) emission inventory in Cambodia through studies of the entire aspects of the country's inventories to select the priority source/sink categories including forest measurement; and
3. Workshops on GHG Inventories in Asia Region (WGIA) where experts from other neighbouring countries attended, and progress shared and outcomes discussed regards the above-mentioned pilot studies.

The project activities which started with the pilot studies in Thailand were followed by another project funded by APN under its CaPaBLE Programme and led by Dr. Towprayoon, entitled 'GHG and Aerosol Emissions under Different Vegetation Land-use in the Mekong River Basin Sub-region'. This project was also selected as one of the eight 'outstanding projects' of the APN's Second Strategic Phase (2005-2010) evaluation. In Cambodia, the capacities of experts to develop GHG emission inventories in the land use, land-use change and forestry (LULUCF) sector were developed considerably and they are now looking for new capacity building opportunities for developing methane emission factors for Cambodian rice fields.

The WGIA have been held every year by the Centre for the Global Environmental Research (CGER), NIES with financial support from the Ministry of the Environment, Japan (MOEJ). About 100 participants



attended the 8<sup>th</sup> WGIA held in July 2010, in Vientiane, Lao PDR (<http://www-gio.nies.go.jp/wgia/wgiaindex-e.html>).

Another significant outcome of the project was the successful measurement of methane's emission from a landfill using a laser sensor done by Drs. Yamada and Towprayoon. This cooperation has been developing and has produced a base for various projects supported by MOEJ and NIES.

The experiences gained during the CaBaBLE project are still living through the present activities of the Japanese members. Hideaki Nakane is leading the Priority Program of NIES, 'Asian Environment Research Programme'. Tomoyuki Aizawa is conducting reviews of national inventories as a member of the United Nations Framework Convention on Climate Change (UNFCCC) Secretariat. Chisa Umemiya moved to Waseda University and is studying the Reduced Emissions from Deforestation in Developing Countries-Plus (REDD+) issues in Thailand. They are thankful that the required capacities to fulfil the above-mentioned activities were considerably strengthened during the implementation of the CaPaBLE project.

Finally, they also feel grateful not only for the financial support from APN but also for valuable suggestions by the Secretariat, especially by Dr. Linda Anne Stevenson.

*continuation from page 17 - Carbon Financial Markets...*

We are very pleased to have been recognised by the APN. Funding from APN has been very important to us, as it allowed us to tap an international source of support for doing work in the region and engage partners in these countries. We feel the APN awards validate our new Carbon2Markets model as a novel approach to link climate mitigation and rural poverty alleviation under a single intervention.

*Dr. David Skole*

Director, Global Observatory for Ecosystem Services (GOES)

Department of Forestry, Michigan State University

Principal Investigator APN ARCP2007-09NSY and APN ARCP2009-09NSY-Skole

We are proud to be one of the participating countries in APN project (ARCP2007-09NSY). The result from this creative project is worthy to Thailand as a pilot or project model to induce the people in conserving and managing their forest land which will lead to sustainable development in the rural areas. In particular, the community network in such areas embraced the practice and understanding of climate change mitigation. Furthermore, the project contributes towards cultivation of strong links between Global Observatory for Ecosystem Services (GOES)/Michigan State University (MSU) and our institutions in Thailand in which we received excellent assistance on knowledge transferring and also provision of a solid foundation for collaboration among the participating countries in our region.

*Chelphong Butthep*

Office of International Affairs

National Research Council of Thailand

Co-Investigators APN ARCP2007-09NSY and APN ARCP2009-09NSY-Skole



# ARCP-Funded Project

## Assessment of Role of Community Forests (CFs) in CO<sub>2</sub> Sequestration, Biodiversity and Land Use Change (Reference: ARCP2009-10NSY-GAUTAM; Project Leader: Dr. Chinta Mani Gautam)



### Stakeholder's Meeting

Nepal Development Research Institute (NDRI) organised a stakeholders' meeting on 25 April 2010 in Dhulikhel, Nepal to discuss the importance of community forests in land-use change, biodiversity and carbon deposit as well as to share the findings of the project ARCP2009-10NSY-GAUTAM. Twenty seven participants, including chairpersons from the community project areas, government authorities and other concerned stakeholders attended the meeting.

The meeting comprised of opening and technical sessions. Dr. Tara Nidhi Bhattarai, President of NDRI, chaired the opening session. Dr. Punya Prasad Regmi, Coordinator (Policy Studies) of NDRI, delivered the welcome speech on behalf of NDRI. The programme was inaugurated by Chief Guest Mr. Yubraj Bhusal - Secretary of the Ministry of Forestry and Soil Conservation. In his opening remarks following the official inauguration of the event, Mr. Bhusal emphasised the need to link the government with the private sector in carbon trading, which is relevant to the community forests.

Dr. Chintamani Gautam, Project Leader, presented a background paper highlighting the project objectives, study sites and project's ultimate goal. Mr. Ram Asheshwar Mandal, Forest Officer at REDD-Forest and Climate Change Cell, presented a paper on *Climate Change in Nepal and Preparation of REDD for Climate Change*, highlighting the present status of Reducing Emissions from Deforestation and Degradation (REDD) in Nepal. Finally, Dr. Bhattarai expressed his thanks and concluded the opening session.

During the technical session, three team members presented a joint paper on the investigations and results/findings of the project. Dr. Gautam focussed on *Assessment of Role of Community Forests (CFs) in CO<sub>2</sub> Sequestration, Biodiversity, and Land-Use Change*, while Mr. Dipesh Pyakurel, Ecologist, explained about *Biodiversity and CO<sub>2</sub> Sequestration*. Mr. Man Bahadur Kshetri, Senior Research Associate at NDRI, covered issues related to *land use*. Discussion followed where participants put forward their queries and views regarding the project. The project results show that CFs have been playing a crucial role in increasing forest cover and tree density in public and private land, and ultimately sequestering carbon. However, the community forest user groups (CFUGs) are unaware about the role of CFs in land-use change and carbon sequestration. Even most of the participants of this stakeholders' meeting were unaware on the ecosystem services and the possible benefits (e.g., carbon trading) that CFs can provide.

Compared to other hilly areas of Nepal, the tree species diversity observed at the sites investigated was richer; nevertheless, some

species were already extinct and some were largely depleted. It is confirmed that *Michelia champaca* (local name: Chanp) was almost extinct from all the surveyed sites due to extensive logging and felling for high valued timber. Likewise, *Debregeasia salicifolia* (local name: Dar) was endangered due to the collection of bark. Few Non Governmental Organisations (NGOs) are working in the CFs of surveyed sites but they are more focussed on CF management, silvicultural practices and social equity issues. Even the executive members of CFs are unaware about the biodiversity and ecosystem services and not a single programme deals with biodiversity and carbon sequestration.

This Stakeholders' Meeting provided participants an opportunity to understand the possible benefits of CFs in terms of ecosystem services and carbon trading in addition to the silvicultural practices and social equity of which they were already aware. Moreover, CFUGs were made aware about the conservation of rare and indigenous species and preserving existing biodiversity in their areas. Positive changes in CFs (increase in forest cover and tree density) are useful for foresters, planners and locals as they offer benefits through carbon trading and environmental services at both local and national levels. Therefore, the outcomes of the present project are useful in determining a CF operational plan including an action plan and management strategy, and also in preparing guidelines to operate specific types of CFs. The project outcomes are also anticipated to support policy and planning, and strengthen the decision-making process of the user and management authorities.

### International Workshop

A one-day knowledge sharing international workshop successfully concluded on 28<sup>th</sup> June 2010 also organised and hosted by NDRI. The workshop was held in Kathmandu, Nepal and the main objective was to discuss and share knowledge on the importance of community forests in sequestering carbon dioxide, conservation of biodiversity and its impact on land-use change. Seventy-eight participants from different sectors including government authorities, national and international organisations (from Japan, Indonesia, Thailand and India), academic and research institutions attended the workshop.

Opening and technical sessions as well as panel discussion comprised the workshop. The opening session was chaired by Dr. Bhattarai and inaugurated by the Chief Guest Dr. Ganesh Raj Joshi, Secretary, Ministry of Environment. Dr. Jaya Kumar Gurung, member of NDRI welcomed all the participants and brief introduction of NDRI was given by Dr. Regmi. Dr. Shobhakar Dhakal, Executive Director of the Global Carbon Project, National Institute for Environmental Studies (NIES), Japan delivered the keynote address on *Global trends of carbon emissions and sinks with emphasis on land-use change and the inter-linkages*. He highlighted the global scenario of carbon concentration, present issues and benefits from REDD+.

Dr. Joshi delivered the opening remarks and congratulated NDRI for its achievement in such a short period of time. He highlighted the recent work conducted by the Ministry to combat the impacts of climate change. Dr. Bhattarai concluded the opening session with great appreciation while Ms. Srijun Sharma served as Master of Ceremony.

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# ARCP-Funded Project

## Collaborative Research on Sustainable Urban Water Quality Management in Southeast Asian Countries: Analysis of Current Status and Development of a Strategic Plan for Sustainable Development (Reference: ARCP2010-01CMY-STHIANNOPKAO; Project Leader: Dr. Suthipong Sthiannopkao)

### 2<sup>nd</sup> APN Workshop on Strategic Policies for Sustainable Urban Water Quality Management in South East Asian Countries



Led by APN Project Leader, Dr. Suthipong Sthiannopkao, a research professor at the International Environment Research Center, Gwangju Institute of Science and Technology (IERC-GIST), Republic of Korea, the 2<sup>nd</sup> APN Project Workshop under the ARCP Programme successfully convened on 27-28 July 2010 at Ho Chi Minh City University of Technology, Viet Nam. The Workshop focussed on 'strategic policies

for sustainable urban water quality management in four Southeast Asian cities', namely Phnom Penh (Cambodia), Bandung (Indonesia), Bangkok (Thailand), and Ho Chi Minh City (Viet Nam). A total of 30 participants composing of scientists and policy-makers from the four Southeast Asian countries attended the workshop.

Active discussion on the development of analytical tools and scientific capacity building programmes for sustainable urban water quality management in Southeast Asia ensued. The Learning Alliance Group (LAG) represented by scientists and policy-makers in each participating country was officially formed. This 2<sup>nd</sup> Workshop was organised as one of the research activities being jointly funded by APN and IERC-GIST and the project was endorsed by the International Human Dimensions Programme for Global Change Research (IHDP)'s Urbanization and Global Environmental Change (UGEC) Project. For more information, please contact Dr. Sthiannopkao at [suthi@gist.ac.kr](mailto:suthi@gist.ac.kr) or [suthi@hotmail.com](mailto:suthi@hotmail.com).

*continuation from page 19 - Assessment of Role of Community Forest...*

The first technical session, consisting of two presentations, was chaired by Dr. Laxmi P. Devkota, NDRI member and former National Planning Commission (NPC) member. The first presentation was on the findings of the APN-NDRI joint study on the *Role of Community Forests in CO<sub>2</sub> Sequestration, Biodiversity and Land-Use Change* by Dr. Nawa Raj Khatriwada, Mr. Dipesh Pyakurel and Mr. Man Bahadur Kshetri. The second presentation was on the *Status of REDD in Nepal* by Mr. Ram Asheshwor Mandal, Forest Officer from REDD and Climate Change Cell, Ministry of Forests and Soil Conservation. Discussion followed where participants put forward their queries.

Dr. Sunil Babu Shrestha, NDRI member and former NPC member chaired the second session with three presentations followed by floor discussion. Participants from Thailand, Indonesia and India presented papers on *Recent Developments on REDD and Forestry Sector* in their respective countries. Speakers included Mr. Dendi Muhamad from IOE, Indonesia, Dr. Qwanruedee Chotichanathawong, Assistant President from Thailand Environment Institute and Dr. Puja Sawhney from New Delhi, India. Many participants expressed their views and provided feedback during the discussion.

There was a panel discussion on the topic *Prospects of Regional Collaboration on REDD and Forestry* chaired by Mr. Resham Bahadur Dangi, Joint Secretary in Ministry of Forests and Soil Conservation and all the speakers were invited as panelists. Before closing, Dr. Regmi thanked all the participants, guests and the organisers for their contribution for the successful completion of the event. For details, you may log on to [www.ndri.org.np](http://www.ndri.org.np).

*continuation from page 4 - Recent APN Project-Related Outputs...*

#### Website

- CIA2009-07-Lotia: Capacity Development of the Scientific Community for Assessing the Health Impacts of Climate Change
- ARCP2009-10NSY-Gautam: Assessment of Role of Community Forests in CO<sub>2</sub> Sequestration, Biodiversity and Land Use Change

#### Project activities

- The Conference on "Marine Biodiversity of East Asian Seas: Status, Challenges and Sustainable Development" is to be held jointly by the APN, Institute of Oceanography, Viet Nam Academy of Science and Technology, and A.V. Zhirmunsky Institute of Marine Biology, Far East Branch of the Russian Academy of Sciences in Nhatrang City, Viet Nam in December this year. For more details, please download the first circular from the APN website.
- The training/workshop on "Climate Change and Data and Information Management System (DIMS) Technology" will be conducted in conjunction with an ongoing research project sponsored by the APN on 1-3 December 2010 in Kuala Lumpur, Malaysia. The workshop aims to raise public awareness on certain themes of climate change and to gather opinion on DIMS performance.
- The training/workshop on "Carbon Governance in Asia - Bridging Scales and Disciplines" which is another APN-funded workshop under reference no CBA2010-04NSY-Dhakal and being co-organised by the Global Carbon Project, Earth System Governance Project of the International Human Dimensions Programme on Global Environmental Change (IHDP) and the United Nations University, Institute of Advanced Studies (UNU-IAS) will take place in Yokohama, Japan on 1-3 November 2010. For more details please visit their official website at <http://www.gcp-urcm.org/CG/>.

# ARCP-Funded Project

## Climate Perturbation and Coastal Zone Systems in Asia Pacific Region: Holistic Approaches and Tools for Vulnerability Assessment and Sustainable Management Strategy (Reference: ARCP2008-07CMY-DUTTA; Project Leader: Dr. Dushmanta Dutta)

### Symposium shows need to act and adapt on climate change

Monash University, Australia held an International Symposium on "Coastal Zones and Climate Change: Assessing the Impacts and Developing Adaptation Strategies" on 12-13 April 2010 at its Gippsland Campus as part of an international project sponsored by the Asia-Pacific Network for Global Change Research (APN) under its "Annual Regional Call for Research Proposals (ARCP)" programme. The symposium was co-sponsored by the West Gippsland Catchment Management Authority, the Department of Sustainability and Environment, Victoria and the Latrobe City Council, Victoria.

The two-day symposium focussed on the assessment of climate change impacts in coastal zones as well as new and existing adaptation strategies and policies that will assist to manage these impacts. The symposium brought together 65 participants from 15 countries to explore the potential impact climate change may have on the world's coastal zones, and considered how individuals, communities and governments needed to respond. The symposium programme included two keynote lecturers by two distinguished speakers covering different aspects of impacts of climate change in coastal areas of Australia.

The first keynote speaker, Dr. Kathleen McInnes, Principal Research Scientist, Centre for Australian Weather and Climate Research, Commonwealth Scientific and Industrial Research Organisation (CSIRO), focussed on the impacts of sea level rise on coastal zones in Australia. She said, "Extreme sea levels evaluated for different return periods for Australia exhibit considerable variation along the coast due to the large spatial variation in tides as well as storm surge. Under future scenarios of sea level rise, the potential inundation from such events may increase non-linearly for many locations, particularly urban areas. In order to adapt to climate change, communities need to not only understand the likely risks and impacts but engage in a planning process to consider what can and should be done about them."



Dr. Kathleen McInnes, Principal Research Scientist, Centre for Australian Weather and Climate Research, CSIRO, responses to questions from the audience after her Keynote lecture on Day 1 of the Symposium



"Despite growing evidence of rising sea levels, and a better understanding of what this will mean for low lying coastal communities, planning for how we should prepare is still very much in the infancy phase," said Mr. Duncan Malcolm AM, the second keynote speaker, and Chair of the Victorian Environmental Assessment Council.



Dr. Duncan Malcolm AM

Gippsland will not be exempted. While this is a long-term issue, and consequences of climate change may seem many years away, we need to start assisting coastal communities to act and adapt now."



Dr. Dushmanta Dutta

In addition to the two keynote lectures, symposium participants heard from Dr. Dushmanta Dutta (Symposium Chair and Senior Lecturer, Monash University) and over 34 speakers (with 22 of these coming from outside Australia) on how climate change and sea level rise was affecting other coastal zones across the country and around the world.

The need for communities in Gippsland's coastal zones to begin acting and adapting to the increasing challenge of climate change has emerged as a key outcome of the two-day international symposium.

*The proceedings of the symposium, published in CD-ROM format, include two key papers and 44 peer-reviewed full papers. The contact details for the proceedings are available on the following website. The website also contains the pdf files of several presentations made at the symposium.*

<http://www.monash.edu.au/cemo/czcc2010/>

## Capacity Building for Mainstreaming Climate Change Issues into Socio-Economic Development Planning in Viet Nam (Reference: CBA2009-06NSY-BRUNNER; Project Leader: Mr. Jake Brunner)

### Moving the Mekong Delta Toward Greater Environmental Sustainability and Climate Change Resilience

The Mekong Delta, Viet Nam's rice basket, faces enormous environmental challenges. These include the loss of virtually all of the delta's natural

wetlands and consequently its ability to adapt to extreme flood events; rapid groundwater depletion and salt water intrusion, the result of reduced base flow caused by accelerated drainage through the dense network of canals; rapid relative sea level rise caused by subsistence (accelerated by groundwater pumping) and global warming; and declining water quality caused by overuse of agricultural chemicals, a consequence of the intense rice cropping and the dense network of dykes that prevent natural water flows.

Many of these problems are linked to the extensive hydrological manipulation that the Mekong Delta has undergone over the last 30 years. This "re-plumbing" has been driven with one objective in mind: increased rice production and it has succeeded: rice production in the delta has tripled since 1980 and Viet Nam is now the world's second largest rice exporter. But the social costs of this single-minded focus on rice production have been huge, particularly on farmers, who have suffered high levels of pesticide poisoning, landlessness, and indebtedness. Biologically, the delta is highly impoverished with its natural wetlands reduced to a few postage stamps amid the rice fields. It is increasingly clear that a new development vision is needed for the delta, one that balances food production with a higher degree of environmental protection. The need for such a transition will be magnified by the impacts of climate change, which are expected to



LandSat images of part of Kiên Giang Province in the western side of the Mekong Delta which illustrate the extent of land cover change

include increased peak floods, more intense storms, and longer dry seasons.

With APN support, the International Union for Conservation of Nature (IUCN) is

collaborating with a range of national and international organisations to develop a 50-year vision for the Mekong Delta that integrates national development priorities, climate change scenarios, and land use options and that can strengthen resilience to climate change while providing important co-benefits in terms of livelihoods and biodiversity.

The approach of investing in ecosystems (opposed to more dykes, canals, and other "hard" measures) is called ecosystem-based adaptation (EBA). As one of the possible elements of an overall adaptation strategy, EBA uses the sustainable management, conservation, and restoration of ecosystems to provide services that enable people to adapt to the impacts of climate change. It aims to maintain and increase the resilience and reduce the vulnerability of ecosystems and people in the face of the adverse effects of climate change.

Developing this vision is a multi-year project. APN support will help us to, first, assemble and review some of the basic science that's driving the hydrological and land-use changes across the delta, and second, to start to engage policy-makers on the implications of, and the need to adjust, current development plans. Initial partner discussions have already been held and data collection activities started. The project ends in December 2010.



### Call for Paper – Colorado Conference on Earth System Governance: Crossing Boundaries and Building Bridges, 17-20 May 2011, Colorado State University, USA

This Conference is part of a global series organised by the Earth System Governance Project, a ten-year research program under the auspices of IHDP. The Conference on Earth System Governance is hosted jointly by the Environmental Governance Working Group and the School of Global Environmental Sustainability at Colorado State University along with the IHDP Earth System Governance Project.

<http://cc2011.earthsystemgovernance.org/>

### Science and Implementation Plan of the IHDP Earth System Governance Project

The Science and Implementation Plan of the IHDP Earth System Governance Project is now available in Japanese and Spanish. The study of earth system governance encompasses all the world's regions and must be internationally organised to make use of local knowledge, values and insights. Diversity within the research community together with strong networking is a prerequisite for studying earth system governance - this includes a diversity of languages. The Science Plan is now available in the official English version, and translated into Japanese and Spanish. <http://www.earthsystemgovernance.org>



Earth  
System  
Governance



## International Workshop and Symposium on Climate and Agricultural Risk Management (Reference: CBA2009-04NSY-VISARTO; Project Leader: Dr. Preap Visarto)



The training-cum-symposium held in Phnom Penh, Cambodia, 16-21 November 2009 aimed to improve the management of climate-associated risks in agriculture, including modified risk profiles associated with climate change scenarios. It consisted of two parts: 1) three-day training activity in the area of climate, crop, disease and pest modelling, thus building on the outputs of the original APN project (16-18 November); 2) four-day international symposium on 'Climate Risk and Agricultural Management' which focussed on information exchange and regional priority setting (19-22 November). The combined training-symposium was jointly supported by APN (CBA2009-04NSY-Visarto), the Australian Government's Overseas Programme (AusAID) International Seminar Support Scheme and the Crawford Fund. It was attended by 32 people from 10 participating countries: Australia, Bangladesh, Cambodia, Indonesia, India, Netherlands, Papua New Guinea, Lao PDR, Viet Nam and the USA.

This training cum-symposium was proposed and designed by the International Climate and Agricultural Risk Management (CARM) Network. The Network arose out of the APN-funded project 'Climate and Crop Disease Risk Management: An International Initiative in the Asia-Pacific Region' (ARCP2007-06CMY) led by Associate Prof. Samsul Huda, University of Western Sydney, Australia.

The overall objective of this training-cum-symposium was to build the scientific capacity of young agricultural researchers in the Asia-Pacific region in the area of decision-making based on weather and climate information. Other objectives were to: 1) provide a venue for interactive discussions among CARM Network members for planning and implementing collaborative research programmes, 2) establish regional research then develop priorities and research concept notes; 3) produce material suitable for Climate Field Classes; and 4) develop baseline study guidelines for Cambodia.

The discussion and sharing of information on climate variability impacts on crops have been very successful. Challenges for managing natural resources in the agricultural sector were identified. In addition, methodologies to reduce climate risk in this sector were shared among the participants, which resulted in a better understanding and knowledge gain on climate variability data analysis and forecasting.

Cooperating with other countries in the region in sharing advanced research work, the project was able to support further the climate change research in Cambodia's agriculture and other countries such as Viet Nam, Lao PDR, Bangladesh, Indonesia and Papua New Guinea, including the development of a collaborative research on plant bio-security. The training-cum-symposium contributed to improving the effective transfer of scientific knowledge and methodologies to decision-makers in the Asian region.

By collaborating with other institutions and bodies that address issues relating to science-policy interactions such as World Meteorological Organisation (WMO), International Crops Research Institute for Semi-Arid Tropics (ICRISAT), Bangladesh Agricultural Research Institute (BARI), Cambodian Agricultural Research and Development Institute (CARDI), universities and local meteorology centres of each country in the region and other organisations, the project successfully contributed in attaining APN goals outlined under the scientific-policy agenda.

## 2<sup>nd</sup> Annual Conference on MANAGEMENT OF NATURAL RESOURCES AND ENVIRONMENT



Guru Arjan Dev (GAD) Institute of Development Studies, Amritsar will be organising its 2<sup>nd</sup> Conference on **Management of Natural Resources and Environment** in the last week of October 2010 (tentative dates: 23-24 October 2010). It will be held at the Conference hall of Guru Nanak Auditorium

of Guru Nanak Dev University, Amritsar. The main theme of the conference is 'sustainable use of natural resources in the context of tradeoffs between development and environment and climate change'. Papers have been invited/selected from interested participants on following sub themes of the seminar:

- *Environmental policy instruments and institutions for sustainable use of natural resources:* Pollution taxes and

marketable permits, participatory institutions such as joint forest management and water user associations and community action for controlling industrial water pollution.

- *Environmental valuation:* Case studies using stated and revealed preference methods for valuing water and forest resources. Benefit cost analysis of conservation of forests and surface and ground water sources.
- *Natural resource accounting and measurement of Green GDP:* Sectoral studies related to mining, forestry and irrigation. Generalisation of national income and input-output accounts for measuring Green GDP.
- *Climate change effects and adaptation and mitigation strategies:* Effects of climate change on agriculture, water supply, forestry and coastal and marine resources. Mitigation strategies and the role of forests and mangroves. Adaptation strategies for agriculture and water supply. Carbon credit and food security implications of natural resource degradation and climate change.

For more information and registration, please contact: [idsasr09@yahoo.com](mailto:idsasr09@yahoo.com), [kainthgs@yahoo.com](mailto:kainthgs@yahoo.com).

## CAPaBLE - SCBCIA

### Capacity Development of the Scientific Community for Assessing the Health Impacts of Climate Change, Ms. Hina Lotia (Reference: CIA2009-07-LOTIA; Project Leader:)

#### Climate Change and Health – Bridging the Gap First National Training Session for Climate Change – Health Cohort 12-15 June 2010, Islamabad, Pakistan



Understanding the effects of climate change on human health is the first step towards taking effective action for keeping these to a minimum. The capacity to respond to the negative health effects of climate change relies on the generation of reliable, relevant, and up-to-date information pertaining to specific regions, countries, and localities, which is not yet available for developing countries. Of the 16 National Health Impact Assessments of Climate Change done between 2001 and 2007, only five were in countries of the developing world — India, Bolivia, Panama, Bhutan, and Tajikistan.

In Pakistan, as in other developing countries, apart from a dedicated few, health professionals have not come to the climate change debate. LEAD Pakistan aims at bringing a change in the status quo by strengthening capacities for research on negative health effects of climate change. Implemented through the financial assistance provided by the Asia-Pacific Network for Global Change Research (APN), LEAD's present endeavour is based on the premises that, the educational and scientific base of Pakistan will have a direct bearing in increasing or constraining its capacity to adapt.

To achieve the same, LEAD Pakistan has enlisted public health professionals from among the health related scientific community from around the country. The organisation is now conducting training workshops directed at building in them the ability to assess and interpret climate data, information and projections. With their knowledge about the effect of weather on the incidence and prevalence of diseases serving as a baseline, this exercise would enhance their understanding of the risks and vulnerabilities posed by climate change to human health.

As an evidence of the same, these professionals will be required to work together and produce a series of research papers directed at determining the attributable burden of climate change to climate sensitive diseases vis-à-vis Pakistan. These papers will in turn be published in related international and national journals. In addition to this, findings from these papers will be made available to the concerned decision-makers within the Ministry of Health, Government of Pakistan with a view that these form the essential basis for its future planning.

The National Training Session arranged by LEAD Pakistan was the first step in the capacity building programme planned for the selected

group of health professionals. The session was designed with the aim of: improving the ability of those from Pakistan's health-related community to interpret the information available about climate change; acquainting them with the complexity of the climate change-health relationship; and equipping them with the skills required to address the methodological challenges involved in analysing the same.

The First National Training Session (1<sup>st</sup> NTS) was organised in Islamabad, Pakistan from 12 to 15 June 2010. A group of 13 Public Health Professionals attended the workshop. In this context, all possible efforts had been made to ensure that the selected group was gender balanced and comprised of mid to senior level professionals from across the country, who shared a similar portfolio in terms of academic background, professional experience and research skills.

The four-day workshop was designed on LEAD Pakistan's training methodology of experiential learning and included interactive talks, presentations, group work, panel discussions, screening of documentaries and a field visit to Pakistan Meteorological Department (PMD) to acquaint the members with the manner in which climate-related data is recorded and interpreted.

The resource persons invited were climatologists, environmental health experts, policy makers and academics from different governmental and non governmental institutions of the country. The resource persons helped the participants understand the themes under discussion with clarity and experience.

The workshop focussed on exploring and analysing the climate change-health relationship and comprised of the following thematic areas;

- Climate Change – Its Drivers and Dynamics
- Direct and Indirect Health Effects of Climate Change
- Climate Injustice – Mapping Health Related Vulnerabilities
- Responding to Climate Change
- Climate Change and Health – The Research Focus
- Climate Change – The Pakistan Scenario
- Climate Leaders – Road Map for the Future

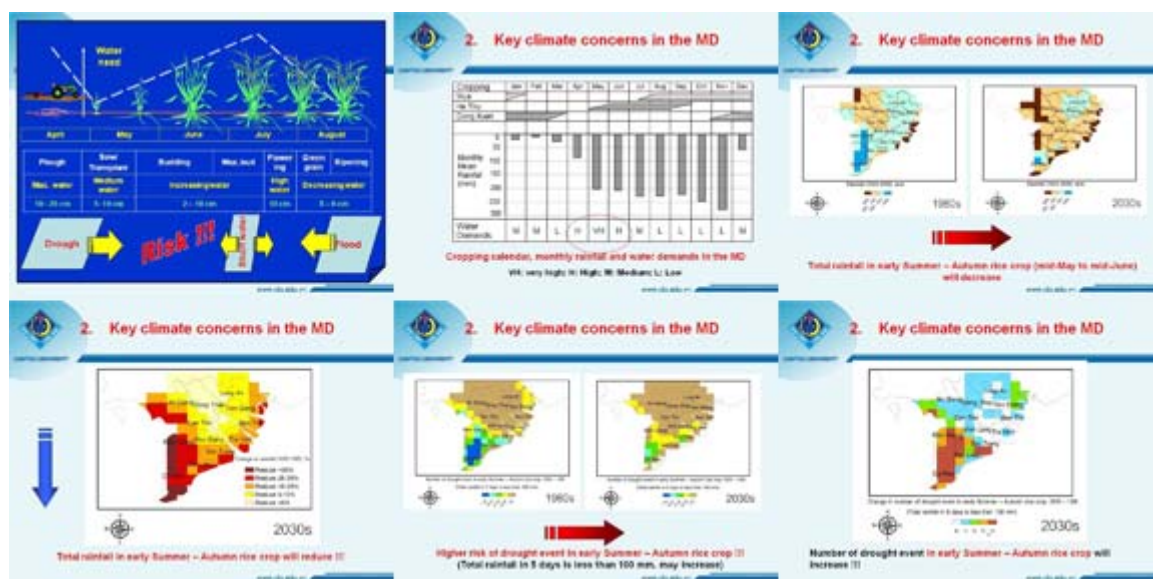
The workshop enabled the participants to:

- Define the term Climate Change, and describe its challenges and threats at global, regional and national levels;
- Draw linkages between weather trends and their potential direct and indirect impacts on human health;
- Highlight health-related vulnerabilities arising due to climate change at global, regional and national levels;
- Assess policy and health infrastructure in terms of its ability to address the challenges posed by climate change;
- Interact with network of professionals, institutions and associations that will be useful for gathering climate change data and its interpretation; and
- Suggest appropriate adaptation measures against climate impacts on human health.

*continued on page 25 ...*

# CAPaBLE - SCBCIA

## Building Research Capacity on Assessing Community Livelihood Vulnerability to Climate Change Impact in Central Viet Nam and Mekong River Delta (Reference: CIA2009-05-JITPRAPHAI; Project Leader: Dr. Somrudee Jitpraphai)



Climate change and its effect on key climate concerns of the Mekong River Delta

Responding to climate change vulnerability, the project is preparing researchers through training as well as gathering information from case studies to support Viet Nam's National Target Programme to Respond to Climate Change. This project is currently developing research capacity on climate change impacts, vulnerability, adaptation and risk assessment in two research centres of two universities in Viet Nam, based on the experience of the Southeast Asia Global Change System for Analysis, Research and Training Regional Centre (SEA START RC) on climate change studies in the Southeast Asia region.

Pilot action on the assessment of key climate concerns and analysis of future climate change risk were conducted as methodology testing at Can Tho University. The researchers at the University reviewed key climate concerns of rice farming, which is the main key sector of the Mekong River Delta. They also reviewed future climate change and analysed how it might threaten rice farming in the Mekong River Delta.

The analysis on future climate change is based on data from climate change scenarios provided by SEA START RC.

Community representatives in the Mekong River Delta were also interviewed on key climate concerns to assess their awareness on climate change issues. The interview was performed through a Focus Group Discussion at Can Tho University. A training workshop will be conducted based on the methods used at the Mekong River Delta and will be applied to the central region of Viet Nam. A "future socio-economic scenario" exercise is planned to create social and economic perspectives of the study sites in the Mekong River Delta and the central region of Viet Nam for vulnerability assessment.

The project will also assess risk from future climate change in the perspective of socio-economic change before initiating local stakeholder engagement at selected communities in the study sites.

*continuation from page 24 - Capacity Development...*

Media coverage of the event was given due importance in order to ensure accurate and effective presentation of the complexity of the relationship between climate change and health. LEAD Pakistan invited several print and electronic media representatives to cover the training event. The event was also announced on 'What's On' section of the daily 'The News International.' The concluding session and certificate distribution ceremony chaired by Minister for Environment, Mr. Hameed Ullah Jan Afridi, was widely covered by the following newspapers and news agencies:

<http://pakobserver.net/detailnews.asp?id=36608>  
<http://www.pid.gov.pk/press15-06-2010.htm> (PR. No. 183)  
<http://www.brecorder.com/component/news/single/58/1/section/1070009.html>

Moreover, several TV channels such as SAMMA and KTN reported the event in their news bulletins. A radio programme Mahol Dost Pakistan was also aired on Islamabad Traffic Police's radio channel FM 92.4 in collaboration with the Ministry of Environment. This radio show helped in creating awareness among masses on environment and health-related issues.

A proper website for the facilitation of the workshop has been developed since inception of this initiative. All the information related to the activities pre, during and after the workshop is available on the website at the following address: [www.lead.org.pk/apn](http://www.lead.org.pk/apn).



# ARCP 2010/11 Projects

**Project Reference: ARCP2010-01CMY-Sthiannopkao**

**Project Title:** Collaborative Research on Sustainable Urban Water Quality Management in Southeast Asian Countries: Analysis of Current Status (comparative study) and Development of a Strategic Plan for Sustainable Development

**Project Leader:** Dr. Suthipong STHIANNOPKAO, Gwangju Institute of Science and Technology (GIST), REPUBLIC OF KOREA; Email: [suthi@gist.ac.kr](mailto:suthi@gist.ac.kr); [suthisuthi@hotmail.com](mailto:suthisuthi@hotmail.com)

**Project Reference: ARCP2010-02CMY-Phua**

**Project Title:** Integrated Prediction of Dipterocarp Species Distribution in Borneo for Supporting Sustainable Use and Conservation Policy Adaptation

**Project Leader:** Dr. Mui How PHUA, School of International Tropical Forestry, Universiti Malaysia, MALAYSIA; Email: [pmh@ums.edu.my](mailto:pmh@ums.edu.my)

**Project Reference: ARCP2010-03CMY-Marambe**

**Project Title:** Vulnerability of Home Garden Systems to Climate Change and its Impacts on Food Security in South Asia

**Project Leader:** Prof. Buddhi MARAMBE, Faculty of Agriculture, University of Peradeniya, SRI LANKA; Email: [bmarambe@pdn.ac.lk](mailto:bmarambe@pdn.ac.lk)

**Project Reference: ARCP2010-04CMY-Wang**

**Project Title:** Building Asian Climate Change Scenarios by Multi-Regional Climate Models Ensemble

**Project Leader:** Dr. Shuyu WANG, Institute of Atmospheric Physics, Chinese Academy of Sciences, CHINA; Email: [wsy@tea.ac.cn](mailto:wsy@tea.ac.cn)

**Project Reference: ARCP2010-05CMY-Luck**

**Project Title:** The Effects of Climate Change on Pests and Diseases of Major Food Crops in the Asia Pacific Region

**Project Leader:** Dr. Joanne Elizabeth LUCK, Cooperative Research Centre for National Plant Biosecurity, AUSTRALIA; Email: [jo.luck@dpi.vic.gov.au](mailto:jo.luck@dpi.vic.gov.au)

**Project Reference: ARCP2010-06CMY-Schaefer**

**Project Title:** Quantifying the Role of Dead Wood in Carbon Sequestration

**Project Leader:** Dr. Douglas SCHAEFER, Xishuangbanna Tropical Botanical Garden, Chinese Academy of Sciences, CHINA; Email: [xiedaoan@xtbg.ac.cn](mailto:xiedaoan@xtbg.ac.cn)

**Project Reference: ARCP2010-07CMY-Bai**

**Project Title:** Asian Coastal Ecosystems: An Integrated Database and Information Management System (DIMS) for Assessing Impact of Climate Change and its Appraisal

**Project Leader:** Dr. V. Ramani BAI, University of Nottingham Malaysia Campus, MALAYSIA; Email: [Ramani-Bai.V@nottingham.edu.my](mailto:Ramani-Bai.V@nottingham.edu.my)

**Project Reference: ARCP2010-08NSY-Freeman**

**Project Title:** Impact of Climate Change on Food Security and Biosecurity of Crop Production Systems in Small Pacific Nations

**Project Leader:** Dr. Angela FREEMAN, Department of Primary Industries, AUSTRALIA; Email: [angela.freeman@dpi.vic.gov.au](mailto:angela.freeman@dpi.vic.gov.au)

**Project Reference: ARCP2010-09NSY-Patwardhan**

**Project Title:** Enhancing Adaptation to Climate Change by Integrating Climate Risk into Long-Term Development Plans and Disaster Management

**Project Leader:** Prof. Anand PATWARDHAN, Indian Institute of Technology, INDIA; Email: [anand@iitb.ac.in](mailto:anand@iitb.ac.in)

**Project Reference: ARCP2010-10NMY-Koike**

**Project Title:** River Management System Development in Asia Based on Data Integration and Analysis System (DIAS) under the GEOSS

**Project Leader:** Prof. Toshio KOIKE, The University of Tokyo, JAPAN; Email: [tkoike@hydra.t.u-tokyo.ac.jp](mailto:tkoike@hydra.t.u-tokyo.ac.jp)

**Project Reference: ARCP2010-11NMY-Asanuma**

**Project Title:** Intercomparison of Landsurface Process Modelling at Asian Drylands

**Project Leader:** Dr. Jun ASANUMA, Terrestrial Environment Research Center, University of Tsukuba, JAPAN; Email: [asanuma@suiri.tsukuba.ac.jp](mailto:asanuma@suiri.tsukuba.ac.jp)

**Project Reference: ARCP2010-12NMY-Uprety**

**Project Title:** Community Based Forestry and Livelihoods in the Context of Climate Change Adaptation

**Project Leader:** Dr. Dharam Raj UPRETY, International Forestry Resources and Institutions (IFRI) and Forest Action, NEPAL; Email: [forestaction@wlink.com.np](mailto:forestaction@wlink.com.np); [dharam.uprety@gmail.com](mailto:dharam.uprety@gmail.com)

**Project Reference: ARCP2010-13NMY-Bae**

**Project Title:** Climate Change Impact Assessment on the Asia-Pacific Water Resources under AWCII/GEOSS

**Project Leader:** Prof. Deg-Hyo BAE, Sejong University, REPUBLIC OF KOREA; Email: [dhbae@sejong.ac.kr](mailto:dhbae@sejong.ac.kr)

**Project Reference: ARCP2010-14NMY-Li**

**Project Title:** Analysis on Urban Land-Use Changes and its Impacts on Food Security in Different Asian Cities of Four Developing Countries using Modified Cellular Automata (CA)

**Project Leader:** Prof. Jianlong LI, The Global Change Research Institute, College of Life Science, Nanjing University, CHINA; Email: [jlli2008@nju.edu.cn](mailto:jlli2008@nju.edu.cn); [jianlongli@sina.com.cn](mailto:jianlongli@sina.com.cn)

**Project Reference: ARCP2010-15NMY-Han**

**Project Title:** The Impact of Spatial Parameters on Greenhouse Gas Emissions: A Comparative Study between Cities in China and India

**Project Leader:** Dr. Sun Sheng HAN, The University of Melbourne, AUSTRALIA; Email: [sshan@unimelb.edu.au](mailto:sshan@unimelb.edu.au)

**Project Reference: ARCP2010-16NMY-Huda**

**Project Title:** Food Security and Climate Change in the Asia-Pacific Region: Evaluating Mismatch between Crop Development and Water Availability

**Project Leader:** Prof. Samsul HUDA, University of Western Sydney, AUSTRALIA; Email: [s.huda@uws.edu.au](mailto:s.huda@uws.edu.au)

**Project Reference: ARCP2010-17NMY-Towprayoon**

**Project Title:** Strategic Rice Cultivation for Sustainable Low Carbon Society Development in Southeast Asia

**Project Leader:** Assoc. Prof. Dr. Sirintornthep TOWPRAYOON, King Mongkut's University of Technology, THAILAND; Email: [sirin@jgsee.kmutt.ac.th](mailto:sirin@jgsee.kmutt.ac.th)

**Project Reference: ARCP2010-18NMY-Lutaenko**

**Project Title:** Coastal Marine Biodiversity of Viet Nam: Regional and Local Challenges and Coastal Zone Management for Sustainable Development

**Project Leader:** Dr. Konstantin LUTANEKO, Institute of Marine Biology, RUSSIAN FEDERATION; Email: [lutaenko@mail.primorye.ru](mailto:lutaenko@mail.primorye.ru); [lutaenko@mail.ru](mailto:lutaenko@mail.ru)

# CAPaBLE 2010/11 Projects

**Project Reference:** CBA2010-01CMY-Sang-arun

**Project Title:** Promoting Sustainable Use of Waste Biomass in Cambodia, Lao People's Democratic Republic and Thailand: Combining Food Security, Bio-energy and Climate Protection Benefits

**Project Leader:** Dr. Janya SANG-ARUN, Institute for Global Environmental Strategies, JAPAN; Email: [sang-arun@iges.or.jp](mailto:sang-arun@iges.or.jp)

**Project Reference:** CBA2010-02CMY-Togtohyn

**Project Title:** Dryland Development Paradigm (DDP) Application for the Most Vulnerable to Climate and Land Use Change of Pastoral Systems in the Southern Khangai Mountains of Mongolia (DDPPaS)

**Project Leader:** Dr. Chuluun TOGTOHYN, Institute for Dryland Sustainability (IDS), National University of Mongolia, MONGOLIA; Email: [chuluun@nrel.colostate.edu](mailto:chuluun@nrel.colostate.edu)

**Project Reference:** CBA2010-03NSY-Indrawan

**Project Title:** Developing the Capacity for Teaching Biodiversity and Conservation in the Asia-Pacific Region

**Project Leader:** Dr. Mochamad INDRAWAN, University of Indonesia, INDONESIA; Email: [jamblang@cbn.net.id](mailto:jamblang@cbn.net.id)

**Project Reference:** CBA2010-04NSY-Dhakal

**Project Title:** Carbon Governance in Asia: Bridging Scales and Disciplines

**Project Leader:** Dr. Shobhakar DHAKAL, Global Carbon Project (GCP), National Institute for Environmental Studies (NIES), JAPAN; Email: [shobhakar.dhakal@nies.go.jp](mailto:shobhakar.dhakal@nies.go.jp)

**Project Reference:** CBA2010-05NSY-Lorrey

**Project Title:** Improving Pacific Island Meteorological Data Rescue and Data Visualisation Capabilities through Involvement in Emerging Climate Research Programmes

**Project Leader:** Dr. Andrew LORREY, National Institute of Water and Atmospheric Research, Ltd., NEW ZEALAND; Email: [a.lorrey@niwa.co.nz](mailto:a.lorrey@niwa.co.nz)

**Project Reference:** CBA2010-06NSY-Kench

**Project Title:** Improving Understanding of Local-Scale Vulnerability in Atoll Island Countries: Developing Capacity to Improve In-Country Approaches and Research

**Project Leader:** Assoc. Prof. Paul KENCH, The University of Auckland, NEW ZEALAND; Email: [p.kench@auckland.ac.nz](mailto:p.kench@auckland.ac.nz)

**Project Reference:** CBA2010-07NSY-Stone

**Project Title:** Web-based 'Discussion-support' Agricultural Climate Information for Regional India

**Project Leader:** Prof. Roger STONE, University of Southern Queensland, AUSTRALIA; Email: [stone@usq.edu.au](mailto:stone@usq.edu.au)

**Project Reference:** CBA2010-08NSY-Salinger

**Project Title:** Addressing the Livelihood Crisis for Farmers: Weather and Climate Services for Sustainable Agriculture – Development of Tools

**Project Leader:** Dr. Jim SALINGER, University of Auckland, NEW ZEALAND; Email: [j.salinger@auckland.ac.nz](mailto:j.salinger@auckland.ac.nz)

**Project Reference:** CBA2010-09NSY-Rupakheti

**Project Title:** Scientific Capacity Development of the Trainers and Policy Makers for Climate Change Adaptation Planning in Asia and the Pacific

**Project Leader:** Dr. Maheswar RUPAKHETI, UNEP Regional Resource Centre for Asia and the Pacific, THAILAND; Email: [Maheswar.Rupakheti@rrcap.unep.org](mailto:Maheswar.Rupakheti@rrcap.unep.org)

**Project Reference:** CBA2010-10NSY-Chen

**Project Title:** Promoting a Data Sharing Environment within the Earth Observation System of Systems: The Asia-Pacific Perspective  
**Project Leader:** Dr. Robert S. Chen, CODATA/CIESIN, Columbia University, USA; Email: [bchen@ciesin.columbia.edu](mailto:bchen@ciesin.columbia.edu)

**Project Reference:** CBA2010-11NSY-De Guzman

**Project Title:** Capacity Building for Research and Monitoring of Marine Protected Areas: An Adaptive Mechanism for Climate Change in the Asia-Pacific Region

**Project Leader:** Dr. Asuncion DE GUZMAN, Mindanao State University, PHILIPPINES; Email: [sony\\_deguzman@yahoo.com](mailto:sony_deguzman@yahoo.com)

**Project Reference:** CBA2010-12NSY-Pradhananga

**Project Title:** Graduate Conference on Climate Change and People

**Project Leader:** Mr. Dhiraj PRADHANANGA, The Small Earth Nepal (SEN), NEPAL; Email: [dhirajmet@hotmail.com](mailto:dhirajmet@hotmail.com); [smallearth@wlink.com.np](mailto:smallearth@wlink.com.np)

**Project Reference:** CBA2010-13NMY-Kawai

**Project Title:** Capacity Building of Biodiversity Research in the Coastal Zones of the Asia Pacific Region: Phycology Taxonomy Analysis Training Using Genetic Marker

**Project Leader:** Prof. Hiroshi Kawai, Environmental Management of Enclosed Coastal Seas (EMECS) Secretariat, JAPAN; Email: [kawai@kobe-u.ac.jp](mailto:kawai@kobe-u.ac.jp); [furukawa@emecs.or.jp](mailto:furukawa@emecs.or.jp)

**Project Reference:** CBA2010-14NMY-Kaihotsu

**Project Title:** Drought Monitoring System Development by Integrating In-situ Data, Satellite Data and Numerical Model Output  
**Project Leader:** Prof. Ichiro KAIHOTSU, Hiroshima University, JAPAN; Email: [kaihotu@hiroshima-u.ac.jp](mailto:kaihotu@hiroshima-u.ac.jp)

**Project Reference:** CBA2010-15NSY-South

**Project Title:** Global Change and Coral Reef Management Capacity in the Pacific: Engaging Scientists and Policy Makers in Fiji, Samoa, Tuvalu and Tonga

**Project Leader:** Prof G. Robin SOUTH, Institute of Marine Resources, University of the South Pacific, FIJI; Email: [robin.south@orda.com.au](mailto:robin.south@orda.com.au); [south\\_g@usp.ac.fj](mailto:south_g@usp.ac.fj)

**Project Reference:** CRP2010-01CMY-Weber

**Project Title:** Vulnerability Mapping as a Policy Tool in Developing Countries

**Project Leader:** Dr. Eberhard WEBER, The University of the South Pacific, FIJI; Email: [weber\\_e@usp.ac.fj](mailto:weber_e@usp.ac.fj)

**Project Reference:** CRP2010-02CMY-Pereira

**Project Title:** Strengthening Capacity for Policy Research on Mainstreaming Adaptation to Climate Change in Agriculture and Water Sectors

**Project Leader:** Dr. Joy Jacqueline PEREIRA, Institute for Environment and Development (LESTARI), Universiti Kebangsaan Malaysia (UKM), MALAYSIA; Email: [joy@ukm.my](mailto:joy@ukm.my)





**Project Reference Number:** CIA2009-01-SNIDVONGS  
**Project Leader:** Dr. Anond Snidvongs, ([anond@start.or.th](mailto:anond@start.or.th))  
 Southeast Asia (SEA) Global Change System for Analysis, Research, and Training (START) Regional Center, Chulalongkorn University, Thailand  
**Project Title:** Climate Change Vulnerability Assessment and Urban Development Planning for Asian Coastal Cities

**Project Reference Number:** CIA2009-02-PULHIN  
**Project Leader:** Dr. Juan Pulhin ([impulhin@uplb.edu.ph](mailto:impulhin@uplb.edu.ph)),  
 Department of Forestry and Forest Governance, College of Forestry and Natural Resource, University of the Philippines Los Baños, Philippines  
**Project Title:** Capacity Development on Integration of Science and Local Knowledge for Climate Change Impacts and Vulnerability Assessments

**Project Reference Number:** CIA2009-03-LUN  
**Project Leader:** Dr. Yin Lun ([lun.yin@gmail.com](mailto:lun.yin@gmail.com)), Centre for Tibetan Regional Sustainable Development, China  
**Project Title:** Climate Change in Eastern Himalayas: Advancing Community-Based Scientific Capacity to Support Climate Change Adaptation

**Project Reference Number:** CIA2009-04-GAOL  
**Project Leader:** Dr. Jonson Lumban Gaol ([jonsonr@gmail.com](mailto:jonsonr@gmail.com)), Department of Marine Science and Technology, Bogor Agricultural University, Indonesia

**Project Title:** Increasing Capacity of Local Scientists for Climate Change Impact and Vulnerability Assessments in Indonesia Archipelagos: Training in In-Situ/Satellite Sea Level Measurements

**Project Reference Number:** CIA2009-05-JITPRAPHAI  
**Project Leader:** Dr. Somrudee Jitpraphai ([somdeem@yahoo.com](mailto:somdeem@yahoo.com)), SEASTART Regional Center (SEA START RC), Thailand  
**Project Title:** Building Research Capacity on Assessing Community Livelihood Vulnerability to Climate Change Impacts in Central Viet Nam and the Mekong River Delta

**Project Reference Number:** CIA2009-06-DUC  
**Project Leader:** Dr. Do Minh Duc ([ducdm@vnu.edu.vn](mailto:ducdm@vnu.edu.vn)), Faculty of Geology, Hanoi University of Science, Viet Nam  
**Project Title:** Capacity Development for Adaptation to Climate Change in the Rural Coastal Zone of Viet Nam

**Project Reference Number:** CIA2009-07-LOTIA  
**Project Leader:** Ms. Hina Lotia ([hlotia@lead.org.pk](mailto:hlotia@lead.org.pk)), Programme Development Department, Leadership for Environment and Development (LEAD), Islamabad, Pakistan  
**Project Title:** Capacity Development of the Scientific Community for Assessing the Health Impacts of Climate Change

## GEO BON to Monitor and Study the Global Biosphere: Implementation Plan Launched for International Day for Biodiversity

The Group on Earth Observations Biodiversity Observation Network (GEO BON) released its detailed, 175-page Implementation Plan for a coordinated global campaign to gather and share information on biodiversity, provide tools for data integration and analysis, and contribute to improved environmental management and human well-being.

Recognising that improved biodiversity monitoring is vital for advancing the conservation and sustainable use of biodiversity, dozens of government agencies and leading scientific and conservation organisations are collaborating through GEO BON. They include the US National Aeronautics and Space Administration (NASA), DIVERSITAS (the International Programme of Biodiversity Science), the European Union's Ebone project, the Global Biodiversity Information Facility (GBIF), the UN Environment Programme's World Conservation Monitoring Centre (UNEP-WCMC), and many others. Over 100 experts from the GEO BON community participated in drafting the Detailed Implementation Plan.

Policy-makers need reliable scientific information in order to craft programmes for managing the planet's biological resources and to monitor the effectiveness of these efforts. However, data on the status of, and trends in, biodiversity are often dispersed, uncoordinated and

incomplete. GEO BON is committed to upgrading these data, interlinking and expanding monitoring systems and data bases, and helping decision-makers and managers to access the information they need.

"By working together and coordinating our strategies, we can dramatically improve our ability to track and understand biodiversity trends," said Bob Scholes of South Africa's Council for Scientific and Industrial Research Organisation (CSIRO) and Chair of GEO BON's Steering Committee. "We can also better monitor our progress on implementing the Convention on Biological Diversity and achieving the 2010 targets for reducing biodiversity loss and any future targets that governments may adopt."

The complete and updated GEO BON Implementation Plan, which has been developed through broad and intensive consultations, was launched to mark the International Day for Biodiversity on 22 May 2010. It is posted on the GEO BON web site at <http://www.earthobservations.org/geobon.shtml> and will be presented at the Group on Earth Observations Ministerial Summit to be held in Beijing on 5 November 2010.

For more information, please contact Michael Williams at [mwilliams@geosec.org](mailto:mwilliams@geosec.org) or +41-22-730-8293.



GROUP ON  
EARTH OBSERVATIONS

GEO BON

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### APN Steering Committee (SC) Members

#### Elected members

1. Republic of Korea: Mr. Suho SEONG (Chair)
2. Malaysia: Dr. Kok Seng YAP (Vice-Chair)
3. Mongolia: Mr. Bayarbat DASHZEVEG
4. Sri Lanka: Mr. R.H.S. SAMARATUNGA (Host of the 16<sup>th</sup> IGM/SPG Meeting)

#### Ex-officio (SPG Co-Chairs)

5. Indonesia: Dr. Erna Sri ADININGSIH
6. USA: Dr. Luis TUPAS

#### Co-opted members

7. USA: Mr. Louis BROWN (Donor Member)
8. Prof. Roland FUCHS of East-West Center (Invited Expert)
9. Dr. W. Andrew MATTHEWS (Invited Expert)
10. Japan: Mr. Yukata MATSUZAWA (Donor Member)

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Luis M. TUPAS, *SPG Co-Chair, USA*

Roland FUCHS, *invited expert (Senior Fellow, East-West Center); Email: Fuchsr@EastWestCenter.org*

Srikantha HERATH, *invited expert (Senior Academic Programme Officer, United Nations University)*  
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Andrew MATTHEWS, *invited expert (nFP/SPG Member for New Zealand)*

Harini NAGENDRA, *invited expert (Faculty Fellow, Ashoka Trust for Research in Ecology and the Environment); Email: nagendra@atree.org*

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Erna Sri ADININGSIH, *SPG Co-Chair, Indonesia*

Luis M. TUPAS  
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Giashuddin MIAH  
*SPG Member, Bangladesh*

Madan Lall SHRESTHA  
*SPG Member, Nepal*

Alexander STERIN  
*SPG Member  
Russian Federation*

## Newsletter Questionnaire

We want to hear from you! Please help us improve the APN Newsletter by filling out this [questionnaire](http://www.apn-gcr.org/newAPN/resources/newsletter/FeedbackForm.doc) and returning it by fax to the APN Secretariat at: +81-78-230-8017. Alternatively, you can download this form at <http://www.apn-gcr.org/newAPN/resources/newsletter/FeedbackForm.doc> and send it as an attachment to [ppulhin@apn-gcr.org](mailto:ppulhin@apn-gcr.org). Thank you for your cooperation.

1. How do you rate the APN Newsletter overall?  
\_\_\_ poor \_\_\_ fair \_\_\_ good \_\_\_ very good
2. How would you describe the APN Newsletter as a source for information?  
\_\_\_ not so informative \_\_\_ informative \_\_\_ very informative
3. Do you still want to continue receiving an electronic copy of the APN Newsletter?  
\_\_\_ yes \_\_\_ no
4. If you know other people or institutions who are interested in receiving a copy of the APN Newsletter, please provide us with their contact details:  
Name: \_\_\_\_\_  
Position: \_\_\_\_\_  
Division: \_\_\_\_\_  
Organization: \_\_\_\_\_  
Postal street address: \_\_\_\_\_  
Postcode and city: \_\_\_\_\_  
Province/Region: \_\_\_\_\_ Country: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Email: \_\_\_\_\_ Website: \_\_\_\_\_
5. We look forward to receiving any additional remarks or suggestions about what you would like to see in the APN Newsletter.  
\_\_\_\_\_

## Calendar of Global Change Events

Events in **bold** are APN or APN co-sponsored events

### 2010

#### JULY

5-11 JULY. International Conference "ENVIROMIS-2010", Tomsk, Russia. Please visit: <http://www.scert.ru/en/conferences/>

10-11 JULY. **Open Meeting of APN Project "Human Impact on Land-cover Changes in the Heart of Asia"**, Tomsk, Russia. Contact: Dr. Igor Okladnikov at [igor.okladnikov@gmail.com](mailto:igor.okladnikov@gmail.com)

11-16 JULY. 11<sup>th</sup> IGAC Conference, joint with CACGP, Halifax, Canada. Please visit: [www.igac.noaa.gov](http://www.igac.noaa.gov).

12-13 JULY. International Forum for Sustainable Asia and the Pacific (ISAP2010), Pacifico Yokohama Conference Center, Yokohama, Japan. Contact: [isap2010@iges.or.jp](mailto:isap2010@iges.or.jp)

12-14 JULY. WMO International Workshop on Addressing the Livelihood Crisis of Farmers: Weather and Climate Services, Belo Horizonte, Brazil

13-15 JULY. Environment and Climate Change Conference, EC<sup>3</sup>o Asia-2010, Prof. K.S. Hegde Auditorium, Anna University, Chennai, India. Contact: [centralsecretariat@ecccoasia.org](mailto:centralsecretariat@ecccoasia.org)

14-16 JULY. 2<sup>nd</sup> Ministerial Regional Forum on Environment and Health in Southeast and East Asian Countries, Jeju, Republic of Korea. Please visit: <http://www.environment-health.asia/index.cfm>

19-22 JULY. ANU Climate Change Institute Young Scholars Conference 2010, The Australian National University, Australia

19-23 JULY. 43<sup>rd</sup> ASEAN Minister's Meeting (AMM-43/PMC/ARF-17), Hanoi, Viet Nam. 20-22 JULY. Asia-Pacific Seminar on Climate Change, Kitakyushu, Japan. Please visit: <http://www.climateanddevelopment.org/ap-net/seminar/h01.html>

21-24 JULY. 2<sup>nd</sup> World Conference on Research Integrity 2010, Singapore. Please visit: <https://www.wcri2010.org/index.asp>

25-26 JULY. **APN Project Joint Workshop "Assessment of Role of Community Forests (CFs) in CO<sub>2</sub> Sequestration, Biodiversity and Land Use Change"**, Kathmandu, Nepal

27-28 JULY. **Workshop on Strategic Policies for Sustainable Urban Water Quality Management in Southeast Asia**, Viet Nam.

27-30 JULY. International GMBA-DIVERSITAS Conference: Functional Significance of Mountain Biodiversity. Chandolin (Valais), Switzerland. Please visit: <http://www.gmba.unibas.ch/2010conference/2010conference.htm>

#### AUGUST

4-6 AUG. 9<sup>th</sup> Meeting of the AFP and AFP Dialogue 2010 "Forest Governance Challenges Beyond Copenhagen: An Asia-Pacific Perspective," Bali, Indonesia. Contact Gugi Ginanjar (Communications Assistant, AFP Secretariat): [G.Ginanjar@cgiar.org](mailto:G.Ginanjar@cgiar.org).

9-10 AUG. International Conference on Managing Forest Resources for Multiple Ecosystem Services under Robust and

Fragile Environments, Phnom Penh, Cambodia. Please visit: <http://www.ai.u-hyogo.ac.jp/7Enophea/khconference/index.html>

10-12 AUG. 6<sup>th</sup> Australia-New Zealand Climate Change and Business Conference, Sydney, Australia. Please visit: [www.climateandbusiness.com](http://www.climateandbusiness.com)

12-14 AUG. Cyrospheric Issues in Regional Sustainable Development, Lijiang, China.

22-28 AUG. **APN Project Workshop "Climate Change Vulnerability Assessment and Urban Development Planning for Asian Coastal Cities."** The Rose Garden Riverside, Nakorn Pathom, Thailand. Contact: Dr. Anond Snidvongs at [anond@start.or.th](mailto:anond@start.or.th)

23-24 AUG. **Workshop on APN Project "Capacity Development on Integration of Science and Local Knowledge for Climate Change Impacts and Vulnerability Assessments,"** Albay, Philippines.

23-28 AUG. IUFRO World Congress 2010: "Forests for the Future: Sustaining Society and the Environment," Seoul, Republic of Korea. For more details please visit: <http://www.iufro.org/events/congresses/world-congress-2010/>

25-27 AUG. **APN Climate Synthesis Workshop**, Kobe, Japan (CLOSED MEETING). Contact: [info@apn-gcr.org](mailto:info@apn-gcr.org)

26-27 AUG. **PAGES - 1<sup>st</sup> Asia 2K Workshop**, Nagoya University, Japan.

30-31 AUG. **16<sup>th</sup> APN Steering Committee Meeting**, Kobe, Japan (CLOSED MEETING). Contact: [info@apn-gcr.org](mailto:info@apn-gcr.org)

#### SEPTEMBER

1-3 SEPT. Climate Change: Health and Ecology, Uppsala, Sweden. Please visit: [http://tiny.cc/SVA\\_Climate2010](http://tiny.cc/SVA_Climate2010)

5-11 SEPT. 2010 World Water Week, Stockholm, Sweden. Please visit: [www.worldwaterweek.org](http://www.worldwaterweek.org)

9 SEPT. **APN/Hyogo International Symposium: Coexistence with Nature ~ Biodiversity and People – Hyogo Dialogue for the Future**, Kobe, Japan. Contact: [info@apn-gcr.org](mailto:info@apn-gcr.org)

13-15 SEPT. PAGES Second Global Monsoon Symposium, Tongji University, Shanghai, China.

13-17 SEPT. Storm Surges Congress 2010 "Risk and Management of Current and Future Storm Surges," University of Hamburg, Germany. Please visit: <http://meetings.copernicus.org/ssc2010/>

20-22 SEPT. UN Summit on the Millennium Development Goals, New York, USA. Please visit: <http://www.un.org/en/mdg/summit2010/>

22-24 SEPT. International Science Workshop "Regional Integration of Past Records for Management of Modern Resources and Landscapes," Highfield Campus, University of Southampton, Southampton, UK.

27 SEPT - 2 OCT. 6<sup>th</sup> Ministerial Conference on Environment and Development (MCED), Astana, Kazakhstan.

*continued on page 32 ...*



## Calendar of Global Change Events

Events in **bold** are APN or APN co-sponsored events

TBD SEPT. Final Plenary Meeting for the Project "The Global Earth Observation System of Systems Asian Water Cycle Initiative Observation Convergence and Data Integration (GEOSS/AWCI/OCIDI)", University of Tokyo, Japan

### OCTOBER

4-6 OCT. International Symposium: Benefiting from Earth Observation, Kathmandu, Nepal. Please visit: <http://geoportal.icimod.org/Symposium2010/>

11-14 OCT. 32<sup>th</sup> Session of IPCC, Busan, Republic of Korea. Contact IPCC Secretariat: [IPCC-Sec@wmo.int](mailto:IPCC-Sec@wmo.int)

15-17 OCT. International Conference on Urbanization and Global Environmental Change, Arizona State University, Tempe, Arizona, USA. Please visit: [www.ugec2010.org](http://www.ugec2010.org) or [www.ihdp.unu.edu/article/920](http://www.ihdp.unu.edu/article/920) Contact: [ugec2010@asu.edu](mailto:ugec2010@asu.edu)

17 OCT. GLP/UGEC Joint Day: Sustainable Land Systems in the era of Urbanization and Climate Change, Arizona State University, Tempe, Arizona, USA. Please visit: [www.glp2010.org](http://www.glp2010.org) or [www.ugec2010.org](http://www.ugec2010.org) or [www.ihdp.unu.edu/article/920](http://www.ihdp.unu.edu/article/920). Contact: [info@glp.hokudai.ac.jp](mailto:info@glp.hokudai.ac.jp) or [ugec2010@asu.edu](mailto:ugec2010@asu.edu)

18-19 OCT. GLP 2010 Open Science Meeting: Land Systems, Global Change and Sustainability, Arizona State University, Tempe, Arizona, USA. Please visit: [www.glp2010.org](http://www.glp2010.org) or [www.ihdp.unu.edu/article/920](http://www.ihdp.unu.edu/article/920) Contact: [info@glp.hokudai.ac.jp](mailto:info@glp.hokudai.ac.jp)

18-29 OCT. United Nations Convention on Biodiversity (CBD) COP-10-2010, Aichi-Prefecture, Nagoya, Japan.

21-22 OCT. **Asia-Pacific Climate Change Adaptation Forum: Mainstreaming Adaptation into Development Planning**, Bangkok, Thailand.

25-26 OCT. IAIA Climate Symposium Denmark: Climate Change and Impact Assessment Aalborg, Denmark. Please visit: <http://iaia.org/iaia-climate-symposium-denmark/>

25-28 OCT. International Conference on Environmental Management (ICEM-2010), Hyderabad, India. Please visit: <http://www.icem2010jntuh.org/index.html>

### NOVEMBER

1-3 NOV. Capacity Building Workshop on Carbon Governance in Asia: Bridging Scales and Disciplines, Yokohama, Japan. Please

visit: <http://www.gcp-urcm.org/CG/HomePage>

1-5 NOV. **"Training Workshop on Downscaling of South Asian Climate Projections" back-to-back with the Proposal Development Training Workshop (PDTW)**, Indian Institute of Tropical Meteorology (IITM), Pune, India. BY INVITATION ONLY. Contact: [info@apn-gcr.org](mailto:info@apn-gcr.org)

5 NOV. 2010 GEO Beijing Ministerial Summit, Beijing, China. Please visit: [www.earthobservations.org](http://www.earthobservations.org)

8-12 NOV. **APN SEA-SRC/Proposal Development Training Workshop (PDTW)**, Manila, Philippines. BY INVITATION ONLY. Contact: [info@apn-gcr.org](mailto:info@apn-gcr.org)

10-11 NOV. 22<sup>nd</sup> APEC Ministerial Meeting, Yokohama, Japan.

15-16 NOV. IAIA Climate Symposium DC: Climate Change and Impact Assessment, Washington, D.C., USA. Please visit: <http://iaia.org/iaia-climate-symposium-dc/>

15-19 NOV. **International Graduate Conference on Climate Change and People**, Kathmandu, NEPAL. Contact Michael Glantz at [michael.glantz@colorado.edu](mailto:michael.glantz@colorado.edu) or Dhiraj Pradhananga at [smallearth@wlink.com.np](mailto:smallearth@wlink.com.np).

23-25 NOV. International Conference on Forestry Education and Research for the Asia-Pacific Region, Manila, Philippines.

29 NOV-10 DEC. UNFCCC 16<sup>th</sup> Conference of the Parties (COP 16), Mexico.

### DECEMBER

1-3 DEC. **3-Day Scientific Workshop on Climate Change and DIMS Technology (CCD)**, Chulan Tower, Kuala Lumpur, Malaysia. Contact: Dr. Ramani Bai V. at [vramanibai@gmail.com](mailto:vramanibai@gmail.com)

3-7 DEC. 5<sup>th</sup> International Nitrogen Conference-N2010, New Delhi, India. Please visit: <http://www.n2010.org/>

11-12 DEC. Sustain' 2010, Sustainable Future for Human Security 2010, Kyoto, Japan. Please visit: <http://ppi-kyoto.org/call-for-paper>

TBD DEC. Conference "Marine Biodiversity of East Asian Seas: Status, Challenges and Sustainable Development," Nhatrang City, Viet Nam.

*Visit our website for a more extensive list of events:*

<http://www.apn-gcr.org/newAPN/news/news.htm>



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

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