

APN 20th
Inter-Governmental Meeting (IGM)/
Scientific Planning Group (SPG) Meeting

PROCEEDINGS

Kathmandu, Nepal, 25-27 March 2015



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APN

ASIA-PACIFIC NETWORK FOR
GLOBAL CHANGE RESEARCH

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(2015 Kathmandu, Nepal)**

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Cover photo: IGM/SPG participants at the ICIMOD Knowledge Park at Godavari, where a guided tour was organised courtesy of ICIMOD to demonstrate various methodologies related to integrated mountain development and sustainable farming practices.

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Message from the SC Chair and Secretariat Director

THE 20th Intergovernmental Meeting (IGM)/Scientific Planning Group (SPG) Meeting and associated committee meetings successfully concluded on 28 March 2015. The meeting was hosted by the Ministry of Science, Technology and Environment of Nepal (MoSTE) in Kathmandu, the country's capital city dotted with ancient, astounding architecture and temples.

The IGM reviewed APN's work undertaken in fiscal year 2014 and approved the proposed work programme and budget plan for 2015-16. Among the many accomplishments and outcomes delivered by APN in the fiscal year 2014, highlights include the following:

- » Increased number of regional research and capacity building projects being managed under APN programmes, frameworks and focused activities;
- » Successful South Asia Science-Policy Dialogue in Bhutan convened back-to-back with the Sub-Regional Cooperation meeting and a national-level Proposal Development Training Workshop (PDTW);
- » Capacity building and awareness-raising through PDTWs, communications and outreach activities;
- » Co-financing partnership between APN and the Royal Kingdom of Cambodia;
- » Continued engagement in international forums and events that strengthen APN's relationship with global change-related organisations and platforms; and
- » Successful 3R Scoping Meeting held in Kobe, Japan (June 2014) and two international events jointly organised with the Hyogo Prefectural Government: International Expert Meeting on Air Pollution Control in Urban Asia-Pacific held in Zhuhai, China (October 2014) and the International Symposium on Hokusetsu Satoyama held in Takarazuka, Japan (November 2014).

Thirteen continuing regional research projects were approved for funding under the Annual Regional Call for Research Proposals (ARCP) programme, and nine capacity building projects were approved under the Capacity Development Programme (CAPaBLE), one of which is a continuing project and eight are newly-funded projects for implementation in 2015-16. In addition, the IGM approved 12 new proposals under the Climate Adaptation Framework (CAF), two of which are to be combined and integrated into a single project, thus there were 11 projects approved for funding in total.

The Fourth Strategic Plan (4SP), which outlines APN's direction in the next five years (2015-2020) was also approved by the IGM. Looking back over the last five years, the IGM has acknowledged APN's successes and contributions at a global scale during its Third Strategic Phase (3SP) and approved the 3SP Report—showing accomplishments from 2010 to 2015 and outlining the challenges APN faces as it moves into the third decade of operations.

The 20th IGM also served as a platform to celebrate APN's 20th year of existence. An interactive session entitled "Celebrating APN's Accomplishments in its Third Strategic Phase (2010-2015)" was conducted, where representatives of a number of outstanding APN-sponsored projects presented highlights of their projects and discussed with IGM participants how the outcomes contributed to the advancement of action-oriented science and policy development in addressing global change issues in the region.

A poster session was organised to provide an opportunity to fourteen Nepalese young scientists to present their work implemented at the national and local levels to the prominent experts and policy makers present during the 20th IGM/SPG Meeting. "Integration of object-based image analysis with machine learning algorithm for forest type classification in Nepal" presented by Mr. Khanal Shiva was awarded the "Mitra Award for Global Change Research" in recognition of his outstanding work. You will find in this present proceedings the poster presented by the Mitra awardee and as an appendix to the Chairpersons Summary, a list of other research studies conducted by the Nepalese young scientists that participated in the poster session.

Lastly, APN is focusing on strengthening its online presence to cater to the region's researchers, policy makers and key stakeholders in a more collaborative and expeditious manner. To mark the beginning of the 4SP, APN launched a new online service—Friends of APN (friends.apn-gcr.org), presenting a new way for hosting online researcher profiles, exchanging knowledge and ideas. The APN website (www.apn-gcr.org) and E-Lib (www.apn-gcr.org/resources) were also redesigned to convey the message of a new beginning with the start of the new strategic phase. We released a number of interactive visualisations and multimedia content (www.apn-gcr.org/visual) as part of our 20th anniversary celebration.

We sincerely thank the Nepalese Government for hosting APN's 20th IGM/SPG Meeting and all the participants for attending the Meeting. We also extend our appreciation to national Focal Points, SPG member, invited experts, and all other stakeholders for their significant contribution and continuing commitment to APN. Finally, our thoughts and prayers go out to the people of Nepal and we hope for the country's speedy recovery from the impacts of the disastrous earthquake.



Handwritten signature of Peldon Tshering in black ink.

Peldon Tshering
Chair, Steering Committee (SC),
APN national Focal Point for Bhutan



Handwritten signature of Hiroshi Tsujihara in black ink.

Hiroshi Tsujihara
Director, APN Secretariat



► **National Focal Points**

BANGLADESH Ahmed
BHUTAN P. Tshering (5)
CAMBODIA Sem (31)
CHINA Zhang* (12)
INDONESIA Ginting (9)
JAPAN Hoshino* (3)
MALAYSIA Abdullah* (20)
NEPAL Thapa (6)
PAKISTAN Yaldram* (34)
RUSSIAN FEDERATION Lutaenko* (35)
SRI LANKA Silva* (39)
THAILAND Kerdkaekaw* (21)
VIET NAM Dinh* (19)

► **SPG Members**

BANGLADESH Miah (10)
BHUTAN C. Tshering* (14)
CAMBODIA Kum (29)
CHINA Dong (28)
INDONESIA Adimingsih (11)
JAPAN Fukushi (47)
MALAYSIA Yunus (13)
MONGOLIA Jamsran (42)
NEPAL M. Shrestha (25)
NEW ZEALAND Matthews* (41)
PAKISTAN Muhammed (4)
PHILIPPINES Adornado* (23)
RUSSIAN FEDERATION Sterin (36)
THAILAND Boonjawat (22)
VIET NAM Ngo (15)

► **Honoured Guest**

MOSTE Gurung (7)

► **Invited Experts to SC**

USA Fuchs (2)
NEW ZEALAND Matthews (41)

► **Invited Experts to SPG**

MAIRS Alikun (30)
ANU Heath (46)
USM Koshy (38)
MALAYSIA Moten (37)

► **Invited Speakers & Observers**

ICIMOD M. Shrestha (24)
IDI NEPAL K. Shrestha
IGBP Smyth (1)
IPBES/MOSTE NEPAL Adhikari
JADAVPUR UNIVERSITY Roy (7)
LCS-RNET/LOCARNET Ishikawa* (18)
FORESTACTION NEPAL Karki
NATIONAL UNIV. MONGOLIA Togtokh (40)
UNIV. PHILIPPINES Pulhin
UNIV. S. CALIFORNIA Sellers

► **Secretariat**

Condorini (48)
 De Guzman (49)
 Deng (55)
 Imanari (54)
 Koswatta (16)
 Stevenson (26)
 Tsujihara (8)

► **Local Organising Committee**

Sharma (53)
 Subedi (45)

* nFP Alternate or SPG Member Alternate

Contents

Message from the SC Chair and Secretariat Director	1
-----------------------------------------------------------	----------

Contents	4
-----------------	----------

Chairpersons' Summary	6
------------------------------	----------

» Chairpersons' Summary	6	
» Appendix 1	Participants List	17
» Appendix 2	Approved Work Programme and Budget Plan, Fiscal Year 2015	20
» Appendix 3	Continuing Multi-Year ARCP Projects, Fiscal Year 2015	21
» Appendix 4	Continuing and New CAPaBLE Projects, Fiscal Year 2015	24
» Appendix 5	New CAF Projects, Fiscal Year 2015	26
» Appendix 6	Summary of Interactive Session I	30
» Appendix 7	Summary of Interactive Session II-A	31
» Appendix 8	Summary of Interactive Session II-B	32
» Appendix 9	Action Points	35

Welcome and Opening Remarks	38
------------------------------------	-----------

» Welcome Remarks by Mr. Mahendra Kumar Thapa, nFP for Nepal	38
» Welcome Remarks by Ms. Peldon Tshering, Vice Chair, APN Steering Committee	39
» Welcome Remarks by Mr. Hiroshi Tsujihara, APN Secretariat Director	39
» Opening Address by Mr. Mahendra Man Gurung, Joint Secretary, MOSTE Nepal	40

Main Item Papers of the 20th IGM/SPG Meeting	41
----------------------------------------------------------------	-----------

» IGM-SPG/20	Timetable	42
» IGM-SPG/20/01-01	Draft Agenda	43
» IGM-SPG/20/01-02	Glossary	49
» IGM-SPG/20/02-01	Highlights of Fiscal Year 2014	55
» IGM-SPG/20/02-02(a)	Final Financial Report Fiscal Year 2013	59
» IGM-SPG/20/02-02(a)-App1	Explanatory Notes to Final Financial Report Fiscal Year 2013	60
» IGM-SPG/20/02-02(b)	Financial Status Report Fiscal Year 2014	61
» IGM-SPG/20/02-02(b)-App1	Explanatory Notes to Financial Status Report Fiscal Year 2014	62
» IGM-SPG/20/02-02(c)	Deficit Strategy	63
» IGM-SPG/20/03	Suggested Amendments to the Framework Document	65
» IGM-SPG/20/03-App1	Suggested Amendments, Highlighted	66
» IGM-SPG/20/03-App2	Additional Changes Proposed at the IGM	69
» IGM-SPG/20/04-01	Third Strategic Phase Report 2010-2015	70
» IGM-SPG/20/04-02	Overview of the 4th Strategic Plan 2015-2020	97
» IGM-SPG/20/04-02-App1	Draft 4th Strategic Plan 2015-2020	98
» IGM-SPG/20/05	Sub-Regional Committee Meetings	110
» IGM-SPG/20/05-01	Draft Agenda: South Asia Sub-Regional Committee Meeting	111

» IGM-SPG/20/05-01-App1	Action Points of the Sixth SA-SRCom Meeting	112
» IGM-SPG/20/05-01-App2	Future Plans/Activities (SA-SRCom)	114
» IGM-SPG/20/05-02	Draft Agenda: Southeast Asia Sub-Regional Committee Meeting	115
» IGM-SPG/20/05-02-App1	Action Points of the Seventh SEA-SRCom Meeting	116
» IGM-SPG/20/05-02-App2	Updates on Myanmar Engagement	118
» IGM-SPG/20/05-02-App3	Updates on Initiating ASEAN Collaboration	119
» IGM-SPG/20/05-02-App4	Future Plans/Activities (SEA-SRCom)	121
» IGM-SPG/20/05-03	Draft Agenda: Temperate East Asia Sub-Regional Committee Meeting	122
» IGM-SPG/20/05-03-App1	Action Points of the TEA-SRCom	123
» IGM-SPG/20/05-03-App2	Future Plans/Activities (TEA-SRCom)	124
» IGM-SPG/20/06	Sub-Regional Chairs' Meeting	126
» IGM-SPG/20/06-App1	Summary of SRC Chairs' Meeting	127
» IGM-SPG/20/07-01	SA-SRCom Chair's Report to the IGM	128
» IGM-SPG/20/07-02	SEA-SRCom Chair's Report to the IGM	130
» IGM-SPG/20/07-03	TEA-SRCom Chair's Report to the IGM	132
» IGM-SPG/20/08-01	Core Programmes and Frameworks	133
» IGM-SPG/20/08-01-App1	Status of ARCP Projects 2014/2015	136
» IGM-SPG/20/08-01-App2	Status of CAPaBLE Projects 2014/2015	140
» IGM-SPG/20/08-02	Science-Policy Engagement	143
» IGM-SPG/20/08-02-App1	SBSTA40 Research Dialogue	145
» IGM-SPG/20/08-02-App2	Outcomes of the Second Science-Policy Dialogue	150
» IGM-SPG/20/08-03	Capacity Development Activities	154
» IGM-SPG/20/08-03-App1	APN-Cambodia Co-Finance Proposal on PDTW	156
» IGM-SPG/20/08-04	Hyogo and Other Activities	160
» IGM-SPG/20/08-04-App1	Hyogo Activities in FY2014	161
» IGM-SPG/20/08-05(a)	Co-Organised Parallel Sessions to Celebrate 20 years of APN	162
» IGM-SPG/20/08-05(a)-App1	International Conference: Our Common Future under Climate Change	163
» IGM-SPG/20/08-05(a)-App2	PROVIA: Adaptation Futures 2016	166
» IGM-SPG/20/08-05(a)-App3	CBA10: Parallel Session on Capacity Building for Loss and Damage	167
» IGM-SPG/20/08-05(b)	APN Websites	168
» IGM-SPG/20/08-05(c)	Media Engagement Activity	169
» IGM-SPG/20/08-06	Co-Finance with the University of Tokyo	171
» IGM-SPG/20/09	Draft Work Programme and Budget Plan, FY2015	172
» IGM-SPG/20/09-App1	Explanatory Notes to Draft Work Programme and Budget Plan, FY2015	173
» IGM-SPG/20/10	SPG Co-Chairs Report	174
» IGM-SPG/20/11	CAF and CAPaBLE Recommendations	175
» IGM-SPG/20/12	Steering Committee Elections	176
» IGM-SPG/20/13	APN Framework Document as Amended by the 20th IGM	178
» IGM-SPG/20/14	Hosts for Future IGMs	199
» IGM-SPG/20/15	Chairperson's Summary and Action Points of the 20th IGM/SPG Meeting	201
» IGM-SPG/20/16	Any Other Business, Final Remarks and Closing	202

Mitra Award Winning Poster and Presentation

203

» Mitra Award	Winning Poster by Mr. Shiva Khanal	204
» Mitra Award	Winning Poster Presentation	205

Section 1

Chairpersons' Summary

MEMBERS or their alternates from Bangladesh, Bhutan, Cambodia, China, Indonesia, Japan, Malaysia, Nepal, New Zealand, Pakistan, Philippines, Russian Federation, Sri Lanka, Thailand and Viet Nam attended the Meeting. Invited experts to the APN Steering Committee (SC), Scientific Planning Group (SPG) and Capacity Development Committee (CDC), as well as invited experts and representatives from the following stakeholders and partners in the international global change community were represented at the Meeting: Institute for Development and Innovation, Nepal (IDI), International Centre for Integrated

Mountain Development (ICIMOD), International Geosphere-Biosphere Programme (IGBP), Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) and International Research Network for Low Carbon Societies/Low Carbon Asia Research Network (LCS-RNet/LoCARNet). APN Project Leaders from ForestAction Nepal, National University of Mongolia, Jadavpur University, University of the Philippines and University of Southern California also participated in the Meeting as observers. The full Participants List is attached as Appendix 1.

Session I: Inaugural Session

Facilitated by the master of ceremonies, opening statements were delivered by Mr. Mahendra Kumar Thapa, Joint Secretary of the Ministry of Science, Technology and Environment (MoSTE), Government of Nepal and APN's national Focal Point (nFP) for Nepal, Ms. Peldon Tshering, Interim Chair of the Steering Committee (SC) and nFP for Bhutan, Mr. Hiroshi Tsujihara, APN Secretariat Director and guest of honour Mr. Mahendra Man Gurung, Joint Secretary of MoSTE, Nepal.

Mr. Thapa welcomed all delegates to the city of Kathmandu and stated that Nepal is linked to APN through a number of activities. He acknowledged that Nepalese young scientists have benefited from the Proposal Development Training Workshop (PDTW) organised by APN each year and that various institutions located in Nepal have received funding from APN to carry out research and capacity development activities.

Ms. Tshering in her opening remarks emphasised that APN has made great achievements in fostering alliance, and enhancing capacities and expertise by helping establish networks and fruitful contacts among its member countries. She expressed her gratitude to the Government of Nepal and the APN Secretariat for their efforts in organising the 20th IGM/SPG meeting.

Mr. Tsujihara expressed his appreciation to the guests and participants who travelled far and wide to reach Kathmandu to attend the Meeting and thanked MoSTE for kindly hosting the said Meeting. He also extended his sincere appreciation for the strong commitment by all governments and scientists of APN member countries, and for the generous and continuous support by the Hyogo Prefectural Government. He highlighted the important role of APN in supporting its member countries that are facing serious environmental problems by actively engaging them in regional research and capacity development activities through competitive funding programmes such as ARCP, CAPaBLE and APN focused activities. He stated that APN, guided by its Fourth Strategic Plan to be released in spring 2015, will continue to work closely with partners, engaging all stakeholders including champions and young researchers who are passionate and ambitious in joining global efforts in addressing the challenges of sustainability.

Mr. Gurung, highlighting the significance of scientific resources and policy-making for a better world, commended APN in its efforts to address global challenges by working in different thematic areas. At the national level, he cited Nepal's work of interest, such as the development of policies

on climate change and national and local level action plans. In closing, he expressed his appreciation to the Steering Committee (SC) for its contributions toward the outcomes of the 20th IGM and urged participants to realise fruitful outputs.

All Members, experts, project leaders, guests and staff gathered for a group photograph.

Session II: Institutional Issues (Part I)

🕒 Participants' Introduction

Facilitated by Mr. Tsujihara, all participants introduced themselves and their affiliation.

🕒 Election of Co-Chairpersons

The IGM elected, by acclamation, the following officers to serve as Co-Chairs of the Meeting:

- » Mr. Mahendra Kumar Thapa (nFP for Nepal)
- » Ms. Peldon Tshering (nFP for Bhutan)

🕒 Item 1: Adoption of the Draft Agenda

Ms. Tshering proposed that all participants observe a moment of silence in remembrance of Mr. Louis B. Brown, former co-opted member to SC and nFP for the USA for 15 years from 1996 to 2011.

Dr. Andrew Matthews, co-opted member to the SC, added that Mr. Brown was a founding member of APN and had been involved in APN directly for over 19 years, contributing enormously to APN. His work ensured that the government of USA remained committed to APN financially from its establishment and that Mr. Brown had contributed greatly to APN in terms of institutional development and linkages with sister organisations and the global change community. He expressed that it was a privilege to have worked with Mr. Brown in APN.

Ms. Tshering asked the IGM to review the agenda and opened the floor for comments. The draft agenda was adopted after incorporating an additional item suggested by Ms. Yuko Hoshino, nFP Alternate for Japan, on a proposed co-financing mechanism in partnership with the University of Tokyo, as Item 8-6.

✓ **ACTION 1:** (IGM, Secretariat): *The agenda was adopted with modifications recorded above.*

🕒 Item 2: Reports from the Steering Committee and Secretariat

▶ Item 2-1: 2014/15 Activities & Action Points

Ms. Tshering, in her capacity as SC interim Chair, reported the main highlights and activities of APN during fiscal year 2014, which included the implementation of action points identified at the 19th IGM/SPG Meeting held in Siem Reap, Cambodia in March 2014, as well as new actions resulting

from the intersessional Steering Committee meeting held in Kobe, Japan in September 2014.

In her report, Ms. Peldon highlighted the increased number of projects being managed under APN programmes, frameworks and focus activities, totalling 60 in Fiscal Year 2014. Reporting the latest status of the 2014 Call for Proposals and Expressions of Interest for CAPaBLE and the Climate Adaptation Framework (CAF), respectively, she then drew attention to the new year-round advisory service, increased number of submissions received, and the improved review process that involved all members of the Scientific Planning Group (SPG) and Capacity Development Committee (CDC) at stage 1 of the 3-stage review process.

On the work undertaken by the task team on the 3rd Strategic Phase Report and 4th Strategic Plan, she reported on the workshop held in November 2014 and the subsequent review/feedback process involving all members, thanking members for their input.

Regarding sub-regional activities, Ms. Tshering emphasised the active participation of member countries in sub-regional meetings for Southeast Asia (SEA) and South Asia (SA), held in Vientiane, Lao PDR and the Kingdom of Bhutan, respectively. She also underscored the success of the South Asia Science-Policy Dialogue convened back-to-back with the sub-regional meeting in Bhutan. Proposal Development Training Workshops (PDTWs) were held back-to-back with both events, bringing the PDTW alumni to 230 persons.

Ms. Peldon introduced the co-financing partnership established between APN and the Kingdom of Cambodia, under which the government of Cambodia will provide co-funding for APN-approved projects that are led by Cambodian scientists. She congratulated the Kingdom of Cambodia for the achievement and reported that discussions were underway with Sri Lanka and Thailand for similar co-financing arrangements.

Other activities reported include: (1) two international events jointly conducted with the Hyogo Prefectural Government, which are International Expert Meeting on Air Pollution Control in Urban Asia-Pacific on 27–29 October 2014 in Zhuhai, China, and the International Symposium on Hokusetsu Satoyama on 30 November 2014 in Takarazuka, Hyogo, Japan; (2) communications and outreach activities; (3) major events conducted/participated; and (4) representative changes in member countries and staff changes in the Secretariat.

In the discussion that followed, Mr. Sundara Sem, nFP for Cambodia, congratulated APN for the activities undertaken and the successful outcomes in the past fiscal year. Mr.

Muhammad Helmi Abdullah, nFP Alternate for Malaysia suggested an edit to the report regarding the location of the 7th SEA-SRC Meetings, before it was accepted by the IGM.

- ✔ **ACTION 2** (Secretariat): *The report was welcomed and approved by the IGM. The edit suggested by the nFP Alternate for Malaysia relating to the location of the 7th SEA-SRC Meeting and PDTW workshop will be incorporated.*

▶ Item 2-2 Financial Reports and Deficit Strategy

Mr. Yukihiro Imanari, Head, Division of Development and Institutional Affairs of the Secretariat, presented the Final Financial Report for Fiscal Year 2013 for IGM approval and the interim Financial Status Report for Fiscal Year 2014 for IGM information and discussion.

In relation to the Final Financial Report (FY2013) that was previously approved by the Steering Committee at its 28th Meeting in September 2014 held in Kobe, Japan, Mr. Imanari noted that the total deficit for that fiscal year amounted to US\$ 511,000 due to a number of factors including lower-than-expected resource availability, budget overrun and loss through exchange rate fluctuations.

In introducing the Financial Status Report (FY2014 as of 31 December 2014), Mr. Imanari acknowledged the enormous in-kind support by member countries in the course of FY2014. He explained that there has been a shortfall in resources available, nevertheless, with a series of strategies implemented during the year, which resulted in exchange-rate-related savings, the deficit reported as of 31 December 2014 was expected to be reduced to US\$ 379,000 by the end of the fiscal year. Mr. Imanari reported that, as with previous years, the finalised Financial Report for FY2014 would be presented to the SC for approval in autumn 2015.

In connection to the aforementioned deficit resulting from budget overrun, exchange rate losses and lack of allocable resources, Mr. Imanari introduced a Deficit Strategy that includes measures to: (1) allocate certain remaining, undisbursed and returned funds from APN funded activities; (2) establish a cost item in the budget plan to help clear the deficit; (3) allocate a contingency of 5% of the total annual revenue to allow for flexibility in financial management; (4) strategically set an exchange rate at the time of budget planning, and (5) convert available funds to US Dollars as soon as contributions from financial donors are received. Mr. Imanari stated that if the strategy were to be implemented, the deficit would be cleared in three fiscal years and any future deficit would be avoided.

Ms. Tshering opened the floor for discussion.

Dr. Matthews commended the Secretariat for presenting a clearer financial statement taking into account the funding commitments for all projects that had not been fully closed. He thanked the Secretariat staff members back in Kobe for working closely with IGES headquarters and external auditors to clarify the liabilities and opportunities as presented in the reports. He also thanked the Kingdom of Cambodia and global change partners for providing co-funding for specific projects.

Mr. Ajith Silva, nFP Alternate for Sri Lanka, stated that in the effort to establish co-finance partnerships with APN, Sri Lanka will explore possibilities to mobilise resources of the Climate Change Secretariat of Sri Lanka, who has funds available for regional research activities. This was welcomed by the IGM.

Dr. Jiutian Zhang, nFP Alternate for China, suggested that the Deficit Strategy be updated annually based on the practice and lessons learned.

- ✔ **ACTION 3** (IGM): *The Final Financial Report for Fiscal Year 2013 was approved by the IGM.*

- ✔ **ACTION 4** (IGM, SC, Secretariat): *The Interim Financial Report for Fiscal Year 2014, presented in an improved format, was accepted by the IGM. The final version will be provided to the SC during the next intersessional meeting and to the next IGM for endorsement.*

- ✔ **ACTION 5** (SC, Secretariat): *The Deficit Strategy proposed by the Secretariat was approved, taking note that the strategy should be reviewed and updated annually at every SC meeting and IGM until the deficit is cleared.*

🕒 Item 3. Framework Document

Ms. Tshering informed the IGM that the suggested amendments to the APN Framework Document presented had been prepared and circulated in January 2015 to all nFPs for their comment and input. The suggestions included updates to the mandate of the IGM and SC, and to the mandate of, and guidance for, the Secretariat. An additional suggested amendment proposed by the CDC to reflect the Committee's complete terms of reference in the Framework Document was also introduced by Ms. Tshering, before asking members to discuss the proposed changes and to raise any additional modifications as appropriate. She reminded members that the IGM was invited to formally endorse the proposed amendments to the Framework Document under Item 13 on Day 3.

In view of the need to continuously review and update the Framework Document, Ms. Tshering invited members to join a task team led by Ms. Tshering herself, to work on drafting suggested amendments to the Framework Document for approval by the IGM at its next meeting. The full list of volunteers and the areas identified by the IGM at the present Meeting that require further amendment are recorded herein under Item 13.

- ✔ **ACTION 6** (Members, Secretariat): *Mr. Chencho Tshering (SPG Alternate for Bhutan), Dr. Subramaniam Moten (Invited Expert to the SPG), Dr. Andrew Matthews (Invited Expert to the CDC), Mr. Sajjad Yaldram (nFP Alternate for Pakistan), and Mr. Ajith Silva (nFP Alternate for Sri Lanka) volunteered to work with Ms. Peldon Tshering to review the suggested amendments to the Framework Document for final approval by the IGM on Day 3 and join a task team to draft suggested amendments for the next IGM.*

- ✔ **ACTION 7** (SRC): *The SRC committees are invited to discuss the Framework Document if time allows at SRC parallel sessions.*

Session III: APN Science, Development and Institutional Affairs

Item 4: Third Strategic Phase Report and Fourth Strategic Plan

Ms. Tshering invited Dr. Matthews and Prof. Kanayathu Koshy to present on behalf of the Task Team the final draft of the Third Strategic Phase Report (3SP) 2010-2015 and Fourth Strategic Plan (4SP) 2015-2020 for IGM consideration and approval.

The final draft of the 3SP (2010-2015) was introduced by Dr. Matthews, who gave a brief introduction to the members of the 3SP task team and expressed his appreciation to members of the SPG and IGM who provided feedback and comments during the review process. He especially noted the successful establishment of three thematic frameworks in addition to the core programmes of ARCP and CAPaBLE, adding that the future of the Frameworks will depend on the outcomes, relevance and stakeholder interest. He informed that 22 projects conducted in the Third Strategic Phase were considered outstanding and were highlighted in the report. He underscored "policy-relevant science" and "science-policy interactions" as APN's niche in the global change community, noting the need and challenge to ensure continuous monitoring of capacity building success and policy relevance. He also highlighted the importance of continuous synthesis and assessment of what has been learned through the Framework activities. Before asking the IGM to formally approve the 3SP, Dr. Matthews introduced a set of numbers in relation to research output, people engagement, knowledge dissemination performance etc., showing the achievements of the five-year period in realising its strategic goals.

Prof. Koshy presented on the final draft of the 4SP (2015-2020) by introducing the four goals and key investment instruments linked to the achievement of these goals, which include underpinning knowledge creation, local capacity development, facilitation of science-policy interaction, and defining regional context of global issues by giving examples of possible activities under each goal. He highlighted the four components of the Action Agenda designed to support the realisation of the goals, i.e. in terms of research, capacity development, science-policy interfacing, communication and outreach, and management. Finally, Prof. Koshy drew a comparison between the structures of the Third and Fourth Strategic Plans, emphasising the focus on the Action agenda and the need for systematic and routine monitoring and evaluation of projects in the new strategic phase, as well as shorter and more frequent synthesis of thematic areas.

Mr. Thapa thanked Dr. Matthews and Prof. Koshy for their presentations and expressed appreciation to the task committee for their work. The floor was opened for discussion and a number of suggestions from Mr. Ginting, Dr. Mandira Shrestha of ICIMOD, Mr. Silva, Mr. Chencho Tshering - SPG Member Alternate for Bhutan, and Dr. Joyashree Roy, invited guest from Jadavpur University were added to the Research Pathways section of the 4SP. Dr. Stevenson, supported by others including Dr. Erna Sri Adiningsih, SPG Member for Indonesia and Dr. Matthews, reiterated that the list was indicative and non-exhaustive and the 4SP, particularly the

Research Pathways section, shall remain a living document for guiding the work of the SPG and therefore, can be revised as research needs arise.

☑ **ACTION 8** (IGM, Secretariat): *The APN 3rd Strategic Phase Report 2010–2015 was approved.*

☑ **ACTION 9** (IGM, SPG, and Secretariat): *The IGM approved the final draft 4th Strategic Plan 2015-2020, with the understanding that Appendix 2 of the 4SP (Research Pathways) is an evolving and non-exhaustive list showing APN's areas of interest. A number of additional topics were proposed as follows:*

- » Sustainable energy related to greenhouse gases;
- » Mountains and coastal hazards;
- » Air resource management;
- » Sustainable consumption and production, and public green procurement; and
- » Satellite/ environmental accounting.

Before closing the morning session, Ms. Tshering provided a brief summary of the discussions and action points noted so far, and expressed her appreciation to the Secretariat for the work involved in preparing the financial reports. Further, she acknowledged the government of Japan and other donors for their financial commitment. She thanked the participants who volunteered to help with the development of the Framework Document and acknowledged the task committee for developing the 3SP (2010-2015) and 4SP (2015-2020).

Item 5: Parallel Sessions: Sub-Regional Cooperation

The Sub-Regional Committees for South Asia (SA), Southeast Asia (SEA) and Temperate East Asia (TEA) met in parallel sessions to discuss common issues, progress of activities and future plans. Outlines of their discussion are listed below.

► South Asia Sub-Regional Committee (SA-SRC):

- » Review of action points from the 6th SA-SRC Meeting;
- » South Asian Association for Regional Cooperation (SAARC);
- » Partnerships with other regional networks;
- » Outcomes of the South Asia Science-Policy dialogue;
- » Status and updates on SA-SRC proposals;
- » Identification of SA-SRC regional priorities for 2015–2016; and
- » Host of the 7th SA-SRC Meeting.

► Southeast Asia Sub-Regional Committee (SEA-SRC):

- » Review of action points from the 7th SEA-SRC Meeting;
- » Status and updates on engaging Myanmar;
- » Status and updates on initiating collaboration with ASEAN;
- » Status and updates on SEA-SRC seed grant proposal;

- » Identification of SEA-SRC regional priorities for 2015–2016; and
- » Host of the 8th SEA-SRC Meeting.

► **Temperate East Asia Sub-Regional Committee (TEA-SRC):**

- » Review of action points from TEA-SRC Meeting;
- » TEA Science-Policy dialogue;
- » Annual PDTW;
- » Strategies to enhance TEA committee activities;
- » Plans/activities in line with APN's 20th anniversary (regional and national activities); and
- » Host of the next TEA-SRC Meeting and focused areas.

Each SRC appointed a Chair, a Vice Chair and a rapporteur to facilitate its meeting and to report to the IGM on Day 2 under Item 7. Following the respective SRC meetings, the Chairs and rapporteurs from the three sub-regions gathered in a joint meeting to exchange ideas and issues among the sub-regions.

In the parallel meetings, the following officers were elected to serve on their respective Sub-Regional Committees for a one year term:

► **SA-SRC:**

- » Chair: Mr. Sajjad Ahmad, nFP for Pakistan (represented by Mr. Sajjad Haider Yaldram, nFP Alternate for Pakistan)
- » Vice Chair: Mr. Ajith Silva, nFP Alternate for Sri Lanka

► **SEA-SRC:**

- » Chair: Mr. Sabar Ginting, SC Member and nFP for Indonesia
- » Vice Chair: Dr. Henry Adornado, Philippines, SPG Member for Philippines
- » Rapporteur: Dr. Jariya Boonjawat, SPG Co-Chair and SPG Member for Thailand

► **TEA-SRC:**

- » Chair: Dr. Tsogtbaatar Jamsran, SPG Member, Mongolia
- » Vice Chair: Prof. Kensuke Fukushi, SPG Member, Japan

🕒 **Item 6: SRC Chairs, Vice Chairs and Rapporteurs Meeting**

The meeting was attended by Mr. Yaldram, Mr. Silva, Mr. Ginting, Dr. Adornado, Dr. Jariya, Dr. Jamsran, Dr. Fukushi and the Secretariat's Ms. Taniya Koswatta.

Chairs of the three regional groups provided updates on sub-regional activities that have been conducted by the sub-regional committee members during Fiscal Year 2014. Members discussed the regional priorities and identified the priority themes for each group. SA-SRC identified three priority areas which include: (1) sustainable consumption and production; (2) energy security; and (3) extreme events such as cyclones and floods. The SEA-SRC chair noted that renewable energy and water security are the most prominent

problems in their region and therefore, SEA-SRC's activities will be focused on those topics. The TEA-SRC chair reported that due to the varying economic and political profiles of the TEA-SRC member countries, the committee selected land use and climate change as a priority theme.

Regarding sub-regional science-policy dialogues, members identified the importance of science and policy interaction and agreed to continue the dialogue to strengthen the collaboration between the scientists and policy makers. TEA-SRC Chair expressed his willingness to hold the TEA Science-Policy Dialogue (TEA-SPD) in Mongolia on autumn of 2015. To effectively use financial resources further, TEA-SRC members agreed to hold the sub-regional committee meeting and the annual proposal development training workshop (PDTW) as back-to-back events with the TEA-SPD. SA-SRC expressed their willingness to conduct a PDTW, in case the TEA-SRC is unable to hold the annual PDTW.

SRC Chairs agreed to discuss the plan of conducting a synthesis of science-policy dialogues at the next IGM after completion of the TEA-SPD. The SA-SRC Chair suggested employing solutions-based approach rather than research-based approach in any future dialogues that APN may organise. The SEA-SRC Chair requested other SRCs to promote APN's 20th anniversary through regional and national activities. In closing, the Chairs expressed their appreciation of the extended time allocated for the sub-regional parallel meetings at the IGM.

🕒 **Item 7: Sub-Regional Committee Reports and Discussion**

Mr. Thapa, invited representatives of the SEA-SRC, SA-SRC and TEA-SRC to report to the IGM on results of the parallel sessions held on Day 2.

► **SEA-SRC**

Mr. Ginting reported on behalf of the SEA-SRC regarding discussions that took place under Item 5 on Day 2. Firstly, he reported the highlights of the 7th SEA-SRC Meeting held in July 2014 in Lao PDR, which included the proposal "Climate Change Adaptation (CCA) in Urban Planning in SEA" that was submitted to APN. Should the proposal be recommended for funding, he noted that the next step would be to define the roles of participating countries. A kick-off meeting back-to-back with the 8th SEA-SRC Meeting in August 2015 was agreed and following that, three "training of trainers" workshops would be conducted in accordance with the proposal timeline in Indonesia, Thailand and Viet Nam, respectively. On initiating collaboration with the ASEAN, Mr. Ginting reported that the SEA-SRC recognised the importance of this matter and conceded that a more direct approach is needed to engage ASEAN. As a result, the SEA-SRC agreed Mr. Ginting's proposal to contact the ASEAN Secretariat in Jakarta directly. Lastly, Mr. Ginting relayed the future plan and activities of the SEA-SRC to the IGM in line with the 4SP and cited renewable energy and water security as priority themes for SEA-SRC focus.

☑ **ACTION 10A (SEA-SRC):** *The SEA-SRC is to undertake planned activities as follows:*

- » On initiating collaboration with the ASEAN Secretariat, Mr. Ginting will contact the ASEAN Secretariat in Jakarta.
- » 8th SEA-SRC meeting is to be held in Indonesia in August back-to-back with a kick-off meeting of the project "Climate Change Adaptation in Urban Planning" (pending approval of the seed grant proposal).
- » Thailand is considering to host the 21st IGM/SPG Meeting in 2016.
- » Thailand will celebrate the 20th anniversary of APN back-to-back with the Climate Expo in Bangkok in June/July 2015. There will also be a number of other events to celebrate in Cambodia, Malaysia, Indonesia and Viet Nam.

► SA-SRC

Mr. Yaldram reported to the IGM, on behalf of the SA-SRC, the discussions that took place under Item 5. He reported first on the highlights of the 6th SA-SRC Meeting held in January 2015 in Bhutan and the action points that were agreed upon. These include: (1) short-listing relevant national-level research institutions/organisations to potentially engage with; (2) a detailed report of the SA-SPD will be prepared and shared in due course with the involved member countries; and (3) formal invitation letter is to be sent to SAARC from APN Secretariat with details about APN and areas for collaboration between APN and SAARC. In terms of SRC cooperation activities in APN's 4SP, SA-SRC decided that it is best to focus activities towards Sustainable Development Goals (SDGs). As regards membership, SA-SRC felt that it is very important to have the presence of India in APN and therefore, recommended the APN Secretariat to communicate with India to appoint a nFP and SPG member as soon as possible. SA-SRC agreed with the suggestion that the Secretariat notify the respective ministry if the relevant nFP is absent for more than two meetings. On financial resources development, SA-SRC requested the APN Secretariat to send a brief five-slide presentation that incorporates the outcome of the 3SP Evaluation, to the members as soon as possible so that it can be effectively used to promote APN. In closing, the Chair reported

that Pakistan will be hosting the next SA-SRC meeting but the schedule is yet to be determined.

☑ **ACTION 10B** (SA-SRC): *The SA-SRC is to undertake planned activities as follows:*

- » Pakistan will host the 7th SA-SRC Meeting.
- » Mr. Chencho Tshering is to develop a concept note on sustainable consumption and production to be shared among the members for further improvement (concept note on paperless office or government)
- » Outcomes of the recently-held South Asia Science-Policy Dialogue will be further shared among stakeholders.

► TEA-SRC

Dr. Jamsran reported on behalf of the TEA-SRC, the discussions that transcribed at their sub-regional parallel session under Item 6. He briefed the IGM about the activities that the TEA-SRC has decided to conduct in fiscal year 2015. A science-policy dialogue on climate change and land management is planned to be held in Mongolia as back-to-back with the PDTW.

☑ **ACTION 10C** (TEA-SRC): *The TEA-SRC is to undertake planned activities as follows:*

- » The plan to hold a Science-Policy Dialogue in Mongolia on climate change and land management will be finalised further by the five TEA member countries.
- » A Proposal Development Training Workshop (PDTW) is also planned to be organised in Mongolia.
- » The TEA-SRC Meeting will take place back-to-back with the SPD and PDTW.

After his presentation, the IGM discussed the actions to be taken based on the results of the SRC Meetings as well as explored ideas on how to advance sub-regional activities. Ms. Tshering thanked Dr. Jamsran for his update and requested that the TEA-SRC share their work with other sub-regions.

Session IV: Institutional Issues (Part II)

🕒 Item 8: Ongoing and New Activities

Ms. Tshering invited the Secretariat to introduce proposed ongoing and new activities for the upcoming Fiscal Year, reminding members that the related budgetary issues were subject to discussion and approval under the ensuing item (Item 9) on Proposed Work Programme, Budget and Risk Management Strategy for FY2015. Continuing and new activities proposed for 2015/16 are summarised as follows:

► Item 8-1: Core Programmes and Science Frameworks

Dr. Linda Anne Stevenson, Head, Division of Communication and Scientific Affairs of the Secretariat started by introducing the status of the 24 projects (13 continuing multi-year projects and 11 new ones) under the ARCP programme approved at

the previous IGM. She pointed out that no funds from USA had been allocated for the 2014 ARCP projects because the funding proposal for the 2014 ARCP projects submitted to NSF had not been approved. She reported that 13 ARCP projects are seeking approval for continuation for FY 2015, and that 8 proposals under the CAPaBLE programme and 12 proposals under the CAF Framework would be recommended by the SPG for IGM approval on Day 3 under Item 11. The total budget required for these would be presented in the ensuing item, Item 9. As regards the 2015 calls for proposals for projects commencing in FY2016, she reported that calls under the new Collaborative Regional Research Programme (CRRP) and Capacity Development Programme (CAPaBLE) were expected to be launched in early June 2015, and there was no plan for other calls at the present time.

▶ **Item 8-2: Science-Policy Engagement**

On science-policy engagement, Dr. Stevenson reported that APN is expected to attend the annual SBSTA research dialogue as agreed at the recent SC Meeting by asking Dr. Matthews to represent APN in the dialogue, which is also an opportunity to discuss issues under the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts (IWM), and the Nairobi Work Programme (NWP) with the UNFCCC Secretariat, on climate adaptation projects being funded by APN. Regarding IPBES, she noted that APN has been recognised by IPBES in a number of ways, including regional assessment in Asia and the Pacific (deliverable 2b) and capacity building. APN is also expected to be represented at the fourth session of the Plenary of IPBES, which will take place in early 2016. With regard to Science-Policy Dialogues, she reminded that the next dialogue was expected to be held in TEA in FY2015 and a workshop would be organised in FY2016 to synthesise the outcomes of the (expected) three dialogues.

▶ **Item 8-3: Capacity Building**

Dr. Stevenson proposed three activities related to capacity building. Two were organised by the Secretariat: (1) one Proposal Development Training Workshop (PDTW) to be held in the TEA region as an annual PDTW; and (2) a tentative capacity building seminar to be held back-to-back with a meeting of the IPBES Technical Support Unit, which was to be hosted in Japan. She noted that suggestions from SPG-SC chairs has led to the improvement of PDTW content and structure, which will be implemented in future PDTWs. The third activity proposed by Dr. Stevenson was in relation to APN-Cambodia Partnership activities, where the government of Cambodia has pledged over \$16,000 as co-funding for a Southeast Asia PDTW to be conducted in Cambodia.

▶ **Item 8-4: Hyogo & Other Activities**

Mr. Tsujihara introduced a number of activities expected to be implemented with earmarked funds from the Hyogo Prefectural Government and the Ministry of the Environment, Japan (MOEJ). One of the Hyogo-based activities will be a workshop on Satoyama and sustainable development, building on the success of the International Symposium on Hokusetsu Satoyama held in 2014. The other, entitled "International Seminar on Restoration of the Rich Natural Environment" will be implemented in collaboration with the Hyogo Prefecture Hanshin-Kita Regional Office to address management of human-wildlife coexistence or air pollution control in urban areas. A seminar or workshop with contract funds from MoEJ is expected to be held tentatively in early 2016 as a follow-up activity to the 3R Scoping Meeting held in Kobe, Japan, in June 2014, which identified the application of new technology as a thematic area of high priority in the Asia-Pacific region.

▶ **Item 8-5: Celebrating 20 Years of APN**

On proposed activities to celebrate the 20th anniversary of APN, Dr. Stevenson introduced a number of proposed co-organised parallel sessions in the following international conferences: "Our Common Future under Climate Change"

Conference (July 2015, Paris, France), PROVIA: Adaptation Futures (June 2016, Rotterdam, the Netherlands) and the 10th International Conference on Community-Based Adaptation (CBA10, early 2016, Dhaka, Bangladesh). Mr. Xiaojun Deng, Programme Officer for Communication and Development, introduced the new "Friends of APN" online platform and shared plans for engaging stakeholders using the established platform, which include a photo contest and a writing competition for the media. Ms. Dyota Condorini, Programme Officer for Science and Institutional Affairs, presented a media engagement activity, which is expected to include a media visit and writing competition to address communication gaps focusing on the human factor.

▶ **Item 8-6: Co-Finance System between APN and the University of Tokyo**

Ms. Hoshino, nFP Alternate for Japan, introduced the concept of a proposal on establishing a co-finance system between APN and The University of Tokyo (UT) to promote and support research conducted by project teams that include members from the university. She noted that the mechanism will encourage faculty members of UT to join APN projects, while facilitating overseas research activities for partners through APN support. She suggested that the mechanism, if successful, could be a model for establishing partnerships with other universities, research institutions and related organisations in APN member countries.

Responding to a question from Dr. Roland Fuchs on the mechanism for selecting projects and the funding process, Ms. Hoshino said that the partnership expected to make use of APN's existing mechanism for project selection and review. Prof. Fukushi provided additional clarification on the design of the mechanism, noting that while the funds can be used for overseas expenses, a key requirement is that the research team must include a faculty member from UT, who does not necessarily need to be the leader of the project proposed. While the IGM generally welcomed the partnership and appreciated the opportunity provided by UT, some questions were raised from the floor, which included the thematic areas of the partnership, additional requirements, percentage of co-finance, etc. Ms. Tshering thanked participants for their inquiry and requested the Secretariat to further discuss with UT concerning expected modalities and share it with the SC.

☑ **ACTION 11** (IGM, SPG, CDC, Secretariat): *While activities introduced above were to be formally endorsed by the IGM under Item 9, the following actions are noted:*

- » *Cambodia will further discuss details of the proposed PDTW involving institutions in Cambodia.*
- » *Prof. Roland Fuchs will provide information about media engagement activities conducted by the East-West Center.*
- » *The IGM reaffirmed that APN's existing call for proposals process will be used in the co-finance mechanism proposed by UT.*

🕒 **Item 9: Proposed Work Programme, Budget Plan and Risk Management Strategy for FY2015**

Mr. Imanari introduced the proposed Work Programme and

Budget Plan for Fiscal Year 2015¹. He started by noting that the exchange rates for budget setting were determined by applying the approved Deficit Strategy based on prevailing exchange rates. He then explained the budget plan in detail, drawing attention to the line item for contingency and for deficit clearance as per the strategy approved by the IGM. He acknowledged the generous in-kind contribution by all members, and particularly thanked Mr. Sundara Sem, nFP for Cambodia for pledging additional monetary contribution through the APN-Cambodia co-finance partnership. Finally, he presented a breakdown of allocations for activities presented earlier in Item 8 before seeking IGM approval of the Work Programme and Budget Plan.

✓ **ACTION 12** (IGM, SC, Secretariat): *The draft Work Programme and Budget Plan for Fiscal Year 2015 was adopted.*

🕒 Item 10: SPG Co-Chairs' Report

Ms. Tshering, called on Dr. Amir Muhammed, SPG Member for Pakistan, to deliver the SPG Co-Chairs' Report.

On behalf of the SPG and the CDC, Dr. Muhammed reported on highlights and results of the SPG meeting held prior to the IGM Meeting, starting by sharing some statistics on current projects (ARCP/CAPaBLE) and statistics on the 2014 Call for Proposals (for CAF and CAPaBLE).

On topics of interest for the 2015 Call for Proposals, Dr. Muhammed presented several topics that were discussed at the SPG Pre-Meeting based on the global research agenda and research interests of each country. Topics included: (1) increasing community resilience in coastal and mountain areas; (2) energy, environment and ecosystems; (3) extreme weather and its impacts; (4) climate change and health; (5) water, energy and food security; (6) global change data management (data policies and access); (7) disaster risk reduction and resilience; and (8) sustainable consumption and production. He also stressed that with regards to the core programmes of APN, the name "Annual Call for Regional Research proposals (ARCP) programme" will be changed to the "Collaborative Regional Research Programme (CRRP)." Furthermore, a Logical Framework Analysis (LFA) will be introduced as part of the proposal for better project implementation and subsequent evaluation. In reviewing proposals, consultation among reviewers and discussion on common proposals will be held as a new modality during the process. In addition to the proposal review process, the SPG agreed that the "score per criterion" must be considered rather than just the "average score" of set criteria.

In terms of project management and evaluation, Dr. Muhammed reported that the SPG proposed "quantifiable indicators" to be included in progress reports of multi-year projects to effectively measure progress and the success of project activities.

He also pointed out the relevance of increasing offer for partnership and collaboration as APN moves into its 4th strategic phase and noted that an integrated effort to

combine projects of similar topics and scope rather than providing small grants might be a strategy that APN adopts, and which the SPG recommends. Likewise, a synthesis of APN projects/activities should be conducted if it can provide good contribution to the society.

Dr. Muhammed stated that the SPG emphasises that research needs to be translated into practice and sees the notable existing gaps between science and policy. Thus, enhancing engagement among the science community, policy makers and media through incorporating media visits to project sites, for example, could be a way to attract the interest of policy makers. In addition, research findings, as disseminated by media, could help the general public to easily grasp the information.

Prior to the end of the presentation, a special thanks to the presenter himself, Dr. Amir Muhammad for his two-year service as SPG-SC Member was acknowledged. In addition, a special thanks to Dr. Subramaniam Moten for volunteering his time and effort in helping out with the 2014 SPG SC duties was noted.

Finally, Dr. Muhammed announced the results of the SPG-SC election as well as the new CDC structure, as follows:

▶ SPG-SC

- » Dr. Boonjawat (Thailand) will act as Co-Chair and serve for one more year
- » Prof. Fukushi (Japan) as SPG Co-Chair for a 2-year term
- » Dr. Hemant Borgaonkar (India) will serve one additional year as SPG-SC member
- » Dr. Jamsran (Mongolia) as new SPG-SC member
- » Dr. Fariza Yunus (Malaysia) as new SPG-SC member

▶ CDC

- » Dr. Boonjawat (Thailand), SPG Co-Chair (Ex-Officio)
- » Prof. Fukushi (Japan), SPG Co-Chair (Ex-Officio)
- » New SC Chair (Ex-Officio, to be elected after SC election)
- » Donor Member (Japan)
- » Dr. Matthews, invited expert
- » Prof. Fuchs, invited expert
- » Dr. Srikantha Herath, invited expert
- » Dr. Juan Pulhin, invited expert

The Chair commended the work of the SPG and CDC over the past year.

✓ **ACTION 13** (SPG, CDC, Secretariat): *The IGM endorsed the following action points regarding the calls for proposals and project management:*

- » *Topics of interest for 2015 Calls for Proposals;*
- » *The name of the ARCP Programme will be changed to CRRP (Collaborative Regional Research Programme);*
- » *Logical framework analysis will be included as part of proposals;*
- » *An expert database will be provided to the SPG;*
- » *Proposals will be scored by criterion; and*
- » *Quantifiable indicators will be included in multi-year progress reports.*

¹ The Work Programme and Budget Plan for Fiscal Year 2015 is attached as Appendix 2 of the present summary.

- ✓ **ACTION 14** (SPG, Secretariat): *The new SPG Sub-Committee (SPG-SC) and its Co-Chairs were elected (refer to the list above).*
- ✓ **ACTION 15** (CDC, Secretariat): *The new Capacity Development Committee (CDC) was elected (refer to the list above).*

🕒 **Item 11: CAF, CAPaBLE and Continuing ARCP and CAPaBLE Recommendations for Funding**

On behalf of the SPG and CDC, Dr. Boonjawat and Prof. Fukushi presented projects and proposals that the SPG and CDC recommended to the IGM for funding under the ARCP and CAPaBLE programmes, and the Climate Adaptation Framework.

▶ **Recommendations for ARCP and CAPaBLE Continuing Multi-Year Projects**

Thirteen continuing multi-year projects under ARCP are secured under fiscal year 2014 budget (US\$ 295,000, with US\$ 145,200 secured from FY 2015 budget). One CAPaBLE continuing multi-year project, seeking recommendation for continuation of funding, was approved for conditional funding (US\$ 27,000, reduced funding) subject to review by the CDC and recommendation at the intersessional SC meeting for approval.

The recommended allocation is outlined in the following table:

Recommendations for ARCP and CAPaBLE Continuing Multi-Year Projects

13 continuing ARCP projects	US\$ 440,200
1 continuing CAPaBLE project pending successful review	US\$ 27,000

▶ **Recommendations for New CAPaBLE and CAF Proposals**

Regarding new projects for fiscal year 2015, Dr. Boonjawat and Prof. Fukushi reported that the SPG was recommending eight proposals under the CAPaBLE call (US\$ 355,500) and 12 proposals (two of which are to be combined) under the CAF call (US\$ 778,000).

Ms. Tshering thanked Dr. Boonjawat and Prof. Fukushi for their report, and asked the IGM to consider and approve the recommendations for new activities.

Recommendations for New CAPaBLE and CAF Projects

8 new CAPaBLE projects from 21 full proposals	US\$ 355,500
12 new CAF projects from 25 full proposals	US\$ 778,000

▶ **Discussions on SPG recommendations**

Dr. Koshy inquired about the approval of activities for the second year of the 2014 CAF projects. Dr. Stevenson answered that the progress of the projects will be evaluated during the intersessional SC meeting and the approval of year 2 activities are pending successful review.

Mr. Ginting asked about a project (ARCP2014-21NMY-Sharp) which the SPG recommended for conditional funding for continuation. Dr. Stevenson clarified that the SPG-SC feels that there should be more progress reported; however, the SPG-SC understood that the project started late. Therefore, the SPG-SC recommended conditional continuation of funding at US\$ 30,000 subject to satisfactory review and subsequent approval of an updated progress report.

Ms. Tshering asked the floor for comments regarding the presented recommendations for continuation under the ARCP programme. The IGM approved the recommendations for continuing ARCP projects by acclamation.

Ms. Tshering then opened the floor for discussion regarding CAF recommendations by the SPG.

Dr. Miah asked about the rationale to combine two proposals submitted under CAF (CAF2014-FP02-Arifwidodo and CAF2014-FP19-Abdulharis). Dr. Boonjawat answered that the two proposals address the same topics and Prof. Fukushi further elaborated that both proponents, who participated in the SEA PDTW held in Lao PDR in July 2014, were collaborators in each other's respective proposals.

After correcting a typographical error pointed out by Dr. Boonjawat, the new and continuing activities under ARCP, CAPaBLE and CAF were approved by acclamation, and the Secretariat was requested to proceed with arrangements to provide the results to the proponents.

- ✓ **ACTION 16** (IGM, SPG, CDC, Secretariat): *The IGM approved SPG recommendations for thirteen (13) continuing ARCP projects (US\$ 295,000 secured in FY 2014 budget, with US\$ 145,200 secured from FY 2015 budget) (listed in Appendix 3).*
- ✓ **ACTION 17** (IGM, SPG, Secretariat): *The IGM approved SPG recommendations for twelve (12) new proposals under the Climate Adaptation Framework (US\$ 778,000), two of which are to be combined into one project, therefore, 11 new projects were approved for funding (listed in Appendix 5).*
- ✓ **ACTION 18** (IGM, SPG, Secretariat): *The continuation of multi-year CAF projects will be decided during the intersessional SC meeting in autumn 2015, following review by the SPG-SC.*
- ✓ **ACTION 19** (IGM, CDC, Secretariat): *The IGM approved SPG recommendations for one (1) continuing CAPaBLE project (US\$ 27,000) pending successful review.*
- ✓ **ACTION 20** (IGM, CDC, Secretariat): *The IGM approved SPG recommendation for eight (8) new proposals under the CAPaBLE programme (US\$ 355,500). In addition,*

US\$25,000 was approved as a contingency fund for CAPaBLE in FY 2015 (listed in Appendix 4).

🔗 Item 12: Election of Steering Committee

Members

Mr. Thapa drew attention to the paper prepared for Item 12 and introduced the nominations received prior to the IGM. He referred participants to the Framework Document wherein the membership, chairpersonship and term of the SC are set out. Noting that one out of the five nominees were nominated after the extended deadline of 6 March 2015, he asked the IGM to consider and provide further nominations, as appropriate.

During the process, Russian Federation and Bangladesh were nominated by Malaysia and Sri Lanka, respectively, bringing the total number of nominees to seven. In the discussion that ensued, there was a strong opinion, particularly expressed by Prof. Giashuddin Miah speaking on behalf of the nFP for Bangladesh, on the need for the rotation of SC membership so that opportunities should be given to members who have not served on the SC before. Furthermore, members serving for over five years should be rotated off from the SC. Other members including Mr. Ginting and Mr. Sem maintained that balanced regional representation should be considered first.

Emphasising that five seats are available for elected members, Ms. Tshering put forward two suggestions based on opinions from the floor: (1) the seven candidates hold an ad hoc meeting during lunch to decide among themselves; (2) as suggested by Dr. Jiutian Zhang, nFP for China and Mr. Ginting, the four nominees nominated in time before the deadline should remain, while the last seat should be open for selection from other candidates. The second option was generally supported and Prof. Miah, on behalf of nFP for Bangladesh and Mr. Silva, on behalf of the nFP for Sri Lanka, announced their respective withdrawal from the list of candidates. The IGM then reached consensus and welcomed the five remaining candidates to serve on the SC as tabulated below.

During the discussion, suggestions were given by Dr. Zhang, Ms. Tshering, Mr. Sem and Mr. Silva to revise the Framework Document in terms of the procedures and modalities of SC election. The related action point is noted under Item 13 APN Framework Document (Part II).

In a closed meeting held immediately after the morning session, the elected members, together with the newly elected SPG Co-Chairs in their capacity as ex-officio members, and Ms. Hoshino, as a donor representative, decided to co-opt Dr. Fuchs, Dr. Matthews and Dr. Kazuhiko Takemoto, former nFP for Japan, to serve on the SC for one more year, pending confirmation of their willingness. The five members also elected among themselves a Chair, a Vice Chair and a Second Vice Chair in accordance with the Framework Document. The Chair of the SC is indicated in the list below.

- ☑ **ACTION 21** (SC): *Five nFPs were elected by the IGM. The Chairpersons, including Vice- and Second Vice Chairs were elected and three members were co-opted by the new SC, as indicated below.*

Elected National Focal Points

- » *Ms. Tshering, Bhutan (Chair)*
- » *Dr. Chengyong Sun, China (First Vice Chair)*
- » *Mr. Ginting, Indonesia (Second Vice Chair)*
- » *Mr. Sajjad Ahmad, Pakistan*
- » *Dr. Andrey V. Adrianov, Russian Federation*

Ex-Officio Members: New SPG Co-Chairs

- » *Dr. Boonjawat, Thailand*
- » *Dr. Fukushi, Japan*

Donor Members

- » *Dr. Akio Takemoto, Japan*
- » *(any other donor country willing to participate)*

Host of the next IGM (1 year term)

- » *China (pending government approval)*

Co-Opted Members (1 year term)

- » *Dr. Fuchs, USA*
- » *Dr. Matthews, New Zealand*
- » *Dr. Takemoto, Japan*

- ☑ **ACTION 22** (Secretariat): *The Secretariat is to contact the three co-opted members to confirm their willingness to serve on the SC.*

🔗 Item 13: APN Framework Document (Part II)

Ms. Tshering invited members to revisit the papers provided under Item 3 on Day 1, and asked members to consider and approve the draft amendments so far proposed. Furthermore, she asked to provide any input and feedback for improving the Framework Document. The suggested amendments were approved as presented and a number of comments on further revising the document were noted.

- ☑ **ACTION 23** (SC, Task Team, Secretariat): *The following actions points were recorded under the present item as well as the previous Item on SC election:*

- » *Ms. Tshering proposed that the window of nomination should be clarified in the Framework Document.*
- » *China, Cambodia and Sri Lanka proposed that the exact detailed procedures regarding SC election be clarified in the Framework Document.*
- » *Mr. Sundara, in addition to those who volunteered on Day 1, will join the task team to revise the Framework Document. The full list of volunteers on the task force is as follows:*
 - *Mr. Chencho Tshering (SPG Alternate for Bhutan),*
 - *Dr. Moten (Invited Expert to the SPG),*
 - *Dr. Matthews (Invited Expert to the CDC),*
 - *Mr. Sajjad Yaldram (nFP Alternate for Pakistan),*
 - *Mr. Silva (nFP Alternate for Sri Lanka)*
 - *Mr. Sem (nFP for Cambodia).*
- » *Among others, the suggested amendments for the Framework Document should also address the modality of election of Chairs of the SC and other organs.*
- » *The procedure for revision should start as early as possible.*

- ✔ **ACTION 24** (IGM, Secretariat): *The proposed amendments presented under Item 3 for the Framework Document were approved by the IGM.*

🕒 Item 14: Host Countries for Future IGMs

Ms. Tshering invited member countries willing to host the 21st IGM and future IGM meetings to officially record their offer. China and Thailand both indicated their willingness to host the 21st IGM meeting, while the latter expressed the understanding that the next IGM is expected to be conducted in a country in Temperate East Asia according to the general procedure of sub-regional rotation. In this regard, Thailand expressed its willingness to host the next IGM should China be unable to do so.

- ✔ **ACTION 25** (China, Thailand, Secretariat): *China indicated its willingness to host the 21st IGM. Thailand also indicated its willingness to host on the condition that China is not ready to host the next meeting, also noting the need for regional rotation.*
- ✔ **ACTION 26** (China, Thailand): *China is to consult with Thailand and the Secretariat, and members will be informed in due course.*
- ✔ **ACTION 27** (Secretariat): *The Secretariat is to send a formal invitation to the nFP for China, in order to obtain official clearance to host the 21st IGM meeting.*

🕒 Item 15: 20th IGM/SPG Action Points

Ms. Tshering circulated a draft paper on action points for any revision or input before it was formally approved. A number of edits were suggested by members and were reflected in action points listed in the text above. An additional action point was requested by Mr. Sem, to be included in the final list of action points.

- ✔ **ACTION 28** (Secretariat): *The "APN Mitra Award for Global Change Research" was awarded to Mr. Khanal Shiva for his work on "Integration of object-based image analysis with machine learning algorithm for forest type classification in Nepal."*

🕒 Item 16: Other Business, Final Remarks and Closing

Dr. Madan Lall Shrestha, SPG Member for Nepal, remarked that it was a privilege for Nepal to host the 20th IGM anniversary and he congratulated the Meeting on its fruitful outcomes, that included co-finance partnerships with the Kingdom of Cambodia and the University of Tokyo. He expressed his hope that more co-finance partnerships will follow to diversify APN's funding base. He thanked all participants for their participation, expressed his appreciation to the Co-Chairs for their leadership and extended his wish that all members have a safe journey home.

Ms. Tshering thanked the government of Nepal for hosting the event and thanked ICIMOD for arranging an interesting and informative field visit to the ICIMOD Knowledge Park at Godavari. She thanked all members for making the meeting a success and thanked the APN Secretariat for its support in ensuring a smooth meeting.

On behalf of the Government of Nepal, Mr. Thapa thanked all delegates for their participation and contribution and expressed gratitude to the Secretariat for its support. He also acknowledged all project leaders, invited guests and observers for their support and participation. He extended special thanks to Mr. Tsujihara for his active participation and also thanked his team at MoSTE who provided important essential support.

Finally, on behalf of the Secretariat, Mr. Tsujihara extended his appreciation to all for their contribution and cooperation for a successful IGM. Particularly, he thanked the host, APN members, project leaders and invited guests, and expressed his hope that members will work closer together to achieve APN goals and establish new partnerships.

The meeting concluded with a round of applause in appreciation of the Co-Chairs' excellent management and for the success of the meeting.

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Appendix 2: Approved Work Programme and Budget Plan, Fiscal Year 2015

Work Programme and Budget Plan, Fiscal Year 2015							
				Exchange Rate for FY 2015: ¹⁾ US\$ 1 = JPYen 126 US\$ 1 = NZ\$ 1.35			
Resources Available: ²⁾							
Japan	Ministry of the Environment			2,187,000			
	Hyogo Prefectural Government			167,200			
ROK	Ministry of Environment			50,000			
New Zealand	Ministry for the Environment			22,200			
USGCRP/NSF				-			
Projected Resources, Committed and Uncommitted, carried over from FY 2014			1,992,390				
Total			1,992,390	2,426,400	4,418,790		
Use of Resources: ³⁾							
				Committed Resources ⁴⁾	Uncommitted Resources for new Allocation ⁵⁾	Resources Allocation of Direct Financial Contributions ⁶⁾	Total
				A	B	C	D=A+B+C
Ongoing Projects from Past Fiscal Years							
ARCP 2012 - 2014				555,280			555,280
CAPaBLE 2013 - 2014				68,440			68,440
CAF 2014				141,760			141,760
AOF 2012				6,000			6,000
LCI 2012 - 2013				76,460			76,460
RUSD 2012				5,980			5,980
Possible Refund to NSF				8,990			8,990
Sub Total				862,910			862,910
Projects and other Activities in FY2015							
CRR 2015				295,000	0	145,200	440,200
CAPaBLE 2015				30,000	0	377,500	407,500
Climate Adaptation Framework				650,360	19,500	750,040	1,419,900
Low Carbon Initiative Framework (LoCARNet Networking)				0	33,110	0	33,110
One Annual Sub-Regional PDTW				0	0	25,000	25,000
Science-Policy Linkages (including SBSTA, COP21, IPBES, SPD-TEA, and SPD Publications & Synthesis)				0	12,000	48,000	60,000
Hyogo Activities				0	0	40,000	40,000
Co-Financing Partnership with Cambodia (PDTW) ⁷⁾				0	13,000	5,000	18,000
SRC South Asia				0	15,000	0	15,000
SRC Southeast Asia				0	15,000	0	15,000
SRC Temperate East Asia				0	15,000	0	15,000
20th Anniversary Activities in 2016				0	16,510	38,490	55,000
4th Strategic Plan and 3rd Strategic Phase Report Publications				0	5,000	0	5,000
Annual Reports, Science Bulletin and Other Publications				0	10,000	10,000	20,000
Secretariat Travel to APN Meetings and ad-hoc Science Meetings				0	0	55,000	55,000
21st IGM/SPG, incl. SC				0	0	130,000	130,000
Personnel Cost				0	0	495,000	495,000
General Maintenance and Operational Cost				0	0	70,000	70,000
Contingency (5% from Projected Direct Financial Contributions in FY 2015) ⁸⁾				0	0	121,170	121,170
Deficit Compensation ⁹⁾				0	0	50,000	50,000
IGES Administrative Overhead (3% of MOEJ Contribution)				0	0	66,000	66,000
Sub Total				975,360	154,120	2,426,400	3,555,880
Total				1,992,390	2,426,400	4,418,790	

Appendix 3: Continuing Multi-Year ARCP Projects, Fiscal Year 2015

Project Reference Number	Title	Project Leader	Project summary	Regional Collaboration/ Countries Involved	Project Duration	Award Details			
						2013/2014 Awarded	2014/2015 Awarded	2015/2016 Recommended Award	2016/2017 Mortgage
ARCP2014-04CMY-Miyata	Toward CarboAsia: integration and syntheses of terrestrial ecosystem flux data in tropics/subtropics and croplands in Asia by activating regional tower-based observation networks	Dr. Akira Miyata, National Institute for Agro-Environmental Sciences, JAPAN	Toward CarboAsia, the carbon budget assessment covering the whole Asian terrestrial ecosystems, it is required to fill data gaps in tropical/subtropical forest and croplands. By utilizing the framework of Asia Flux (http://www.asiaflux.net/), we will hold workshops and training courses to encourage and activate tower-based flux observation networks in south-eastern and southern Asia, thereby promoting data integration and syntheses of carbon and water cycles in tropical/subtropical forest and croplands in Asia.	Japan, Republic of Korea, China, Philippines, Vietnam, Thailand, Malaysia, Indonesia, Bangladesh, India	3 years	45,000 (Retained from 2013/2014 fund)	40,000 (Retained from 2013/2014 fund)	40,000	
ARCP2014-05CMY-Manton	Coordinated Regional Climate Downscaling Experiment (CORDEX) in Monsoon Asia	Professor Michael Manton, Chair Scientific Steering Committee for Monsoon Asia Integrated Regional Study (MAIRS). Monash University, AUSTRALIA	A series of three CORDEX workshops will be held in 2013, 2014 and 2015 in South Asia, East Asia and South East Asia. The workshops will foster synergies and coherence between the various climate downscaling and vulnerability, impact and adaptation (VIA) communities in the Asia Pacific region through direct engagement. The workshops will be scientific in nature and will cover state-of-the-art climate downscaling research, training and capacity building.	Australia, India, China, Republic of Korea, Nepal	3 years	45,000 (Retained from 2013/2014 fund)	40,000 (Retained from 2013/2014 fund)	40,000	
ARCP2014-06CMY-Li	Assessing Spatiotemporal Variability off NPP, NEP and Carbon Sinks off Global Grassland Ecosystem in respond off Climate Change in 1911-2011.	Professor. Jianlong Li, Nanjing university, CHINA	This project will be realized to provide an integrated technical method and report of the assessing variability of NPP, NEP and carbon sinks of global grassland ecosystem in respond of climate change and human activity in the global scale and long -term under the different temporal and spatial from three developing countries to worldwide for farmers, policy makers and international community and disseminate the findings	China, Mongolia, Uzbekistan and technical support from USA and Australia	3 years	40,000 (Retained from 2013/2014 fund)	36,000 (Retained from 2013/2014 fund)	25,200	
ARCP2014-07CMY-Tangang	Southeast Asia Regional Climate Downscaling Project (SEACLID)	Prof. Fredolin Tangang, University Kabangsaan Malaysia, MALAYSIA	1. Carry out joint regional climate downscaling for a common SEA domain with RegCM4 using 5 CMIP5 GCMs and 3 RCPs under the SEARCI on the basis of shared workloads. 2. Collectively analyze model performances, create ensemble regional climate projection for the SEA region, and establish SEARCI web portal and data center for efficient data dissemination freely to users in the region	Malaysia, Philippines, Indonesia, Thailand, Cambodia, Lao PDR, Vietnam	3 years	45,000 (Retained from 2013/2014 fund)	40,000 (Retained from 2013/2014 fund)	40,000	
ARCP2014-14NMY(B&ES)-Salmo	Influence of Mangrove Biodiversity on Accumulation of Carbon and Resilience to Sea Level Rise: A Comparative Assessment Among Disturbed, Restored and Intact Mangrove Systems	Dr. Severino G. Salmo III, Ateneo de Manila University, Quezon City, PHILIPPINES	Mangroves provide vital ecological and socio-economic services such as supporting fisheries and forestry products, stabilizing shorelines, sequestering carbon and improving water quality. Mangrove sediments can also store massive amounts of carbon that may increase mangrove forest resilience to climate change by maintaining forest floor elevations relative to sea level rise. Mangrove deforestation threatens biodiversity and carbon pools in mangroves and ultimately their resilience to sea level rise. Using a standardized method, the project aims to create a regional research network to evaluate the role of mangrove biodiversity in carbon storage and resilience to sea-level rise among disturbed, restored and intact mangroves.	Philippines, Malaysia, Singapore, Australia, USA, Indonesia	3 Years		40,000 (Retained from 2014/2015 fund)	25,000 (Retained from 2014/2015 fund)	20,000

Project Reference Number	Title	Project Leader	Project summary	Regional Collaboration/ Countries Involved	Project Duration	Award Details			
						2013/2014 Awarded	2014/2015 Awarded	2015/2016 Recommended Award	2016/2017 Mortgage
ARCP2014-15NMY-Wu	Comparative Analysis of Pollution Sources at the Hangzhou Bay & Mekong River Mouths	Professor Jiaping Wu, Institute of Islands and Coastal Ecosystems, Zhejiang, CHINA	At the interface between land and ocean there exist continuous material exchanges where the terrestrial ecosystems discharge nutrients into oceans to provide food sources for oceanic organisms but also causes red tides that are detrimental to fisheries. As climate change continues and human alteration of terrestrial ecosystems intensifies, ecological impacts on river deltas and fisheries have become a major environmental concern. The proposed work is to deploy a process-based model to quantitatively examine how recent changes in land use, including rural restructuring of towns, villages, and farmlands, affect nutrient transport from terrestrial ecosystems to two very important deltas in Asia: Mekong River and Qiantang River watersheds	Thailand, Vietnam, Lao PDR, Japan, USA	3 Years		45,000 (Retained from 2014/2015 fund)	20,000 (Retained from 2014/2015 fund)	45,000
ARCP2014-16NMY-Babel	Developing an operational water security index, and its application in selected diverse regions of Asia	Professor Mukand S. Babel, Asian Institute of Technology (Water Engineering and Management), Pathumthani, THAILAND	The project will: (a) establish a practical framework to develop a water security index (WSI), using appropriate dimensions, sub-indices and indicators at local and basin scales; (b) implement the index diverse study areas in Asia; and (c) assess the status of water security at different time scales: past, present, and future. Through interactions/feedback with/ from relevant stakeholders throughout the duration of the project, policy guidelines for actual operationalization of the index will be developed	Thailand, Vietnam, India	2 Years		40,000 (Retained from 2014/2015 fund)	40,000 (Retained from 2014/2015 fund)	
ARCP2014-17NMY-Dey	Impacts of Crop Residue Removal for Biomass Energy on Soil Function; Studies to recommend Climate Adaptive Agricultural Waste Management	Dr Dipayan Dey, South Asian Forum for Environment [SAFE], Kolkata, INDIA	The project aims to investigate the impacts of biomass burning to soil through a series of activities that includes: (i) site selection; (ii) data gathering on seasonal variations of soil characteristics; (iii) estimation of crop residue characteristics, analysis of residual ash and assessment of GHG & SPM release; (iv) impacts assessment of residue-burning and residue-keeping on biomass growth, yield & crop performance, disease occurrence, post-ante analysis on soil functions, soil carbon & soil bio-chemistry, etc; and (v) develop strategy and dissemination	India, Bhutan, The Philippines	2 Years		40,000 (Retained from 2014/2015 fund)	30,000 (Retained from 2014/2015 fund)	
ARCP2014-18NMY-Heath	Development of an evidence-based climate change adaptation toolkit to help improve community resilience to climate change impacts in Uttarakhand, India	Dr Lance Heath, Australian National University Climate Change Institute, Canberra, AUSTRALIA	The state of Uttarakhand in India has recently experienced unprecedented flooding and loss of life on account of a serious climate-related extreme event. This activity will use Participatory Integrated Approaches (PIAs) to identify the risks, vulnerabilities and opportunities resulting from climate change impacts on communities in the Nainital region, Uttarakhand, India. The results will be used to develop a climate change adaptation toolkit, which is based on a set of scientific and evidence based methodologies or tools to guide policy makers during the adaptive response planning process and to help communities cope better with those risks and vulnerabilities identified	Australia, India, China, Nepal, Bangladesh	2 Years		40,000 (Retained from 2014/2015 fund)	45,000 (Retained from 2014/2015 fund)	

Project Reference Number	Title	Project Leader	Project summary	Regional Collaboration/ Countries Involved	Project Duration	Award Details			
						2013/2014 Awarded	2014/2015 Awarded	2015/2016 Recommended Award	2016/2017 Mortgage
ARCP2014-19NMY(B&ES)-Liang	Coastal forest management in the face of global change based on case studies in Japan, Myanmar and the Philippines	Liang Luohui, United Nations University Institute for Sustainability and Peace (UNU-ISP), Tokyo, Japan	The proposed research will examine community-based forest management, including local knowledge in vulnerable communities to identify best practices and their integration with planning of human settlement and facilities to strengthen community resilience to climate change impacts as well as evaluate effectiveness and needs of policy interventions through a bottom-up process. The project will assess potential benefits of coastal forests in adaptation to and mitigation of climate change. Three project sites, one each in the Philippines, Myanmar and Japan, suffer frequent typhoons or tropical cyclones. The comparative perspective will explore how different countries and local communities manage coastal forests to cope with coastal hazards under similar bio-physical conditions, but different socio-economic contexts and draw on their experiences for developing context-based solutions	Philippines, Myanmar, Japan	2 Years		40,000 (Retained from 2014/2015 fund)	40,000 (Retained from 2014/2015 fund)	
ARCP2014-20NMY-Mishra	Climate Change Adaptation through Optimal Stormwater Capture Measures: Towards a New Paradigm for Urban Water Security	Dr. Binaya Kumar Mishra, United Nations University - Institute for Sustainability and Peace (UNU-ISP), Tokyo, Japan	Climate change is expected to deteriorate urban water security by altering rainfall pattern into more intense events with longer dry days. The resulting impact is more floods in rainy season and water scarcities in dry season due to increasing surface runoff and decreasing groundwater recharge respectively. Both of these manifestations are similar to that of urbanization, and therefore these impacts can be largely minimized by introducing modified on-site stormwater captures measures which have been successfully tested for the urbanization. This research aims to improve urban water security in the Asia-pacific region by optimization of on-site stormwater infiltration and storage measures.	Japan, Thailand, Vietnam, Lao PDR	2 Years		35,000 (Retained from 2014/2015 fund)	30,000 (Retained from 2014/2015 fund)	
ARCP2014-21NMY-Sharp	Integrated solid waste management system leading to zero waste for sustainable resource utilization in rapid urbanized areas in developing countries	Dr. Alice Sharp, Sirindhorn International Institute of Technology (SIIT), Thammasat University, Pathumthani, THAILAND	The project will contribute to preparation of guidelines for integrated solid waste management based on the nature of waste and learning from the showcase examples in Thailand. The project will analyse existing waste management system in partner countries, find the success and failures in the current waste management practices. Once the gaps are identified, the appropriate integrated waste management system can be identified. It will also build scientific capacity of local authorities in terms of integrated solid waste management via national workshops and develop collaborative network in solid waste management in the region	Thailand, Bhutan, Vietnam	2 Years		45,000 (Retained from 2014/2015 fund)	30,000 (Retained from 2014/2015 fund)	
ARCP2014-22NMY-Zhou	Assessment of Climate-Induced Long-term Water Availability in Ganges Basin and Impacts on Energy Security in South Asia	Dr. Xin Zhou, Institute for Global Environmental Strategies (IGES), Hayama, Kanagawa, JAPAN	Ganges river has important role for India, Bangladesh and Nepal *through its tributary. However, it is very vulnerable towards water availability in the long run especially under climate variability which requires regionally coordinated water and energy and policies for water and energy security and sustainable development. The research aims to: project the water supply condition under different climate change scenarios based on hydrological modelling using satellite as well as survey data at the river basin level; ii) estimate the water use intensity of available power generation technologies based on firm-level survey data in three countries; and iii) assess long-term energy supply scenarios under projected water supply constraints at river-basin level using bottom-up energy optimization modelling	Bangladesh, India, Nepal	2 Years		40,000 (Retained from 2014/2015 fund)	35,000 (Retained from 2014/2015 fund)	

Appendix 4: Continuing and New CAPaBLE Projects, Fiscal Year 2015

Full Proposal/ Project Reference	Proposal/Project Title	Proponent/Project Leader, Institution and Country	Project Summary	Regional Collaboration/ Countries Involved	Project Duration	CDC Funding Recommendation	
						Funds for 2015/2016	Total Funding requested from FY2015/2016
CBA2014-02NMY-Singhruck	Strengthening the adaptive capacity of local agricultural communities through the development of seasonal climate prediction system	Dr. Patama Singhruck, Center of Excellence for Climate Change Knowledge Management (CCKKM), Chulalongkorn University, Bangkok, THAILAND	The main objective of this project is to build scientific capacity for seasonal climate prediction. Although seasonal climate prediction products have been available, their usefulness to agricultural sectors has not been fully realized. This is especially true for local farming communities in non-irrigated zones which rely solely on rain. Early or late monsoon onset, flash floods, prolonged droughts affect their livelihood directly. To enhance their capacity to make adaptive response to natural variability, climate information in the form which is accessible and relevant to them at local scale is most needed. This project aims to respond to this challenge.	patama@cckm.or.th, patama.s@chula.ac.th	1 year	27,000	27,000
CBA2014-FP12-Silva	Escalating small hydropower development and aquatic biodiversity of mountain streams in Sri Lanka	Prof. E.I.L Silva Water Resources Science and Technology 77/2, Hettiyawatte, Elapitiwela, Ragama, SRI LANKA	Establishment small hydropower plants (SHPP) by arresting mountain streams is categorized as eco-friendly renewable technology than building large dams, because their relatively smaller inundation areas behind the weirs and downstream bed exposure. Nevertheless, SHPP, exert multiple negative impacts on local environments and aquatic biodiversity, but reported studies on this tragedy are scanty. In many countries in the Asia Pacific region SHPP are exempted from rigorous EIA procedures due to low capital investment. Remarkable negative impacts of SHPP are essentially ecological; on riverine and riparian biota, ecosystem function and processes, fish migration etc. due to curtailed ecological integrity by discontinuum of stream flow.	Sri Lanka	1 year	20,000	20,000
CBA2014-FP05-Seitzinger	International Geosphere-Biosphere Programme (IGBP) Landmark Synthesis Event	Dr. Sybil Putnam Seitzinger, International Geosphere-Biosphere Programme (IGBP), The Royal Swedish Academy of Sciences, Lilla Frescativägen 4A, Box 50005, SE-104 05, Stockholm, SWEDEN	IGBP has played a pre-eminent role in fostering the understanding of global environmental change, facilitating international collaboration and building research capacity in the developing world. To mark its legacy and eventual transition to the new Future Earth initiative IGBP will organise transdisciplinary sessions and a young scientists' event at the AGU conference in December 2015. IGBP is keen to engage its researchers from developing countries in the Asia-Pacific region in this event: the event will enable them to present their research, engage with IGBP scientists from around the world and build collaborations.	APN Countries	1 year	37,500	37,500
CBA2014-FP20-Pushpakumara	Scientific Capacity Development to Strengthen Informed-Decision Making for Improved Climate Policy Formulation and Implementation in South Asian Countries	Prof. Gamini Pushpakumara, Faculty of Agriculture, University of Peradeniya, Old Galaha Road, Peradeniya, SRI LANKA	The proposed project will conduct regional and national workshops and seminars focusing on comprehensive assessment of the existing climate policies and strategies, build capacity on policy formulation and implantation, updating scientific information (i.e. climate change and variability, ecosystems and ecosystem services, biodiversity and land use, resources utilisation and pathways for sustainable development), and developing research agenda for the regions gap filling. The project will network policy makers, and senior & young scientists in the SA to build new generation of trainers and decision makers to support combating climate change issues in the region and the world	Sri Lanka, Bangladesh, Nepal, Bhutan	2 years	32,000	64,000
CBA2014-FP02-Avtar	Developing a Training Module to Monitor Forest Cover and Deforestation using Advanced Remote Sensing Techniques under UN-CECAR Framework in support of REDD+ MRV System	Dr. Ram Avtar, UNU-IAS53-70 Jingumae 5-chome, Shibuya-ku, Tokyo, 150-8925, JAPAN	Reducing Emissions from Deforestation and forest Degradation (REDD+) is an initiative to reward individuals, communities, projects and countries who reduce greenhouse gases (GHGs) emission from forests. REDD+ can deliver sustainable co-benefits for climate change mitigation, biodiversity conservation and ecosystem services. The aim of the programme is to (1) develop the capacity of the government, NGOs, local community people to monitor forest cover and deforestation, (2) achieve sustainability in the forest resources in Cambodia, Sri Lanka and India by making sustainable forest management plan using updated information about forest cover and deforestation hot spots based on advanced Remote Sensing techniques such as Synthetic Aperture Radar (SAR), (3) provide an operational measurement, reporting and verification (MRV) system to Cambodia, Sri Lanka and India.	Japan, Cambodia, Sri Lanka, India	1 year	40,000	40,000

Full Proposal/ Project Reference	Proposal/Project Title	Proponent/Project Leader, Institution and Country	Project Summary	Regional Collaboration/ Countries Involved	Project Duration	CDC Funding Recommendation	
						Funds for 2015/2016	Total Funding requested from FY2015/2016
CBA2014-21NSG-Adiningsih	Building Capacity for Urban Climate Change Adaptation in Southeast Asia	Dr. Erna Sri Adiningsih Remote Sensing Technology and Data Center, Indonesian National Institute of Aeronautics and Space (LAPAN)	It is expected that the proposed project should have the scope to promote educational activities in urban planning, research in climate change adaptation strategies in urban planning, and community service to adapt climate change in urban areas. We propose to organize a series of one week summer school (training of the urban planners or training of trainers) on building capacity for urban climate change adaptation in South-East Asia (SEA) region. Each training will compose of 3 components; the first module is the review of interaction between climate change and SEA region, from the science perspective, to the development of policy options for responses to climate variability and impacts. The second component is the field visit to coastal cities to observe impacts of extreme events and adaptive measures. The third component is the hands-on experiences on the model output or lesson learned of urban planning to solve the real problems and needs in climate change adaptation, based on the output of SEA regional climate downscaling exercise for future climate projection and implementations for short, medium and long term adaptive capacity in SEA cities.	Indonesia, Thailand, Viet Nam, Philippines, Cambodia, Lao PDR, Malaysia, USA	2 years	40,000	80,000
CBA2014-FP14-Prasad	Biodiversity Conservation In Western Ghats, India. Capacity Building in harnessing geospatial data Management	Dr. S. Narendra Prasad, Open Source Geospatial India, International Institute of Information Technology, Gachibowli, Hyderabad 500032, INDIA	Sustainable development and conservation in Western Ghats Ecosystems, a global biodiversity hotspot, has taken centre stage due to the huge and unprecedented developmental demands from proposed energy, mining and tourism activities. The two GOI reports on western ghats emphasize paucity of verifiable scientific data and information in geospatial domain and has recommended a strong and immediate sustained activity to bridge the gap. Towards achieving this goal, the proposed activity aims to enhance adoption of geospatial technology through desktop, web and mobile platforms to help build decision support systems in conserving/managing biodiversity. A very first and most needed step in this direction is a programme of trainers of training (TOT) for multiple stakeholders of western Ghats.	India	1 year	33,000	33,000
CBA2014-FP15-Sharifi	Integrated, Resilience-based Planning for Climate Change Mitigation and Adaptation in Asia-Pacific Cities	Dr. Ayyoob Sharifi Global Carbon Project National Institute for Environmental Studies (NIES), 16-2 Onogawa, Tsukuba, 305-8506, JAPAN	The project intends to convene scholars from different disciplines and contexts to discuss strategies for incorporating resilience thinking and climate change adaptation and mitigation into urban decision-making and planning process. The proposed workshop would be held in mid-2015 (in Thailand or Japan) and up to 30 researchers, including early career scientists and young researchers would be invited. To facilitate further discussions we also plan to hold regular teleconference meetings. As core projects of the Future Earth, GCP and UGEC will establish collaborations with other global environmental change (GEC) programs and the Urban Climate Change Research Network to extend the breadth of the project.	Thailand, USA, Australia, China, Japan	1 year	38,000	38,000
CBA2014-FP16-Comia	On-the-ground Promotion of Climate Change Adaptation Strategies via Establishment of Local Agroforestry Learning Laboratories in Southeast Asia	Dr. Reynaldo A. Comia, Philippine Agroforestry Education and Research Network (PAFERN), Inc. 2/F Tamesis Hall, CFNR-UPLB, College, Laguna, PHILIPPINES Phone: +63 49 536 3809	The proposed project is a regional collaboration of SEANAFE member-institutions in Vietnam, Philippines and Indonesia with the primary aim of establishing on-field Agroforestry Learning Laboratory (ALL) to intensify promotion of agroforestry as a climate change adaptation strategy; strengthen partnership among farming communities, academic institutions and local government units through the maintenance of ALLs; enhance capacity development of local institutions; and, share lessons and experiences of PAFERN in its three project sequels with APN. PAFERN, will provide project leadership, while VNAFE and INAFE will work as project collaborators.	Viet Nam, Philippines, Indonesia	1 year	43,000	43,000

Appendix 5: New CAF Projects, Fiscal Year 2015

Full Proposal Reference Number	Proposal Title	Proponent, Institution and Country	Project Summary	RR/CD	Regional Collaboration/Countries Involved	Project Duration	SPG Recommendation	
							Funds for 2015/2016	Total requested, FY2015/2016
CAF2014-FP09-Jacobson	Optimizing climate change adaptation through enhanced community resilience	Dr Christine Jacobson Sustainability Research Centre, University of the Sunshine Coast, Australia Locked Bag 4, Maroochydore DC, QLD 4558, AUSTRALIA; Tel. +61 449 121 590; Fax. 61754565008	We propose a research-based activity that assesses resilience of communities, with varying degrees of vulnerability to climate change, and then uses this assessment to design and inform adaptation actions that reduce the impacts of climate change. The degree to which rural communities in the Asia-Pacific region are prepared for the effects of climate change on their livelihoods is largely unknown (Hijioka et al. 2013). Communities with higher levels of resilience are generally less vulnerable to change because they can mobilise resources and adapt more readily. Yet in some cases, such communities may be more vulnerable because of the perception that they have sufficient access to resources, knowledge and experience to adapt when in reality, they do not. Assessments of community resilience help in identifying communities that have sufficient resources and processes for adaptation, and communities that need to develop these to reduce vulnerability. Such assessments are positive experiences for communities, emphasising their collective strengths rather than their helplessness. The research team has been part of efforts to develop indicators of community resilience for the Asia-Pacific previously and is now in a position to package these for policy deployment as part of community resilience toolkit. We seek to trial this toolkit with selected rural communities in Cambodia and Viet Nam, then work with governments and NGOs to use the resilience toolkit outcomes as a basis for climate change adaptation and development planning.	RR	Australia, Cambodia, Viet Nam	1 Year	45,000	45,000
CAF2014-FP08-Monprapussorn	Integrated analysis of climate, land-use and water for resilient urban megacities: A case study of Thailand, Lao PDR and Vietnam.	Sathaporn Monprapussorn, Ph.D. Department of Geography, Faculty of Social Sciences, Srinakharinwirot University 114 Sukhumvit 23 Bangkok THAILAND 10110, Tel 662 649 5000 ext. 15540	This research focuses on the integration of land-use, climate and water resources for resilient urban cities purpose in different geographical area of Southeast Asia. Bangkok, Vientiane and Hanoi, a capital city of Thailand, Lao PDR and Vietnam, are included in the study. Future climate scenarios (AR5) of temperature and precipitation in 2050 will be created by using CORDEX- HadGEM-RA downscaling with 50 km resolution, looking for a baseline change in three cities. Land-use/land-cover change (LULC) will be further explored and modelled by simulating three future LULC scenarios; business as usual (BAU), rapid economy change (REC), and green growth scenarios (GGC) to ensure that all possible socioeconomic factors will be taken into consideration. Projected temperature, precipitation, LULC will be used as the input into Water Evaluation and Planning (WEAP) model in order to calculate how much of the precipitation that falls in the particular area ends up as run-offs into stream, recharge to groundwater or evapotranspiration to vegetation and finally water budget (demand and supply). Proposed activities attempt to integrate different LULC scenarios into WEAP by estimating future water demand to better conduct risk and vulnerability assessment in urban water context based on different socioeconomic and environment driving forces (thematic iii), while utilize climate, LULC, biophysical and socioeconomic data as input into urban water resources analysis (thematic vii) To get all related stakeholders involved in research, they will be contacted and informed at research preparation stage, each country will arrange national workshop to communicate, consult and to brainstorm different ideas of current adaptive capacity and future adaptation plan in the water sector to identify suitable adaptation practice.	RR	Thailand, Viet Nam, Lao PDR	2 Years (18 months)	45,000	45,000
CAF2014-FP23-Kumar	Assessment and mapping of the vulnerability of iTaukei (indigenous) communities in Fiji.	Dr. Mahendra Kumar Director, Climate Change Division Ministry of Foreign Affairs & International Cooperation, FIJI	The purpose of this project is to develop and enhance the capacities of the Climate Change Division and its partners to identify, profile, and map indigenous communities in Fiji that are vulnerable to the impacts of climate change. The information will be used to guide and inform future adaptation measures that the Government of the Republic of Fiji and other stakeholders might undertake, ultimately increasing the resilience of these communities to the impacts of climate change.	CD	Fiji	1 Year	43,000	43,000

Full Proposal Reference Number	Proposal Title	Proponent, Institution and Country	Project Summary	RR/ CD	Regional Collaboration/ Countries Involved	Project Duration	SPG Recommendation	
							Funds for 2015/ 2016	Total requested, FY2015/2016
CAF2014-FP18-Pham	Utilizing geospatial technology to assess health vulnerability to climate change for rural population in Vietnam and Philippines	Dr. Pham Thi Thanh Nga Vietnam National Satellite Center, Vietnamese Academy of Science and Technology Floor 9th, Main Building, 18 Hoang Quoc Viet, Cau Giay district, Ha Noi, VIET NAM Tel: (+84) 04-37917675 Fax: (+84) 04-37627205	Viet Nam and the Philippines are recognized as the most vulnerable to climate change due to regular flooding and frequent typhoons and therefore an increased burden of climate change related diseases. Changes in climate are likely to lengthen the transmission seasons of vector-borne diseases such as dengue and malaria as well as alter their geographical range. Our aim is to study health vulnerability to mosquito-borne diseases under climate change for rural populations in Vietnam and Philippines. We will develop a geospatial database on the above-mentioned disease including temperature, precipitation, land cover, socio-economic conditions etc. for the most disease exposure regions in two countries; identify trends in epidemiological patterns, unexpected and emerging events; identify vulnerable locations and risk factors, and mapping health vulnerability to malaria and dengue. This activity matches with APN's Focus Activities of developing high-resolution earth observational datasets that can contribute to filling data gaps as well as to sharing of public health-oriented data. Moreover, the project results will help build science-based knowledge for adaption planning and decision making in health sector via informing risk and vulnerability. This contributes to APN's high priority activities in development and utilization of vulnerability and risk assessments, and utilization of available information including climate data in applications for adaptation.	RR	Viet Nam, Philippines, Japan	2 Years	40,000	80,000
CAF2014-FP07-Siswanto	Developing High Spatiotemporal Resolution Datasets of Low-Trophic Level Aquatic Organism and Land-Use/Land-Cover in the Asia-Pacific Region: Toward an Integrated Framework for Assessing Vulnerability, Adaptation, and Mitigation of the Asia-Pacific Ecosystems to Global Climate Change.	Dr. Eko Siswanto Japan Agency for Marine-Earth Science and Technology (JAMSTEC) 2-15 Natsushima-cho, Yokosuka, Kanagawa 237-0061 JAPAN Tel.: +81 46 867 9822, Fax: +081 46 867 9455	As a research-based, proposed activity comprises two main parts. The first part aims at developing high spatiotemporal resolution datasets of the Asia-Pacific LTLO and geophysical variables to fill spatiotemporal data gaps which is relevant to focus activity or high-priority interest (i) (see p. 3 of Call for Focussed Activities under APN's Climate Adaptation Framework). Practically, relevant to high-priority interests (i) and (ii), the first part comprises calibration/validation of satellite data/model estimation by using in situ data collected and shared by collaborators, and as one of project contributions the developed datasets will be launched on the JAMSTEC's web/server to be shared with end-users. As for the second part which is relevant to high priority interests (iii), (iv), and (vii), the activity will utilize constructed high resolution LTLO and geophysical datasets to assess the impacts of climate changes on terrestrial/marine LTLO modification, vulnerability, and expected human/economic risks, based on which climate change adaptation and mitigation action plans will be recommended. For the success of the proposed activity, communications among the collaborating scientists, between scientists and stakeholders (e.g., local government, etc.) are needed and valuable for making recommendations to policy/decision makers to implement climate change adaptation and mitigation based on scientific knowledge gained from this proposed activity, thereby relevant to high priority interest (v). In line with the UNFCCC and relevant to high priority interest (vi), participating scientists will develop regional datasets, models, methods and implement generated information in different areas surrounding their countries, thereby promotes regional capacity development (especially in developing countries).	RR	Japan, Korea, China, Thailand, Viet Nam, Malaysia, Indonesia, USA	3 Years	45,000	124,000
CAF2014-FP11-Odeh	Monitoring grassland degradation in North/Central Asia: Deciphering the impacts of climate change and government policies at different spatial-temporal scales using remote sensing and expert knowledge	Associate Prof. Inakwu Odeh Centre for Carbon, Water and Food, Faculty of Agric. & Envir., The Univ of Sydney, Australian Technology Park, 1, Central Avenue, Eveleigh NSW 2015, AUSTRALIA; Telephone/Fax: T: +61 2 8627 1055/ F: +61 2 8627 1099	Grassland degradation, exacerbated by climate change, is a serious concern in North/Central Asia. This proposal aims to determine the degree of grassland degradation in the region and to decipher the relative impacts on grassland degradation due to climate change adaptation compared to those due to human activities enacted through government policy agenda. The proposal will use advanced GIS, remote sensing and expert systems, to determine the degree and extent of grassland degradation as influenced by climate change to elucidate the effectiveness of past grassland restoration programs in China, Mongolia and Uzbekistan, since the early 2000s and produce recommendations to inform various national government policy reform agenda on grassland restoration. It will address the APN focus activity on Climate Change Adaptation Framework by promoting scientifically-sound adaptation programs through research and capacity building.	RR	Australia, China, Mongolia, Uzbekistan	2 Years	28,000	56,000

Full Proposal Reference Number	Proposal Title	Proponent, Institution and Country	Project Summary	RR/ CD	Regional Collaboration/ Countries Involved	Project Duration	SPG Recommendation	
							Funds for 2015/ 2016	Total requested, FY2015/2016
CAF2014-FP04-Shaheen	Climate smart agriculture through sustainable water use management: Exploring new approaches and devising strategies for climate change adaptation in South Asia	Nuzba Shaheen, Global Change Impact Studies Centre, National Centre for Physics (NCP) Complex, Shahdara Road, Quaid -i-Azam University Campus, Islamabad . (44000), PAKISTAN	The objective of proposed project is to model how projected climate change scenarios will spatially and temporally impact cereal production, a dietary staple for billions of people in South Asia. Scenarios will be constructed using state of the art weather generator approach for the first time across South Asia. This has already been successfully applied in Pakistan (Forsythe et al., 2014). Climate change impact assessment will be made by constructing statistically downscaled climate scenarios at field scale resolutions which will then be applied to crop water productivity models to simulate yield response to water. Outcomes of this project will be useful for devising climate change adaptation strategies for integration into policy making and will help build resilience in water efficient agriculture and food security by sustainable use of limited resources	RR	Sri Lanka, Bangladesh, Cambodia, UK, Pakistan	2 Years	45,000	89,000
CAF2014-FP05-Neef	Climate Change Adaptation in Post-Disaster Recovery Processes: Flood-Affected Communities in Cambodia and Fiji	Prof. Andreas Neef Human Sciences Building, 10 Symonds Street, Rm. 836B, Auckland 1142, NEW ZEALAND; Tel +64-9-9233486; Fax +64-9-3737439	By adopting an integrated and participatory action-research approach, this project will explore how rural communities living in flood-prone river basins of Cambodia and Fiji respond to increasing incidences of floods under the influence of climate change and other risk factors, such as hydro-electric power development, forest conversion and environmental degradation. Particular emphasis will be placed on risk perceptions and adaptive strategies of individuals, families and social groups with regard to regular and catastrophic floods and how the livelihoods of vulnerable groups are affected by flood disasters. Our research approach will integrate the food, water and energy security nexus with the rural livelihood framework. The aims of the project are to (1) identify the spatial extent and dynamics of flood hazards as a result of multiple risk factors; (2) determine the various factors that can enhance resilience and adaptive capacities of flood-affected communities in a changing environment, and (3) provide examples of successful community-based flood management and climate change adaptation that can serve as best-practice models for other flood-affected communities in the Asia-Pacific region.	RR/ CD	New Zealand, Fiji, Cambodia, Australia, UK	3 Years	40,000	80,000
CAF2014-FP19-Abdulharis	Synergising Academic, Business, Community and Government Institutions for Better Livelihood to Conceptualise Development of Smart Cities towards Climate Change Mitigation and Adaptation in Bandung, Bangkok and Manila	Dr. rer. pol. Rizqi Abdulharis, ST, M.Sc Center for Agrarian Research, Institut Teknologi Bandung Gedung Labtek IX-C, Lantai 1, Jl. Ganesa 10, Bandung 40132, INDONESIA	This activity is proposed in order to, on one hand, solve problem concerning local climate change confronted by Municipality of Bandung and, on the other hand, contribute to conceptualisation of its development towards a Climate Smart City. To solve the above mentioned problems, Climate Smart City is proposed as the future form of Bandung. Development of Climate Smart City policy should comprehensively be done. By adopting Smart City definition of Volg (2012; as cited in SURP, 2013), in this activity, Climate Smart City is defined as a city that combines infrastructure, technology and local community involvement, not only to building sustainable cities by means of intelligent and attractive approaches based on local conditions, capabilities and resources (Volg, op. cit.) but also contribute to climate change mitigation and adaptation. Therefore, the biggest challenge on development of Climate Smart City is to maintain the balance among achievement of economic, social and environmental development, as well as climate change mitigation and adaptation. Synergy among actors in these sectors therefore acts as important factor on development of comprehensive policy related to Climate Smart City. To facilitate synergy among actors in this respect, this activity would involve academic, business, community and government sector. Moreover, knowledge sharing among actors in this respect from Bandung, Bangkok and Manila would also be performed. The output of this activity would be a policy and at least two academic papers, as well as a working group on Climate Smart City for Bandung, Bangkok, and Manila, as well as ASEAN region	RR	Indonesia, Thailand, Philippines	1 Year	40,000	80,000
CAF2014-FP02-Arifwidodo	Understanding Urban Heat Island Effects to Urban Energy Consumption and Implications to Microclimate Adaptation and Mitigation Strategies for Planning Policy in Major Southeast Asian Cities	Sigit Dwiananto Arifwidodo, PhD Faculty of Architecture, Kasetsart University, Thailand 50 Paholyothin Road, Jatujak, Bangkok 10900 Thailand Tel. +6629428960 ext 314 fax. +662 9405413	The project is a regional research project aimed to understand the Urban Heat Island (UHI) effects to urban energy consumption and their implications to microclimate adaptation and mitigation strategies for planning policy in major Southeast Asian cities. Its purpose is to mainstream microclimate considerations in urban planning policy in Southeast Asian cities. The case studies selected for the project are Bangkok (population: 7 million) and Hanoi, Vietnam (2.8 million). The proposed project will be divided into 3 parts. First, the project will assess the consequences of UHI to urban energy consumption in the selected cities through meso-scale urban climate modelling. Second part of the project will examine the existing UHI mitigation and adaptation measures and the perceptions and preferences of urban stakeholders on microclimate considerations in urban planning policy. The third part of the project will propose the alternative scenarios and appropriate adaptation and mitigation responses to reduce UHI intensity and improve urban energy efficiency through workshop and capacity building program for policy makers. The project is relevant because it directly corresponds to a number of high priority focused area of interest activities under APN's climate adaptation framework as follows. First, the project deals with the downscaling datasets of climate modelling at the urban level, which corresponds to thematic area of interest no. 1 and no.7. Second, as the project aims to mainstream microclimate adaptation and mitigation strategies in urban planning policy, it relates to thematic area of interest no.4. Third, the project also intends to build capacity for urban policy makers to implement master plan that are in line with the UNFCC adaptation activities (thematic area of interest no.5 and no. 6).	RR	Thailand, Japan, Viet Nam	1 Year		

Full Proposal Reference Number	Proposal Title	Proponent, Institution and Country	Project Summary	RR/ CD	Regional Collaboration/ Countries Involved	Project Duration	SPG Recommendation	
							Funds for 2015/ 2016	Total requested, FY2015/2016
CAF2014-FP10-Dautova	Developing life-supporting marine ecosystems along the East Asia's coasts - a synthesis of physical and biological data regarding coral reef ecosystems for the science-based management and socio-ecological policy making in terms of Global Sustainability	Dr. Tatiana N. Dautova A.V. Zhirmunsky Institute of Marine Biology, Far East Branch of the Russian Academy of Sciences Palchevsky Street 17, Vladivostok 690041, Russia; tel.: 7 (4232) 310-905, Fax 7 (4232) 310-900	The proposed project addresses the essential questions regarding the global change research – how to identify, explain and predict the changes in the coastal marine ecosystems (particularly – coral reefs) under the natural and anthropogenic influence forcing? We intend to unite the experience and knowledge of the scientists, management specialists and policy makers of our countries for the following main goals: 1) to synthesize the existing fragmentary data on the physical environments and build the high-resolution observational databases that can contribute to filling data gaps; 2) to analyze these data together with the information on the biodiversity and reproductive potential of key groups of marine organisms for scientifically based recognition of the risky changes in the coastal coral reefs and explain their reasons; 3) to estimate the adaptive capacity and self-restoration potential of the coral reefs under the global climate change. Our project has fundamental relevance with APN Focus Activity as it is intended to unite both the high-level and early-career scientists and managers from our countries to promote the regional cooperative global change research. We plan widely discuss and promote at public and policy-making levels all our results and conclusions for developing the social-related policy options for the marine conservation and appropriate responses to global change as well. As the marine coastal ecosystems, such as coral reefs, contribute the invaluable benefit to the life-support human systems and economics in Asia-Pacific countries, the proposed project is immediately relevant to the APN mission to enable investigations of changes in the Earth's life support systems and their implications for sustainable development in the Asia-Pacific region.	RR	Russia, Viet Nam, Philippines	2 Years	38,000	76,000
CAF2014-FP15-Marambe	Building Climate Resilience in Farming Systems in Sloping Lands of South Asia	Prof. Buddhi Marambe, Faculty of Agriculture, University of Peradeniya Old Galaha Road, Peradeniya 20400, SRI LANKA, Tel: +94812395100; Fax: +941812395110	The proposal is research-based. The project aims to assess resilience and characterization of diverse farming systems in hilly areas in South Asia (SA) based on their adaptation capacities, with special emphasis on food and nutrition security, by utilizing the available information including climate data. The project will carry out (a) Identification, characterization and documentation of farming systems and land use patterns in hilly areas of SA in detail, to identify differences among them in resource utilization and sustainable management, and (b) Climate vulnerability mapping, food and nutrition and health security mapping of different farming systems at the lowest administrative level, to ascertain the level of present resilience. Based on the outcomes listed in section 6 of the EOI, the project has direct relevance to two high priority activities identified by APN for CAF funding namely, (vi) Developing and Implementing local adaptation plans that are in line with the UNFCCC, and (vii) Utilization of available information including climate data in applications for adaptation.	RR	Sri Lanka, Bangladesh, Pakistan, Nepal	2 Years	60,000	60,000

Appendix 6: Summary of Interactive Session: Youth Engagement in APN

INTERACTIVE Session I was held on the evening of the first day of the IGM, 25 March 2015. It provided an opportunity for Nepalese young scientists to present their research work to the IGM. Out of 35 submitted abstracts, 15 were selected for poster presentations at the 20th IGM. Fourteen posters listed below were presented and judged by APN members and representatives from the international global change research community.

The poster entitled "Integration of object-based image analysis with machine learning algorithm for forest type clas-

sification in Nepal" presented by Mr. Khanal Shiva from the Department of Forest Research and Survey, Kathmandu, was selected as the best poster. Mr. Shiva delivered an oral presentation on his research to the IGM/SPG on 27 March 2015. Section IV includes a copy of the winning poster and presentation. Recalling the contribution by Dr. Ashesh Proshad Mitra on the occasion of APN's 20th anniversary, APN awarded the 2015 Mitra Award to Mr. Shiva. The IGM expressed its appreciation to all young researchers for their poster presentations and research efforts on understanding environmental and climate change issues in Nepal.

Presenter	Organisation	Poster Title
Dr. Kafle Hemu Kharel	Nepal Academy of Science and Technology	Analysis of spatial temporal variation of drought over the past 30 years in western Nepal
Mr. Dahal Nirmal Mani	Norwegian University of Life Science (NMBU) (Ex Student)	Soil carbon stock (SOC) as influenced by community forestry in Nepal and its implication for REDD
Mr. Sharma Amrit Prasad	Tribhuvan University, Central Department of Environmental Science	School dropout rate of children in a changing climate
Mr. Thapa Amrit	Kathmandu University	Extraction of periodic components and nonlinear trend in temperature at Kyangjing Gumpa, Langtang river basin, Nepal, using empirical mode decomposition (EMD)
Mr. Khanal Shiva	Department of Forest Research and Survey	Integration of object-based image analysis with machine learning algorithm for forest type classification in Nepal
Mr. Joshi Laxmi Raj	Central Department of Botany, Tribhuvan University	Predicted responses of Himalayan alpine flora to the anticipated future warmer climate
Ms. Bhatta Mamta	Mahakali Engineering Consultancy	Forest fire risk in Chitwan by using remote sensing and GIS
Mr. Bishwokarma Dipak	ForestAction, Nepal	Integrating climate adaptation planning across governance levels: how least developed countries could learn from Nepal?
Mr. Gaire Anmesh	Department of Mechanical Engineering, Pulchowk Engineering College	High efficiency cyclone separator to reduce emission of particulate matters
Dr. Khanal Tanka	Department of Veterinary Medicine, Agriculture and Forestry University	Re-emergence of Japanese encephalitis: a study of potential risk factors in Terai of Nepal
Mr. Marahatta Santosh	Faculty of Agriculture, Agriculture and Forestry University	Improving the productivity of rice through site specific nutrient management in foot hills of Nawalparasi district of western Nepal
Mr. Panthi Jeeban	The Small Earth Nepal (SEN)	Changing climate—adapting to change: water and soil conservation in Gandaki river basin of Nepal Himalaya
Mr. Khatri Pawan	Kathmandu University, Department of Civil & Geomatics Engineering	Impact of climate change on regional climate in the eastern to central Nepal
Ms. Silwal Gunjan	Kathmandu University	Modelling snow and ice melt runoff in the context of climate change: a case study of Dudhkoshi river basin, Nepal

Appendix 7: Summary of Interactive Session II-A

INTERACTIVE Session II-A provided an opportunity for representatives of a number of outstanding APN-supported projects to present the highlights of their respective projects and to discuss with IGM participants how the outcomes contributed to advancing action-oriented science and policy development in addressing global change issues in the region. A special panellist comprising members from the global change community and representatives from the policy-making sector provided reviews and opinions on the projects.

The first presentation was delivered by Dr. Jeffery Sellers who talked about his research applying remote sensing and GIS to compare urbanisation dynamics and related environmental changes in four mega-regions in the two largest developing countries, China and India. This was followed by presentations from Dr. Kedar Lall Shrestha on impacts of global change on the Himalayan Mountains and Dr. Chuluun Togtokh on the application of Dryland Development Paradigm in Mongolia's pastoral systems.

🕒 Peri-Urban Development and Environmental Sustainability: Examples from China and India (ARCP2008-17NMY-Sellers and ARCP2009-05CMY-Sellers)

Dr. Jeffery Sellers explained the scope of the project, which focused on policy consequences brought about by the expansion of urban areas and rapid expansion outside urbanised areas.

The project identified micro-drivers and patterns of urbanisation using micro-scale analysis by collecting ground level data on local land use transition, remote sensing analysis and micro-case analyses in the cities of Beijing and Wuhan (China) and Bangalore and Mumbai (India). Dr. Sellers stated that the project specifically used spatial metrics analysis and assessed the cities by scaling up indicators at the micro to macro level using spatial analysis. Using 23 landscape indicators, the parameters were aggregated through principal components analysis (PCA) and canonical correlation analysis examined relationships between urban form in different cities and over time.

The analysis revealed strikingly different transformations of urban form in Chinese and Indian urban regions. In China, peri-urban expansion has proceeded consistently in coastal regions with strong external investment regardless of city size, but less systematically in some inland regions and little in others. In India, peri-urban expansion has been less dramatic and has varied less between regions with different levels of external investment. The Indian patterns of peri-urban expansion also differ systematically from corresponding Chinese patterns. Results of the study suggest that national differences explain most of the variation in urban trajectories and in India in particular, urban expansion in some cities is increasing dramatically.

🕒 Impacts of Global Change on the Dynamics of Snow, Glaciers and Runoff over the Himalayan Mountains and Their Consequences for Highland and Downstream Regions (ARCP2008-16CMY/ARCP2009-04CMY-Shrestha)

Dr. Kedar Lall Shrestha from the Institute of Development and Innovation, Nepal, first gave a background on climate and topography of the Himalayan Mountains and explained that due to ruggedness of the terrain and inaccessibility of its higher regions, there is a great scarcity of adequate scientific data leading to uncertainty and knowledge gaps in understanding and projecting hydrological changes.

He explained that in the first year, high resolution regional climate model was run, validated and then used together with energy budget model for understanding snow and glacier dynamics and for projecting changes in the melt runoff area of three selected Himalayan river basins. Similarly, hydrological models were validated for assessing temporal and spatial change in water availability in the selected basins. In the second year, apart from fine tuning the models, a desk study was conducted on the consequences of changes in water availability to people's livelihood and the economy and societies in the highland and downstream areas.

In conclusion, he pointed out that the project provided much-needed baseline information for identifying and implementing adaptation and mitigation strategies for sustainable development of the region.

🕒 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) (CBA2009-12NMY-Togtohyn/CBA2010-02CMY-Togtohyn)

Dr. Chuulun Togtokh, Institute for Dryland Sustainability (IDS), National University of Mongolia, presented the findings of his APN-funded project. He first described Mongolia's pastoral systems and cited that socio-economic changes and climate change in the last two decades have caused dynamic changes in the systems. Through the project, he applied the Dryland Development Paradigm (Reynolds et al., 2007) as a framework to analyse pastoral social-ecological systems in the Tuin and Baidrag river basins, located in Bayanhongor aimag.

It was found that global warming is the most critical slow variable in the drylands and as suggested in the study, water resources in the region have already decreased to below critical threshold levels, with fewer rivers flowing and lakes drying out. He stated that this in turn increased social-ecological vulnerability rapidly in the desert steppe region than in other ecological zones.

Dr. Togtokh emphasised that the dynamics of Mongolia's pastoral social-ecological systems is driven by climate extreme events such as drought and zud (severe winter in which a large number of livestock die due to starvation owing to inability to graze) and livestock number increase due to transition to market economy. The study also investigated on the traditional rangeland management that herders engage in to cope with climate variability. As a result, the study identified the need for meat storage systems in the countryside to prevent not only livestock losses but also rangeland degradation.

The project showed stronger community level involvement and the effective use of traditional knowledge. It also identified future research gaps and policy needs and developed stronger partnerships with Tuin River Basin Council, producing the Tuin River Basin Sustainable Management Plan as an output.

🕒 Status of the Future Earth Initiative

Prof. Fukushi made a presentation on Future Earth (FE). He described FE structure and its current status. He also briefly explained the history of FE and the background on its establishment as a transformation of legacy core global change programmes.

🕒 Panellists' Review and Comments

▶ Prof. Ailikun, SPG Invited Expert (MAIRS)

Prof. Ailikun commented that it is common for APN grants to serve as seed funds that stimulate larger research and

capacity building activities on a range of global change related topics, from community-based adaptation, impacts of climate change to others that address social economic change.

She cited that a majority of APN-supported projects are focusing on sustainability research already—particularly reflecting on-the-ground exercise of the sustainability aspect covering developing countries and developed countries in the region. This characteristic of APN is what makes it distinct from other organisations or initiatives. She emphasised that although APN funds are small compared to those provided by many other organisations, project grants from APN are constantly sought by researchers because of the network that it provides and its special niche on capacity building for developing countries that involve them in pioneering research. She closed by quoting that APN works for, pushes and supports the people in the Asia-Pacific region.

▶ Dr. Jiutian Zhang, nFP Alternate China

Mr. Zhang, nFP Alternate for China, asked Prof. Sellers about the forward-looking policy-making angle of research he presented, and asked for his recommended solutions to the accelerating urbanisation and its impacts to water resources in the course of current climate change issues. In general and as directed to all speakers, he commented that although supporting research projects is helpful, how to provide policy implications to further support policy-making is more important and is of common interest.

Appendix 8: Summary of Interactive Session II-B

🕒 Presentations from APN Project Leaders:

▶ Community Based Forestry and Livelihoods in the Context of Climate Change Adaptation (ARCP2010-12NMY/ARCP2011-04CMY-Paudel)

Mr. Rahul Karki of Forest Action Nepal presented the accomplishments of project ARCP2011-04NMY-Paudel, which was conducted in Nepal, Bangladesh, Thailand and Viet Nam. He discussed the methodology employed (household surveys and analysis of 30-year meteorological database) and introduced the results, which showed a high degree of dependency by local communities on forest, agriculture and natural resources, particularly among the poor and marginalised groups.

Mr. Karki further explained the nature of climate change impacts on natural-resource-dependent communities in South and Southeast Asia and presented on the diverse

adaptation approaches that farmers take (sustainable agriculture, livelihood diversification, sustainable forestry activities among others) to achieve synergy between sustainable management of natural resources and climate change adaptation. The study suggests that institutions play important roles in adaptation measures, especially in terms of linking adaptation plans with local development planning and therefore, policy measures should be carefully designed with no harm principles. It concluded that transferring tenure rights and decentralised governance of forests and natural resources help increase local resilience and acknowledged the need for a better understanding of ways to integrate climate adaption with local level development planning.

▶ Capacity Development on Integration of Science and Local Knowledge for Climate Change Impacts and Vulnerability Assessments (CIA2009-02NSY-Pulhin)

Dr. Juan Pulhin, Professor of the College of Forestry and

Natural Resources at the University of the Philippines Los Baños (UPLB), presented the outcomes of CIA2009-02NSY-Pulhin, a project that aimed at building the capacity of local government officials and researchers, and the provincial government of Albay in the Philippines by assessing the impacts of and their vulnerability to climate change with the use of SimCLIM, a computer model system designed to examine effects of climate variability, change over time and space, and support decision-making and climate proofing. In addition, the project also investigated the local knowledge of the people in the province in terms of climate change. Albay, the project site, served as a pilot site for the assessment of climate impacts and vulnerability in the Philippines. Responding to a question from the audience, Dr. Pulhin noted that project findings were integrated into policy-making to meet the needs of local government officials.

Dr. Pulhin emphasised the importance of integrating science and local knowledge towards a more robust assessment because of the following reasons:

- » It is difficult for communities to imagine future impacts of climate change and sea-level rise;
- » Their proposed responses are driven by variability and extremes rather than long-term gradual changes;
- » Use of computer models captured the 'forward looking' aspect of climate change;
- » Use of participatory techniques makes the assessments grounded on local realities and captures local/indigenous knowledge and experience.

► **Role of Experiments in Sustainability Transitions in Asia (ARCP2009-11NSY-Roy)**

Dr. Joyashree Roy, Professor at Jadavpur University, presented the outcomes of her project ARCP2009-11NSY-Roy, which consists of two workshops to develop a collaborative research strategy for inventorising, classifying and analysing "sustainability experiments" in the Asian context.

According to Prof. Roy, the definition of sustainability in a developed country is very much different from that by an expert from developing country. Similarly, how sustainability is viewed and understood differs among various actors. Therefore, bringing together experts from developing and non-developing countries helps see contexts in different ways.

The project conducted theoretical discussions for levelling off, followed by break-out groups to identify sustainability experiments in the Asian context and how can they be classified. The workshops also tried to discuss the underlying reason why sustainability experiments are not being scaled up, and in this context, looked on the special features of Asia that help create such barriers, and the main challenges and mechanisms for their development.

In closing, Prof. Roy pointed out the very important need on capacity building in sustainability transitions among young researchers in the Asian region who can carry on the existing work or initiatives in order to achieve a sustainable transition.

🔄 Presentation/Comments from Special Panellists

► **Ms. Tomoko Ishikawa (LCS-RNet/LoCARNet)**

Ms. Ishikawa made a short orientation on LCS-RNet/LoCARNet and mentioned the importance of "impact formation." Parallel to APN's, she described the roles that LCS-RNet/LoCARNet play on making use of research capacity in low carbon policy making by organising policy dialogues and facilitating knowledge sharing through annual meetings and other opportunities.

She further enumerated the three aspects of "Transformative Solutions" which are: (1) grassroots social learning and knowledge co-production, particularly in a Southern developmental context, to enable a broader agenda of behaviour change; (2) innovative science and technology-based solutions for decarbonisation; and (3) establishment of a worldwide systematic multi-layered, science-policy dialogue to realise low-carbon societies.

► **Dr. Karen Smyth (IGBP)**

Dr. Karen Smyth presented an overview of IGBP and also made comments on the presentations by project leaders. First, she cited the importance of case studies as they meet data gaps (gaps in downscaling simulated scenarios), ensure that local conditions and different perspectives are taken into account, outcomes are applicable to relevant decision makers, and inform global understanding (e.g. through metadata analysis and global models). Second, she emphasised that indigenous knowledge provides an understanding of the local environment and of historical and contextual frameworks. She added that knowledge of local conditions help with adaption and mitigation measures, which cannot be achieved by other data methods and can complement other data collection methods.

Similar to IGBP's initiatives, projects supported by APN engage stakeholders for a holistic understanding and for drawing up potential better solutions. In addition, APN-supported projects such as that on experiments in sustainability transitions (ARCP2009-11NSY-Roy) have significant roles in providing new insights over a timeframe and across disciplines, and help inform future work and steer direction of programmes.

► **Dr. Jay Ram Adhikari (Intergovernmental Panel on Biodiversity and Ecosystem Services)**

Dr. Jay Ram Adhikari talked about the objectives and operating principles of IPBES, achievements in 2014, and programmes and plans for 2015. As an international platform, IPBES aims to strengthen the science-policy interface for biodiversity and ecosystem services for the conservation and sustainable use of biodiversity, long-term human well-being and sustainable development, including through assessment and capacity building. He explained that the APN Biodiversity and Ecosystem Services framework explicitly identifies key priority themes such as drivers and pressures for biodiversity change that influence ecosystem services, impacts of biodiversity loss and vulnerability to the shrinking of

ecosystem services, prediction of changes in biodiversity and ecosystem services through model-based scenarios, and adaptation, response and mitigation, which are very much in line with the objectives and functions of IPBES and therefore, APN can complement IPBES work in the Asia-Pacific Region through collaborative approaches and partnership, mainly for: (1) Technical Support Unit (TSU); (2) data and information support; (3) capacity building; and (4) collaboration and expert support for regional and global assessment.

He also highlighted the research on the state of biodiversity and ecosystem services in the Asia-Pacific region, which include: (1) interlinkages between climate change, land degradation, biodiversity and ecosystem services; (2) indigenous and local knowledge on BES; (3) interaction among policy, institutions and legal regime on BES; (4) impact of consumption and production pattern on BES; and (5) national and sub-regional assessment on biodiversity and ecosystem services.

► **Dr. Lance Heath, SPG Invited Expert (ANU-CCI)**

Dr. Heath thanked APN project leaders for their informative presentations. He noted three main revolving themes from the presentations: (1) climate change impacts and extreme events on natural and social systems; (2) development of strategies to build and strengthen resilience and adaptive capacity; and (3) accuracy of projections.

He cited that application of research is vital, but its implications are more important, and integrating traditional methods and technical approaches (simple technology) is a good way to move forward in this changing global environment. In

addition, he said that the presentations tackled crucial issues or challenges at the ground level. Common findings suggest extreme changes in temperature and rainfall, uncertainties, increased crop disease etc.

As opportunities for APN in the next twenty years, he explained that it is worthwhile to give attention to building resilience and adaptive capacity, mainstreaming and integrating adaptation initiatives with traditional adaptation programme/systems and income diversification and addressing security issues related to migration. The approaches and messages to be used to respond to these challenges should reach out to the involved communities in an understandable and effective manner, through what was described as the KISS (Keep It Short and Simple) method.

► **Mr. Sajjad Ahmad, nFP Alternate for Pakistan**

Speaking on behalf of Pakistan, Mr. Ahmad focused his comments on the issue of replicability and integration of research with development plans. He stressed that scientific research, particularly on climate change are "distinctly linked with finance" adding that scientific results and technologies are very hard to combine and are not well understood by policy makers. All papers and publications show good promise but it is not often that there are quantifiable accumulated effects/impacts to be viewed for use of policy makers, said Mr. Ahmad. At the end, he strongly suggested the inclusion of extrapolating economic values of science (science economics). He commented that with this approach and through involving stakeholders, potential for replicability would be high.

Appendix 9: Action Points

▶ **Election of Chair:**

The IGM accepted the proposal of Mr. Thapa and Ms. Peldon to serve as Co-Chairs of the Meeting.

▶ **Item 1. Adoption of Agenda**

1. The agenda was adopted with an additional agenda item included as Item 8-6, which was proposed by Ms. Yuko Hoshino, national Focal Point Alternate for Japan, on a co-financing mechanism in partnership with the University of Tokyo.

▶ **Item 2.1. SC Report to the IGM**

2. The report was welcomed and approved by the IGM. An edit suggested by the nFP Alternate for Malaysia related to the location of the 7th SEA-SRC Meeting and PDTW workshop will be incorporated.

▶ **Item 2.2. Financial Reports**

3. The Final Financial Report for Fiscal Year 2013 was approved by the IGM.
4. The Interim Financial Report for Fiscal Year 2014, presented in an improved format was accepted by the IGM. The final version will be provided to the SC during the next intersessional meeting and to be endorsed in the next IGM.
5. The Deficit Strategy proposed by the Secretariat was approved, taking note that the strategy should be reviewed and updated annually at every SC meeting and IGM until the deficit is eventually cleared.

▶ **Item 3. Framework Document**

6. Mr. Chenchu Tshering (SPG Alternate for Bhutan), Dr. Subra Moten (Invited Expert to the SPG), Dr. Andrew Matthews (Invited Expert to the CDC), Mr. Sajjad Haldram (nFP Alternate for Pakistan) and Mr. Ajith Silva (nFP Alternate for Sri Lanka) volunteered to work with Ms. Peldon Tshering remotely to prepare suggested amendments to the Framework Document for approval at the next IGM.
7. The SRC committees are invited to discuss this issue if time allows at SRC parallel sessions.

▶ **Item 4. Third Strategic Phase Report and Fourth Strategic Plan**

8. The APN 3rd Strategic Phase Report 2015-2020 was approved.
9. The IGM approved the final Draft 4th Strategic Plan with the understanding that Appendix 2, the

Strategic Plan (Research Pathway) is an evolving and non-exhaustive list showing APN's areas of interest. A number of additional topics were proposed as follows:

- a. Sustainable energy related to greenhouse gases (Sabar Ginting, nFP for Indonesia);
- b. Mountain and coastal hazards (Mandira Shrestha, ICIMOD);
- c. Air resource management (Ajith Silva, nFP Alternate for Sri Lanka);
- d. Sustainable consumption and production, and public green procurement (Chenchu Tshering, nFP Alternate for Bhutan); and
- e. Satellite/environmental accounting (Joyashree Roy, Jadavpur University).

▶ **Item 5. SRC Parallel Sessions (SRCs to report to the plenary on Day 2)**

▶ **Item 6. SRC Chairs and Rapporteurs Meeting (SRCs to report to plenary on Day 2)**

▶ **Item 7. SRC Report to IGM**

10. The IGM endorsed the reports from the South Asia (SA), Southeast Asia (SEA) and Temperate East Asia (TEA) Sub-Regional Committees and approved the following action points presented:

SEA

- a. On initiating collaboration with the ASEAN Secretariat, Mr. Sabar Ginting will contact ASEAN Secretariat in Jakarta directly.
- b. The SEA meeting is to be held in Indonesia in August back-to-back with the kick-off meeting of the project "Building Capacity in Climate Change Adaptation in Urban Planning" (given that the seed grant proposal from SEA is approved by the IGM for funding).
- c. Thailand is considering of offering to host the 21st IGM/SPG Meeting in 2016.
- d. Thailand will celebrate the 20th anniversary of APN back-to-back with the Climate Expo in Bangkok in June/July 2015. There will also be a number of other events to celebrate in Cambodia, Malaysia, Indonesia and Viet Nam.

SA

- a. Pakistan agreed to host the next SA-SRC Meeting.
- b. Mr. Chenchu Tshering is to develop a concept note on sustainable consumption and production to be shared among the members for further improvement (concept note on paperless office or government)
- c. Outcomes of the recently-held Science-Policy

Dialogue will be further shared among stakeholders.

TEA

- a. The plan to hold a Science-Policy Dialogue in Mongolia on climate change and land management will be finalised further by the five TEA member countries.
- b. A Proposal Development Training Workshop (PDTW) is also planned to be organised in Mongolia.
- c. The TEA-SRC Meeting will take place back to back with the SPD and PDTW.

▶ **Item 8. Ongoing and New Activities**

11. Activities introduced under the present item are expected to be endorsed under Item 9. Some actions are noted:

- a. Cambodia will further discuss the details of the proposed PDTW involving institutions in Cambodia.
- b. Prof. Roland Fuchs will provide information about media engagement activities conducted by the East-West Center.
- c. The IGM reaffirmed that APN's existing call for proposals process will be used in the co-finance mechanism proposed by the University of Tokyo.

▶ **Item 9. Budget and Work Programme for FY2015**

12. The draft Work Programme and Budget Plan for Fiscal Year 2015 was adopted.

▶ **Item 10. SPG Co-Chairs Report**

13. The IGM endorsed the following action points regarding the call for proposals process and project management:

- a. Topics of interest for 2015 Call for Proposals;
- b. The name of the ARCP Programme will be changed to CRRP (Collaborative Regional Research Programme);
- c. Logical Framework Analysis will be included as part of proposals;
- d. An external expert database will be provided to the SPG;
- e. Proposals will be scored by criterion;
- f. Quantifiable indicators will be included in the progress report.

14. The new SPG Sub-Committee (SPG-SC) and its Co-Chairs were elected. The SPG-SC membership is as follows:

- a. Dr. Jariya Boonjawat, SPG Member for Thailand will act as Co-Chair and serve for one more year
- b. Dr. Kensuke Fukushi, SPG Member for Japan as SPG Co-Chair for a 2-year term
- c. Dr. Hemant Borgaonkar, SPG Member for India will serve one additional year as SPG-SC member
- d. Dr. Tsogbaatar Jamsran, SPG Member for Mongolia as new SPG-SC member

e. Dr. Fariza Yunus, SPG Member for Malaysia as new SPG-SC member

15. The new Capacity Development Committee (CDC) was elected:

- a. Dr. Jariya Boonjawat, SPG Member for Thailand and SPG Co-Chair (Ex-Officio)
- b. Dr. Kensuke Fukushi, SPG Member for Japan and new SPG Co-Chair (Ex-Officio)
- c. The new SC Chair (Ex-Officio, to be elected after SC election)
- d. Donor Member (Japan)
- e. Dr. Andrew Matthews, invited expert
- f. Prof. Roland Fuchs, invited expert
- g. Dr. Srikantha Herath, invited expert
- h. Dr. Juan Pulhin, invited expert

▶ **Item 11. CAF and CAPaBLE Recommendations**

16. The IGM approved SPG recommendations for thirteen (13) continuing ARCP (US\$ 295,000 secured in FY 2014 budget, with US\$ 145,200 secured from FY 2015 budget).

17. The IGM approved SPG recommendations of twelve (12) new proposals under the Climate Adaptation Framework (US\$ 778,000), two of which are to be combined into one project, therefore 11 new projects are approved for funding.

18. The continuation of the multi-year CAF projects will be decided during the intersessional SC meeting in Autumn 2015.

19. The IGM approved SPG recommendations for one (1) continuing CAPaBLE project (US\$ 27,000) pending successful review.

20. The IGM approved SPG recommendation of eight (8) new proposals under the CAPaBLE programme (US\$ 355,500). In addition, US\$25,000 was approved as a contingency fund for CAPaBLE in FY 2015.

▶ **Item 12. Election of Steering Committee Members for 2015-2017**

21. Five national Focal Points were elected by the IGM. The Chairpersons were elected and three members were co-opted, by the new SC, as indicated below.

Elected National Focal Points

- a. Ms. Peldon Tshering, Bhutan (Chair)
- b. Dr. Chengyong Sun, China (First Vice Chair)
- c. Mr. Sabar Ginting, Indonesia (Second Vice Chair)
- d. Mr. Sajjad Ahmad, Pakistan
- e. Dr. Andrey V. Adrianov, Russian Federation

Ex-Official Members: New SPG Co-Chairs

- f. Dr. Jariya Boonjawat, SPG Member for Thailand
- g. Dr. Kensuke Fukushi, SPG Member for Japan

Donor Member

- h. Dr. Akio Takemoto, nFP for Japan
- i. (any other donor country willing to participate)

Host of the next IGM (1 year term)

- j. China (pending government clearance)

Co-Opted Members (1 year term)

- k. Dr. Roland Fuchs (USA)
- l. Dr. Andrew Matthews (New Zealand)
- m. Dr. Kazuhiko Takemoto (Japan)

- 22. The Secretariat is to contact the three co-opted members for their consent to serve on the SC.

▶ **Item 13. APN Framework Document**

- 23. During the discussion on SC Election (Item 12), the following actions points in relation to the same topic were recorded:
 - a. Ms. Peldon proposed that the window of nomination should be clarified in the Framework Document.
 - b. China, Cambodia and Sri Lanka proposed that the exact detailed procedures regarding SC election must be clarified in the Framework Document.
 - c. Mr. Sundara, in addition to those who volunteered in Day 1, will join the task force to revise the Framework Document.
 - d. Among other things, suggested amendments for the Framework Document should address the modality of election of Chairs of the SC and other groups.
 - e. The revision process should start as early as possible.

- 24. The proposed amendments presented under Item 3 to the Framework Document were approved by the IGM.

▶ **Item 14. Host Country for Future IGMs**

- 25. China indicated willingness to host the 21st IGM. Thailand also indicated willingness to host on the condition that China is not ready to host the next meeting, also noting the need for regional rotation.
- 26. China is to consult with Thailand and the Secretariat, and other members will be informed in due course.
- 27. The Secretariat is to send a formal invitation to the nFP for China, in order to obtain official clearance to host the 21st IGM meeting.

▶ **Item 15. IGM Action Points**

(Present Item)

▶ **Item 16. Any Other Business**

- 28. The "APN Mitra Award for Global Change Research" was awarded to Mr. Khanal Shiva for his work on "Integration of object-based image analysis with machine learning algorithm for forest type classification in Nepal."

Section 2

Welcome and Opening Remarks

Welcome Remarks by Mr. Mahendra Kumar Thapa, Joint Secretary, Ministry of Science, Technology and Environment, Nepal



HONOURABLE Chief Guest, Mr. Mahendra Man Gurung, Joint Secretary, MOSTE, Mr. Hiroshi Tsujihara, APN Secretariat Director, guests on dias, APN national Focal Points, APN SPG Members, APN Secretariat, observers, media personnel, distinguished delegates, ladies and gentlemen,

It's a great pleasure to welcome you all to this official inauguration of APN's 20th Inter-Governmental Meeting/Scientific Planning Group Meeting. We will be having a very fruitful meeting for the next couple of days. Thank you, Hon. Chief Guest, APN Secretariat and all other distinguished delegates for your precious presence, which has made us proud.

I would like to thank all APN member countries for giving us this opportunity to host APN's biggest event of the year. Respected all, this IGM is also more precious for us as we are also going to celebrate the 20th anniversary of APN's establishment. Though we are hosting the IGM for the first time here in Nepal, we had prior experience of hosting an APN event in 2013, which was the fourth SA-SRC meeting. We assure that we will not leave any gap for the success of this event as well.

Nepal is linked to APN by a number of activities through meetings, seminars, training programmes and research activities. A number of scientists have benefited from the Proposal Development Training Workshop being organised each year. In addition, various institutions located in Nepal have received funding from APN to carry out research activities. Nepal, as before, will continuously support APN in the future as well.

Regarding the output from this IGM meeting, as a national Focal Point to APN, I hope optimum scientific, communication and outreach related activities will be achieved. Important ongoing activities will be continued and many more new, important plans, policies and activities will be proposed and implemented. I hope this 20th IGM meeting will create a milestone in addressing global environmental change. Furthermore, we should also explore further opportunities that APN could benefit from global forums to fulfil our mission from this meeting. I have also taken this forum as an opportune time to renew contacts and discuss problems of mutual interest with delegates from member countries of the region.

Respected all, I would like to announce that, in addition to various sessions, on March 26 we are also planning to have a field visit in the Godavari Knowledge Park, where various mountain-related technologies will be demonstrated with the support from ICIMOD. Further details will be communicated later on.

Finally, I would again like to cordially thank you all for your presence and wish for the success of the event. Thank you!

Welcome Remarks by Ms. Peldon Tshering, Vice Chair, APN Steering Committee

HONOURABLE Joint Secretary of Nepal's Ministry of Science, Technology and Environment, Mr. Mahendra Man Gurung, honourable Hiroshi Tsujihara, Director of the Asia-Pacific Network for Global Change Research Secretariat, APN national Focal Points and SPG members, ladies and gentlemen,

A very good morning to all of you. I am most honoured to be here at the 20th Inter-Governmental Meeting of the Asia-Pacific Network for Global Change Research, here in the glorious city of Kathmandu where I am sure I can speak on behalf of all and say that we are all delighted to be a part of the meeting



here in Nepal and most especially in the year of the 20th anniversary of APN.

Distinguished guests, ladies and gentlemen, today's multi-faceted environment challenges and fast-changing world calls for a close partnership between countries. Globalisation presents many challenges to our region and, as such, we should cooperate with the aim of achieving future benefits. And here we find that APN has done much to foster such alliances and expertise in bringing together like minds for the benefit and learning of many in our region.

Over the years, APN has been a supporter of policies and projects that has contributed immensely to the environment in our region. Annual gatherings such as this enable the building of a productive dialogue among member countries, regions and interested partners, and in addition, also provide an invaluable opportunity for networking and fruitful context between our countries.

Welcome Remarks by Mr. Hiroshi Tsujihara, APN Secretariat Director



H.E. Mahendra Man Gurung, Joint Secretary, Ministry of Science, Technology and Environment, Nepal, distinguished Mr. Mahendra Kumar Thapa, Joint Secretary, Ministry of Science, Technology and Environment, APN national Focal Point for Nepal, distinguished Ms. Peldon Tshering, APN national Focal Point for Bhutan and First Vice Chair of APN Steering Committee, distinguished

national Focal Points and members of Scientific Planning and Capacity Development Group of APN, invited experts, ladies and gentlemen, good morning.

At the opening of APN's 20th Joint Inter-Governmental Meeting and Scientific Planning Group Meeting, I would like to express my special appreciation to all participants who have travelled far and wide to visit Kathmandu.

Second, I would like to express my sincerest gratitude to the Ministry of Science, Technology and Environment, Nepal, for hosting this important meeting. This is the first Joint IGM and SPG Meeting here in Nepal. I would like to congratulate Nepal for the successful opening of this memorable meeting.

APN is an Inter-Governmental organisation of 22 member countries in the Asia-Pacific region. It was established in 1996 as a result of Japan-US initiative to promote global change research, which started at the White House Conference on Science and Economic Research related to Global Change in 1991, followed by talks between President Bush and Prime Minister Miyazawa, which resulted in the establishment of a

I recognise that we have had some varied discussions and we will have many more discussions in these few days—all of which will enhance our participation and make APN a most effective body that will benefit our region in the most intrinsic way to research and capacity building. We are also pleased to know that a half-day field visit has been scheduled, which for sure will give us a good experience in the areas of work that have been going on and will enable us to get to know Kathmandu a little more. These activities and sessions will also highlight possible avenues of cooperation between countries and come up with beneficial continuing projects which can give positive impacts to our region.

In closing, I wish to express my gratitude to the government of Nepal for such excellent arrangements and the warm welcome that we all had. I also would like to take this opportunity to thank APN Director and the APN Secretariat for organising this very important meeting in your most usual way of efficiency and excellence. Having held the Science-Policy Dialogue in Bhutan only this year, we have experienced the amount of work that is required to undertake such gathering and we appreciate the diligence and effort that has been done in committing this very smoothly for us. I wish this meeting will be fruitful and hope we have a very productive session. Thank you and Namaste.

number of regional networks for global change research. The research network created in the Asia-Pacific region is APN. In 1999, the permanent Secretariat of APN was established in Kobe, Japan, hosted by Hyogo Prefectural Government

On behalf of APN, I would like to extend my sincere appreciation for the strong commitment by all governments and scientists of member countries, and for the kind and continuous support by Hyogo Prefectural Government.

The Asia-Pacific region is home to more than half of the world's population that challenges the sustainability of natural resources, communities and their cultural heritage. Achieving sustainable development of this region is further complicated by the impacts of natural and anthropogenic changes in the Earth's bio-geophysical system.

According to IPCC's Fifth Assessment Report, warming of the climate system is unequivocal. In recent decades, changes in climate have caused impacts on natural and human systems on all continents and across the oceans. I am sure that many people now wonder if the frequent extreme events we see these days are due to climate change. The Fifth Assessment Report has also pointed out that we will witness severe impact of climate change on food production, water resources, ecosystems and biodiversity, human health and infrastructure such as water supply and electricity.

In this regard, APN must work harder to support these member countries facing such serious environmental problems. APN has been actively engaging in regional research and capacity development activities through competitive funding programmes — the ARCP and CAPaBLE programmes. In recent

years, we are also promoting focused activities under frameworks on Low Carbon Initiative, Climate Change Adaptation, and Biodiversity and Ecosystem Services.

As APN is now moving into its fourth Strategic Phase (2015–2020), it has become clearer than ever that science-based policy making is a key to addressing future global change and sustainability challenges.

Guided by our fourth Strategic Plan to be released in spring 2015, we will continue to work closely with partners, engaging all stakeholders including champions and young researchers who are passionate and ambitious in joining global efforts in addressing these challenges.

With their support, I hope that APN will be able to carry on with its increasingly important role in transforming global change and sustainability science into solution-oriented knowledge that informs decision and policy-making.

In order to achieve our goals, we need to scale up our activities. How to secure the budget comes to the question. I much appreciate Japan, USA, Republic of Korea and New Zealand for their continuous financial contribution to APN in the past. I also appreciate all member countries for their in-kind contribution. In the future, I believe it becomes very important for APN to establish partnerships with other funding agencies and research institutions based in developed and developing countries. I believe such partnerships will accelerate to provide funding opportunities for researchers in the Asia-Pacific region.

Finally, ladies and gentlemen, I hope that this meeting will work towards a fruitful outcome, thanks again to the continuous support and ownership by member countries, which will better address global change challenges in the region. Thank you very much.

Opening Address by Mr. Mahendra Man Gurung, Joint Secretary, Ministry of Science, Technology and Environment of Nepal



DIGNITARIES on dias, distinguished delegates attending this 20th IGM and SPG Meeting, media personnel, ladies and gentlemen.

I am pleased to be here with you all in this very important meeting, where prominent scientists and policy makers of APN member countries are participating. I would like to welcome you to Nepal and

this meeting. Let me also thank the distinguished Director of APN Secretariat and all the member countries for providing an opportunity to host this important meeting. The Government of Nepal appreciates the role played by APN in the field of science and is committed to the mission and objectives of APN.

Although I am participating formally in an APN event for the first time, I have been familiar with the activities of this Network. The mission that APN has undertaken to promote science-related measures and activities, as well as to link science and policy has further enhanced its significance in recent years. It has generated an understanding of global environmental change by conducting a number of regional research activities. APN's work on various areas such as "climate change and climate variability" and "ecosystems, biodiversity and land use" is very praiseworthy.

I have been informed that we are also celebrating APN's 20th anniversary. I would like to congratulate you on this very happy occasion and wish that APN becomes more effective in contributing to the field of science in the coming days.

I came to know from Mr. Thapa that the two-day Steering Committee meeting held prior to this meeting had fruitful outputs. I hope and urge all the distinguished participants to make the IGM a shightly productive one. I am also keen to participate in the Poster Session of Nepalese young scientists.

The Ministry of Science, Technology and Environment (MoSTE) is working to promote science and technology, without which faster economic development is not possible. In this context, we have formed five high-level advisory committees to advise the government in the area of science and technology. We already have the policy on science and technology, nuclear technology, biotechnology etc. In the area of climate change, the government has already brought policy documents like NAPA, LAPA and Climate Change Policy. Nepal has successfully completed two years' leadership of LDCs for the period of 2013–14 in UNFCCC negotiations.

Observing all these initiatives on climate change and associated sectors, what I am fully convinced is, scientific findings and their application by policy makers is of utmost importance. I hope this joint IGM and SPG Meeting could come up with plans and programmes that will balance science and policy. We definitely should work hard, cooperate and coordinate more for this. The concerted effort of scientists, economists, administrators, policy makers is crucial in this regard. I hope we are on this path through this networking.

MoSTE, in collaboration with APN, has already hosted the Fourth South Asia Sub-Regional Committee meeting here in Kathmandu in February 2013. I am looking forward to the successful completion of this Meeting and invite all to celebrate the 20th Anniversary of APN.

Finally, let me thank you once again.

Section 3

Main Item Papers of the 20th IGM/SPG Meeting





DRAFT AGENDA
APN Joint 20th Inter-Governmental Meeting (IGM)/
Scientific Planning Group (SPG) Meeting
Kathmandu, Nepal, 25-27 March 2015

Day One: Wednesday 25 March 2015

08:30-08:50

Registration for all participants

IGM/SPG Session I: Inaugural Session

08:50-09:10
(IGM/SPG)**Welcome Remarks***Mr. Mahendra Kumar Thapa, National Focal Point (nFP) for Nepal*09:10-09:20
(IGM/SPG)**Welcome Remarks***Ms. Peldon Tshering, Steering Committee (SC) Vice Chair
Mr. Hiroshi Tsujihara, Secretariat Director*09:20-09:40
(IGM/SPG)**Opening Address by Guest of Honour***Guest of Honour: Mr. Mahendra Man Gurung, Joint Secretary,
Ministry of Science, Technology and Environment, Nepal*

09:40-10:00

Group Photograph

All participants have a group photograph taken.

10:00-10:20

TEA/COFFEE BREAK (20 min)

IGM/SPG Session II: Institutional Issues (Part I)

10:20-10:40
(IGM/SPG)**Participants' Self-Introduction**All participants, via a *tour de table*, will introduce themselves and their affiliation.

Facilitator:

*Mr. Hiroshi Tsujihara, Secretariat Director*10:40-10:50
(SPG observes)**Election of Chair and Vice-Chair**IGM delegates will elect a Chair and a Vice-Chair.
(SPG members, experts and guests observe this session)

Facilitator:

*Mr. Hiroshi Tsujihara, Secretariat Director*10:50-11:00
(IGM/SPG)**Item 1: Adoption of the Draft Agenda**The Chair will seek adoption of the agenda. Additional agenda items may be suggested. Logistic information will be provided.
IGM Chair and Yuki Imanari, Secretariat

Document Reference
(Action)

IGM-SPG/20/01-01
(for adoption)

11:00-12:00
(IGM/SPG)

Item 2: Reports from the Steering Committee (SC) & Secretariat

2.1 Report on APN Activities in 2014, especially those taken to follow up on Action Points from 19th IGM.
(30 min)
Presenter: Ms. Peldon Tshering, SC Vice Chair

2.2 Financial Reports on Expenditure for 2013/14 & 2014/15
(30 min)
Presenter: Yukihiro Imanari, Secretariat

12:00-12:30
(IGM/SPG)

Item 3: APN Framework Document (PART I)

Amendments to the Framework Document, as proposed by the SC, will be presented for initial discussion, noting that further discussion will be held and approval of final text will be sought on Friday 26 March.
Presenter: Ms. Peldon Tshering, nFP from Bhutan and SC Member

12:30-13:30

LUNCH (60 min)

IGM/SPG Session III: APN Science, Development & Institutional Affairs

13:30-14:30
(IGM/SPG)

Item 4: Report from the Strategic Task Committee

The IGM will be asked to review and discuss the draft report for Evaluation of the 3rd Strategic Phase and the 4th Strategic Plan.
Presenters: Dr. Kanayathu Koshy

IGM/SPG Session IV: Sub-Regional Committee Meetings

14:30-17:00
(SRCs)

Item 5: Parallel session: Sub-Regional Cooperation

Parallel Sessions: The Sub-Regional Committees for Southeast Asia, South Asia, and Temperate East Asia will discuss common issues and progress. Participants from the Oceania/Pacific sub-region may also wish to meet informally during this time.
Chairs and Rapporteurs to be assigned among the SRC Members

17:00-17:30
(SRCs)

Item 6: SRC Chairs and Rapporteurs Meeting

The Chairs, Vice Chairs and Rapporteurs will meet to identify and discuss issues, particularly those of common interest to the SRCs.

SRC Chairs and Rapporteurs

Interactive Session I: Celebrating 20 Years of the APN

17:30-19:00

Part I: Youth Engagement in the APN

An informal session, with refreshments, will provide an opportunity for early-career scientists from Nepal, as well as project leaders and the GC community to exhibit posters on their research projects and networking.

Facilitator Ms. Taniya Koswatta, Secretariat

20:00-22:00

RECEPTION DINNER hosted by the APN

IGM-SPG/20/02-01 (for information)

IGM-SPG/20/02 (for approval)

IGM-SPG/20/03 (for approval on Friday 27 March 2015)

IGM-SPG/20/04 (for approval)

IGM-SPG/20/05 (for information and discussion)

(Agenda for SRC Meetings are provided separately)

IGM-SPG/20/06 (for information and discussion)

See information provided separately

----- END OF DAY ONE -----



DRAFT AGENDA
APN Joint 20th Inter-Governmental Meeting (IGM)/
Scientific Planning Group (SPG) Meeting
Kathmandu, Nepal, 25-27 March 2015

Day Two: Thursday 26 March 2015

IGM/SPG Session IV: Sub-Regional Committee Meetings (continued)

09:00-09:30
(IGM/SPG)

Item 7: Sub-Regional Committee Reports and Discussion

The SRC's will report on the results of their meetings and the IGM will be asked to discuss how best to advance sub-regional activities.
Presenters: SRC Chairs

Document Reference

(Action)

IGM-SPG/20/07
(for information, discussion; and action, where appropriate)

IGM/SPG Session V: Institutional Issues (Part II)

09:30-10:30
(IGM/SPG)

Item 8: Activities for 2015/2016

For each of the Sub-Items identified below, a report will be presented and the IGM will be asked to review the report and, where appropriate, approve action needed to follow-up on ongoing activities and implement new activities.

8.1 Core Programmes and Science Frameworks
 12 min *Presenter: Dr. Linda Anne Stevenson, Secretariat*

IGM-SPG/20/08-01
(for approval)

8.2 Science-Policy Engagement: Science-Policy Dialogues, UNFCCC, IPCC & IPBES, etc
 12 min *Presenter: Dr. Linda Anne Stevenson, Secretariat*

IGM-SPG/20/08-02
(for approval)

8.3 Capacity Building, Outreach and Networking
 12 min *Presenter: Dr. Linda Stevenson & Mr. Sundara Sem (Capacity building and Networking) and Mr. Xiaojun Deng (Communication and Outreach), Secretariat*

IGM-SPG/20/08-03
(for approval)

8.4 Hyogo and Other Activities
 12 min *Presenter: Mr. Hiroshi Tsujihara, Secretariat*

IGM-SPG/20/08-04
(for approval)

8.5 Celebrating 20 Years of the APN
 12 min *Presenters: Mr. Xiaojun Deng (APN "New" Website and Alumni), Ms. Dyota Condorini & Dr. Linda Anne Stevenson (other activities)*

IGM-SPG/20/08-05
(for approval)

Item 1

10:30–10:50 **TEA/COFFEE BREAK (20 min)**

10:50–11:30
(IGM/SPG)

Item 9: Proposed Work Programme, Budget and Risk Management Strategy for FY 2015

The IGM will be asked to consider and approve the proposed Work Programme and Budget for FY 2015, including the budgets for those activities presented under Item 8. The IGM will also be asked to consider the strategy for financial risk management.

Presenter: Mr. Yukihiro Imanari, Secretariat

Interactive Session II(a): Celebrating 20 Years of the APN

11:30–13:00

Part II(a): Celebrating APN’s Accomplishments

Moderator: nFP Malaysia

The session will be interactive in nature and invited experts and representatives from "outstanding" APN-led projects will be asked to disseminate their research findings through presentations, specialists panels and science-policy engagement for strategic engagement on common issues that will be considered as the APN embarks on its 4th strategic phase. Agenda is available separately.

13:00–14:00

LUNCH

14:00–21:00

Field Trip organised by the Ministry of Science, Technology and Environment of Nepal, followed by Reception Dinner, hosted by the Ministry of Science, Technology and Environment of Nepal. Details will be provided separately.

IGM-SPG/20/09
(for approval)

See information provided separately

Information will be provided separately

----- END OF DAY TWO -----

Item 1



DRAFT AGENDA
APN Joint 20th Inter-Governmental Meeting (IGM)/
Scientific Planning Group (SPG) Meeting
Kathmandu, Nepal, 25-27 March 2015

Day Three: Friday 27 March 2015

Session VI: Scientific Affairs

09:00-9:40
(IGM/SPG)

Item 10: SPG Co-Chairs Report

The SPG Co-Chairs will report on the results of the SPG Meeting (and the SPG Pre-Meeting) & will present topics of possible interest for the 2015 Annual Calls for Proposals

Presenter: Dr. Amir Muhammed, SPG Member for Pakistan

09:40-10:40
(IGM/SPG)

Item 11: CAF, CAPaBLE and Continuing ARCP and CAPaBLE Recommendations for Funding

The SPG Co-Chairs will present the SPG's recommendations for funding

Presenters: Dr. Jariya Boonjawat, SPG Co-Chair and Dr. Kensuke Fukushi, SPG Member for Japan

10:40-11:10

TEA/COFFEE BREAK (20 min)

Session VII: Development & Institutional Affairs

11:10-11:40
(SPG Observes)

Item 12: Election of Steering Committee Members

IGM Delegates will elect Steering Committee Members for the next period.

Presenters: IGM Chair and SC Vice Chair

11:40-12:00
(IGM/SPG)

Item 13: APN Framework Document (Part II)

The IGM will be asked to consider again and to adopt the draft amendments to the Framework Document presented under Item 3.

Presenter: Ms. Peldon Tshering, nFP from Bhutan and SC Member

12:00-13:00

LUNCH (60 min)

Document Reference
(Action)

IGM-SPG/20/10
(for information, discussion; and action, where appropriate)

IGM-SPG/20/11
(for information, discussion, and action, where appropriate)

IGM-SPG/20/12
(for discussion)

IGM-SPG/20/13
(for discussion)

Interactive Session II(b): Celebrating 20 Years of the APN

13:00-15:00

Part II(b)b: Celebrating APN’s Accomplishments

Moderator: nFP Mongolia

The session will be interactive in nature and invited experts and representatives from "outstanding" APN-led projects will be asked to disseminate their research findings through presentations, specialists panels and science-policy engagement for strategic engagement on common issues that will be considered as the APN embarks on its 4th strategic phase. Agenda is available separately.

15:00-15:30

Presentation from the Mitra Awardee

The IGM will present the Mitra Award for Best Poster and the winning young scientist will deliver a presentation about his/her research/work.

15:30-16:00

TEA/COFFEE BREAK (30 min)

Session VIII: Institutional Issues (Part III), Summary and Closing

16:00-16:10

(IGM/SPG)

Item 14: Host Countries for Future IGMs

Planning for the 21st and 22nd IGMs will be discussed, especially offers received to host these meetings.

IGM Chair and Mr. Hiroshi Tsujihara

16:10-16:50

(IGM/SPG)

Item 15: 20th IGM/SPG Action Points

Members will review and finalise the Chairperson’s Action Points.

15.1: Action Points (Programme of Work)

15.2: Action Points (2015/16 Fiscal Budget)

IGM Chair and Vice Chair

16:50-17:00

(IGM/SPG)

Item 16: Other Business, Final Remarks and Closing

Any additional items of business raised under Item 1 will be discussed. Final logistic information will be provided. Final remarks will be made and the IGM will be closed

IGM Chair and Vice Chair

----- END OF DAY THREE -----

(see information provided separately)

IGM-SPG/20/14
(for discussion and approval)

IGM-SPG/20/15
(for discussion and adoption)

Item 1

ACRONYM	FULL NAME	DESCRIPTION	More Information (URL)
4SP	Fourth Strategic Phase	The fourth 5-year strategic phase of APN will start in April 2015.	
ARCP	Annual Regional Call for Research Proposals	ARCP is a core programme of the APN that supports regional-based global change research.	www.apn-gcr.org/programmes-and-activities/arcp
B&ES	Biodiversity and Ecosystem Services	B&ES refers to biological diversity and the goods and services that it provides, including supporting, provisioning, regulating and cultural services, which are crucial to human wellbeing. APN is promoting B&ES through the launch of its new Framework in 2013	www.apn-gcr.org/bes
CAF	Climate Adaptation Framework	CAF is a new framework, launched in 2013, to support activities related to climate change adaptation, disaster risk reduction and loss & damage.	www.apn-gcr.org/caf
CANSA	Climate Action Network South Asia	A network of Civil Society Organisations and NGOs in South Asia, established to support and empower civil society organisations to influence the design and development of an effective global strategy to reduce greenhouse gas emissions and ensure its implementation at international, national and local levels in the promotion of equity and sustainable development.	
CAPaBLE	Scientific Capacity Building/Enhancement for Sustainable Development in Developing Countries	CAPaBLE is a core programme of the APN that supports capacity building activities in the Asia-Pacific region.	www.apn-gcr.org/programmes-and-activities/capable
CDC	Capacity Development Committee	The CDC reviews and recommends capacity building activities for funding support.	www.apn-gcr.org/about-apn/apn-structure/cdc-capacity-development-committee/
CDKN	Climate and Development Knowledge Network	CDKN supports climate compatible development policies through combining research, advisory services and knowledge management. It is funded by the Department for International Development, Government of UK and the Dutch Ministry of Foreign Affairs.	www.cdkn.org

ACRONYM	FULL NAME	DESCRIPTION	More Information (URL)
CORDEX	Coordinated Regional Climate Downscaling Experiment	CORDEX is a WCRP project that provides global coordination of Regional Climate Downscaling for improved regional climate change adaptation and impact assessment.	wcrp-cordex.ipsl.jussieu.fr/
EBLU	Ecosystem, Biodiversity and Land Use	One of the research theme under APN's Scientific Agenda (Reference: APN 2011-2015 Strategic Plan).	http://www.apn-gcr.org/resources/items/show/1855
FE	Future Earth	Future Earth is a research initiative on global environmental change and global sustainability.	http://www.futureearth.org
IAI	Inter-American Institute for Global Change Research	IAI is an international organisation of 19 countries in the Americas with a mission to increase the understanding of global change phenomena and their socio-economic implications.	www.iai.int
ICIMOD	International Centre for Integrated Mountain Development	The International Centre for Integrated Mountain Development (ICIMOD) is a regional intergovernmental learning and knowledge sharing centre serving the eight regional member countries of the Hindu Kush Himalayas.	http://www.icimod.org/
IGES	Institute for Global Environmental Strategies	IGES is a public interest organisation headquartered in Hayama, Japan, that conducts innovative policy development and strategic research for environmental sustainability.	www.iges.or.jp
IGM	Inter-Governmental Meeting	The IGM is APN's decision-making body and approves APN's strategies and activities, including the annual work programme and budget.	www.apn-gcr.org/about-apn/apn-structure/igm-members/
IPBES	Intergovernmental Platform on Biodiversity and Ecosystem Services	IPBES is an intergovernmental body established in April 2012 by 94 governments to strengthen the science-policy interface for biodiversity and ecosystem services.	www.ipbes.net
IPCC	Intergovernmental Panel on Climate Change	The Intergovernmental Panel on Climate Change (IPCC) is the leading international body for the assessment of climate change, established by the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO) in 1988 to provide the world with a clear scientific view on the current state of knowledge in climate change and its potential environmental and socio-economic impacts.	http://www.ipcc.ch/

ACRONYM	FULL NAME	DESCRIPTION	More Information (URL)
IRRI	International Rice Research Institute	The International Rice Research Institute (IRRI) is a research organisation dedicated to reducing poverty and hunger through rice science; improving the health and welfare of rice farmers and consumers; and protecting the rice-growing environment for future generations.	http://irri.org/
IWMI	International Water Management Institute	The International Water Management Institute (IWMI) is a non-profit, scientific research organisation focusing on the sustainable use of water and land resources in developing countries.	http://www.iwmi.cgiar.org/
LCI	Low Carbon Initiatives	LCI is one of APN's Frameworks launched in 2012 and supported by earmarked contribution by the Ministry of Environment, Japan.	www.apn-gcr.org/lci
LoCARNet	Low Carbon Asia Research Network	LoCARNet is a network of researchers that facilitates the formulation and implementation of science-based policies for low-carbon development in the Asian region, aiming at facilitating science-based policies in order to realise a sustainable future based on a stabilised climate.	http://lcs-rnet.org/about_locarnet/
MOEJ	Ministry of the Environment, Japan	MOEJ is responsible for environmental conservation, pollution control, and nature conservation.	www.env.go.jp
nFP	National Focal Point	An nFP is a member of the Inter-Governmental Meeting, appointed by respective APN member countries.	www.apn-gcr.org/about-apn/apn-structure/igm-members/
NSF	National Science Foundation	NSF is a United States agency that supports research and education in all the non-medical fields of science and engineering.	www.nsf.gov
PARR	Pan-Asia Risk Reduction fellowship programme	PARR is a fellowship programme initiated by START International that aims at providing training and educational opportunities in the Asia-Pacific. APN is supporting PARR through providing fellowship funds.	www.start.org/download/2013/ar-research-for-action.pdf
PDTW	Proposal Development Training Workshop	A workshop series offered by the APN to enhance research proposal development capacity of young scientists in the Asia-Pacific region.	www.apn-gcr.org/programmes-and-activities/pdtw/

ACRONYM	FULL NAME	DESCRIPTION	More Information (URL)
RFCC	Regional Forum on Climate Change	A regional forum organised by the Asian Institute of Technology in collaboration with the French Ministry of Foreign Affairs and International Development, ASEAN Secretary General, and the European Union, seeking to propose interventions that would influence climate policy in the region, and inspire ASEAN position for climate change negotiations at the global scale.	http://www.rfcc2015.ait.asia/
RUSD	Resource Utilisation and Pathways to Sustainable Development	A research theme under APN's Scientific Agenda (Reference: APN 2011-2015 Strategic Plan).	http://www.apn-gcr.org/resources/items/show/1855
SA	South Asia	APN's SA membership includes Bangladesh, Bhutan, India, Nepal, Pakistan and Sri Lanka.	www.apn-gcr.org/programmes-and-activities/sub-regional-cooperation/
SAARC	South Asian Association for Regional Cooperation	An association of South Asian nations, established to promote and strengthen collaboration in the economic, social, cultural, technical and scientific fields.	http://www.saarc-sec.org/
SACEP	South Asia Co-operative Environment Programme	South Asia Co-operative Environment Programme (SACEP) is an inter-governmental organisation, established in 1982 by the governments of South Asia to promote and support protection, management and enhancement of the environment in the region.	http://www.sacep.org/default.htm
SBSTA	Subsidiary Body for Scientific and Technological Advice	SBSTA is an organ of UNFCCC mandated to provide the Conference of Parties with advice on scientific, technological and methodological matters.	unfccc.int/bodies/body/6399.php
SC	Steering Committee	The SC provides strategic advice to the APN, particularly to the Secretariat's annual Programme of Work, and acts on behalf of the IGM during intersessional periods.	www.apn-gcr.org/about-apn/apn-structure/sc-steering-committee/
SEA	Southeast Asia	APN's SEA membership includes Cambodia, Indonesia, Lao PDR, Malaysia, Thailand, Philippines and Viet Nam.	www.apn-gcr.org/programmes-and-activities/sub-regional-cooperation/

ACRONYM	FULL NAME	DESCRIPTION	More Information (URL)
SPD	Science-Policy Dialogue	SPDs are a series of events organised by the APN in collaboration with regional partners to provide a forum for science-policy interaction regarding GC issues.	www.apn-gcr.org/resources/items/show/1880
SPG	Scientific Planning Group	The SPG reviews and recommends proposals received to the IGM for approval of funding, among other mandates.	www.apn-gcr.org/about-apn/apn-structure/spg-scientific-planning-group/
SPG-SC	SPG Sub-Committee	The SPG-SC is a sub-organ of the SPG, elected by SPG members.	www.apn-gcr.org/about-apn/apn-structure/spg-sc-spg-sub-committee/
SRC/SRCom	Sub-Regional Committee	The SRCs discuss and identify issues and research/capacity development needs that are common to respective subregions.	www.apn-gcr.org/programmes-and-activities/sub-regional-cooperation/
START	SysTem for Analysis Research and Training	START is a non-profit organisation based in Washington DC, USA that promotes research-driven capacity building to advance knowledge on global environmental change in Africa and Asia-Pacific.	www.start.org
TEA	Temperate East Asia	APN's TEA membership includes China, Japan, Mongolia, Republic of Korea and Russian Federation.	www.apn-gcr.org/programmes-and-activities/sub-regional-cooperation/
UNEP	United Nations Environment Programme	UNEP is a UN organisation mandated to be the leading global environmental authority that sets the global environmental agenda, that promotes the coherent implementation of the environmental dimensions of sustainable development within the United Nations system and that serves as an authoritative advocate for the global environment.	http://www.unep.org/
UNFCCC	United Nations Framework Convention on Climate Change	The United Nations Framework Convention on Climate Change (UNFCCC) is an international environmental treaty negotiated at the United Nations Conference on Environment and Development (UNCED), informally known as the Earth Summit, held in Rio de Janeiro from 3 to 14 June 1992.	http://newsroom.unfccc.int/

ACRONYM	FULL NAME	DESCRIPTION	More Information (URL)
USGCRP	United States Global Change Research Program	USGCRP is a US federal programme that coordinates and integrates global change research across 13 government agencies. APN receives financial contribution from USGCRP through NSF.	www.globalchange.gov
WCRP	World Climate Research Programme	WCRP is jointly sponsored by International Council for Science and the World Meteorological Organization, and has also been sponsored by the Intergovernmental Oceanographic Commission of UNESCO to determine the predictability of climate, and to determine the effect of human activities on climate.	www.wcrp-climate.org

Item 2-1: Summary of Activities Undertaken and Action Points Addressed Since the 19th IGM/SPG Meeting

This paper summarises the work undertaken and the action points addressed since the 19th IGM/SPG Meeting held in March 2014 in Siem Reap, Cambodia.

1. Project Management

The Secretariat is supporting and managing the following projects in fiscal year 2014:

Core programmes:

- **ARCP**—Annual Regional Call for Research Proposals: 24 projects (11 new and 13 continuing);
- **CAPaBLE**—Scientific Capacity Development Programme: 13 projects (12 new and 1 continuing);

Frameworks and focused activities:

- **LCI**—Low Carbon Initiatives: 7 projects (2 single year and 5 multiyear);
- **EBLU**—Ecosystems, Biodiversity and Land Use: 1 project (continuing);
- **RUSD**—Resources Utilisation and Pathways for Sustainable Development: 1 project (continuing);
- **CAF**—Climate Adaptation Framework: 14 new projects and one continuing project

Other projects, including SRCs: 3 projects.

2. Annual Calls for Proposals

The 2014 APN Call for Proposals under the Climate Adaptation Framework and CAPaBLE Programme was launched on 20 June 2014. The Secretariat received 61 Summary Proposals under the CAPaBLE Programme and 69 Expression of Interest (EOI) under the Climate Adaptation Framework, which were reviewed in an improved process in which all Scientific Planning Group (SPG) and Capacity Development Committee (CDC) members are involved in the Stage 1 review.

This year, APN also implemented its “Advisory Service” as a year-round service. Refer to: <http://www.apn-gcr.org/programmes-and-activities/online-advisory-service/>

3. Frameworks

Three frameworks have been established (one in 2012 and two in 2013):

- Biodiversity & Ecosystem Services (B&ES) Framework: 2 projects under the ARCP programme and three projects under CAPaBLE Programme were categorised under B&ES framework based on IPBES’ areas of interest.
- Climate Adaptation Framework (CAF): Member governments approved 14 projects under CAF and project contracts have been drawn. All but two are multi-year projects.
- Low Carbon Initiatives (LCI) Framework:
Project updates
 - 2 single year projects completed
 - Four projects are continuing to second year activities

- Based on SPG-SC recommendations and SC approval, second year activities of LCI2012-03NMY(R)-Lopez project have been discontinued.
- Networking activities: a side event was held at the 3rd LoCARNet meeting involving LCI project leaders and collaborators

4. 3SP Evaluation & 4SP Planning

As advised by the 19th IGM Meeting, a 4th Strategic Plan Writing Workshop was held in Kobe, Japan from 18-20 November 2014, participated by Prof. Kanayathu Chacko KOSHY, Dr. W. Andrew MATTHEWS, Dr. Eileen Lavonne SHEA, Dr. Akio TAKEMOTO, and Dr. Luis M. TUPAS (via Skype).

The task team reviewed and completed the final draft of the 3rd Strategic Phase Report that summarises APN's dynamic work in realising the third strategic plan, including a summary of over 130 projects undertaken within the 3rd Strategic Phase, after incorporating feedbacks from external reviewers before the workshop, and from task team members during the workshop. The draft 4th Strategic Plan was formulated based on the advice given at the 19th IGM meeting, taking into consideration the latest development in the global change community.

On 28 November 2014, the draft 3rd Strategic Phase Report and the draft 4th Strategic Plan were circulated among APN members for comment and feedback. Secretariat has collated all feedback and has prepared the final drafts of both the 3rd Strategic Phase Report and the 4th Strategic Plan for final review and approval at the 20th IGM under Item 4.

5. Sub-Regional Cooperation

The seventh Southeast Asia Sub-Regional Cooperation (SEA-SRC) Meeting was held in July 2014 in Vientiane, Lao PDR. A Myanmar representative was represented at the 7th SEA-SRC meeting. Among other things, the SEA-SRC discussed:

- Improving the summer school proposal integrating members comments;
- Engagement of Myanmar in sub-regional cooperation; and
- Enhancing collaborative activities with other Southeast Asia regional networks.

The SRC committee organised APN's second Science Policy Dialogue (SPD) and sixth South Asia (SA) sub-regional committee Meeting in January 2014 in Thimphu, Bhutan. The SA meeting discussed outcome of the SPD, possible collaboration activities with South Asian regional networks and organisations, and sub-regional committee's cooperation activities in the fourth strategic phase.

6. Co-Financing Partnership

A co-financing partnership between APN and Cambodia was established on 10 July 2014. Under the partnership, the government of Cambodia will provide co-funding for APN-approved projects that are led by Cambodian scientists. The term of partnership is from July 2014 to June 2019.

Discussions are underway with Sri Lanka and Thailand for establishing similar co-financing arrangements.

7. Proposal Development Training Workshops (PDTWs)

APN organised annual PDTW in 2014 back-to-back with the 7th Southeast Asia Sub-Regional Meeting in Lao. APN introduced the "open call selection process for participants" in the 2014 annual PDTW and selected 24 young scientists from Southeast Asia region.

National Environment Commission of Bhutan organised a two-day Proposal Development Training Workshop involving 20 national young scientists. The workshop was held as back to back with the Science Policy Dialogue and South Asia Sub-Regional Cooperation Meeting.

With the above two workshops, APN has expanded the PDTW alumni to 230 persons.

8. Hyogo Activities

International Expert Meeting on Air Pollution Control in Urban Asia-Pacific *27-29 October 2014, Zhuhai, China*

The international meeting was held in collaboration with the Hyogo Prefectural Government of Japan and Beijing Normal University, Zhuhai. Over 40 experts from 9 countries with diverse background including atmospheric science, economics and public health exchanged the latest knowledge on urban air pollution control across Asia and the Pacific. Also participating in the meeting were government representatives from Guangdong, China, where the meeting was held, and from Hyogo Prefectural Government, including Ms. Junko Umetani, Chief Executive Officer for the Environment.

International Symposium on Hokusetsu Satoyama

30 November 2014, Takarazuka, Hyogo, Japan

Attended by about two hundred participants, the Hyogo-APN symposium featured three lecture presentations on satoyama and three case studies of traditional use and management of landscapes and natural resources. The program was designed and intended to raise awareness on the importance of satoyama, particularly the satoyama of the Hokusetsu region. The symposium was an avenue in the creation of Hokusetsu Satoyama Declaration that incorporates the ideas of the International Partnership for the Satoyama Initiative (IPSI) to work efforts towards making Hokusetsu Satoyama an ideal representation of satoyama globally.

9. Communications and Outreach

The following publications

- Proceedings of the 19th IGM/SPG Meeting (September 2014)
- Annual Report 2013-2014 (December 2014)
- Science Bulletin 2015 (March 2015)
- CAF publication: Linking Disaster Risk Reduction, Climate Change Adaptation and Loss & Damage

To mark the 20th Anniversary of APN, the APN Alumni service is added to the websites, which is open to the public and allows for dynamic content generation. The Alumni is expected to host researcher profiles and provide a platform for contributing articles and other contents to be featured in the APN websites and disseminated for a wider audience in the community.

The APN logo was redesigned to celebrate the 20th year of achievements by APN, with a slogan “20 years of bridging science and policy for a sustainable Asia-Pacific”. It is expected that the new “20th anniversary logo” will be used throughout the year in all APN activities to maximise visibility.

The APN website was redesigned and is planned to launch before the IGM, to convey a fresh image as APN enters its 4th Strategic Phase. The E-Lib was also redesigned, added features for visualisation and easier navigation.

10. Major Events

Below is a list of major events organised by the APN or in which the APN was represented:

Date	Title of Event
Apr 2014	MAIRS Open Science Conference 2014, Beijing, CHINA
Jun 2014	40th session of the Subsidiary Body for Scientific and Technological Advice, UNFCCC, Bonn, GERMANY
Jun 2014	3Rs Scoping Workshop, Kobe, JAPAN
Jul 2014	Southeast Asia 7th SRC Meeting and first annual PDTW, Vientiane, LAO PDR
Sept 2014	28 th Steering Committee Meeting, Kobe, JAPAN
Oct 2014	APN-ICCCAD Session: Knowledge Foundations of Loss and Damage Systems, MALAYSIA
Oct 2014	International Expert Meeting on Urban Air Pollution Control, Zhuhai, CHINA
Nov 2014	International Symposium on Hokusetsu Satoyama, Takarazuka, Hyogo, JAPAN
Dec 2014	LoCARNet's 3rd Annual Meeting, Bogor, INDONESIA
Jan 2015	3rd Plenary of Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES-3), Bonn, GERMANY
Jan 2015	South Asia Science-Policy Dialogue, Thimphu, BHUTAN
Jan 2015	South Asia 6 th SRC meeting and national level PDTW, Thimphu, BHUTAN
Feb 2015	3rd International Workshop on Future Earth in Asia held at Kyoto, JAPAN
Mar 2015	UN 3rd World Conference on Disaster Risk Reduction, Sendai, JAPAN

11. New Representation in the APN

National Focal Points:

Date changed	Country	Former member	New member
June 2014	Malaysia	Dr. Wan Azli Wan Hassan (nFP Alternate)	Mr. Muhammad Helmi Abdullah (nFP Alternate)
June 2014	Pakistan	Mr. Muhammad Irfan Tariq	Mr. Sajjad Ahmad
June 2014	Republic of Korea	Mr. Kyeong-yun Jeong	Ms. Ho Yu
July 2014	Japan	Mr. Hiroshi Tsujihara	Dr. Akio Takemoto
Nov 2014	Nepal	Mr. Gokarna Mani Duwadee	Mr. Mahendra Kumar Thapa
Feb 2015	Sri Lanka	Mr. B. M. U. D. Basnayake	Mr. Nihal Rupasinghe

Scientific Planning Group (SPG) Members:

Date changed	Country	Former member	New member
July 2014	Sri Lanka	Mr. Sunil H. Kariyawasam	Mr. Lalith Chandrapala

12. Changes in the Secretariat

Former Director	New Director
Dr. Akio Takemoto	Mr. Hiroshi Tsujihara

Ms. Yayoi Nagaoka, technical support staff left APN Secretariat as she completed her term of service in February 2014. Mr. Vianney Vunabandi, a master's degree student at Kobe Institute of Computing, joined the Secretariat as an intern from August 2014 to February 2015.

Final Financial Report, Fiscal Year 2013 (as of 31 March 2014) ¹⁾							
Resources Available:²⁾							
Japan	MOEJ	Yen 243,243,000 /100	2,430,000	Exchange Rates in FY 2013:			
	Hyogo	Yen 23,558,000 /100	236,000	US\$ 1 = JPYen 100			
ROK	Ministry of Environment		50,000	US\$ 1 = NZ\$ 1.20			
New Zealand	Ministry for the Environment	NZ \$ 30,000 /1.20	25,000				
USGCRP/NSF			362,000				
Unspent Funds of Projects from FY 2011 and earlier, finalised in FY 2012			83,000				
LCI Framework (from FY 2012)			260,000				
SBSTA/UNFCCC			10,000				
AOF			391,000				
Total			3,847,000				
Use of Resources:				Approved Allocation of Resources ³⁾	Actual Expenditures ⁴⁾	Committed Resources ⁵⁾	Difference ⁶⁾
				A	B	C	D=A-(B+C)
ARCP				1,000,000	342,200	657,800	0
CAPaBLE CBA				567,000	440,000	127,000	0
Climate Adaptation Framework (incl. Disaster Risk Reduction - Loss & Damage)				780,000	52,000	728,000	0
Low Carbon Initiative Framework (LCI CMYs + LoCARNet Networking)				460,000	220,800	256,600	-17,400
SBSTA38 + UNFCCC19/SBSTA39				20,000	22,000	0	-2,000
Hyogo Activities	Hyogo/APN/IGES-KRC Int'l Symposium			30,000	30,000	0	0
	EMECS 10			30,000	30,000	0	0
IGM/SPG, incl. SC				120,000	125,000	0	-5,000
Posts SC, Inst	Yen 33,500,000 /100		335,000	355,300	0	-20,300	
Programme Fellow	Yen 3,100,000 /100		31,000	47,700	0	-16,700	
Travel				65,000	62,000	0	3,000
Publications				40,000	36,000	4,000	0
Posts Adm.	Yen 8,090,627 /100		81,000	91,000	0	-10,000	
General Operational Cost				45,000	82,000	0	-37,000
IGES Adm Overhead				73,000	73,000	0	0
Coordinator	Yen 4,100,000 /100		41,000	46,300	0	-5,300	
Climate Synthesis				24,000	21,500	2,500	0
Sub-Regional Strategic Development/Planning				120,000	80,000	40,000	0
3SP Evaluation Report & 4th Strategic Plan				15,000	7,000	8,000	0
Biodiversity and Ecosystem Services Framework				43,000	0	43,000	0
Sub Regional Science-Policy Dialogue and Synthesis				50,000	0	50,000	0
3R Scoping Workshop				25,000	0	25,000	0
PARR Fellowship Programme				30,000	0	30,000	0
Total				4,025,000			-110,700
				-178,000			
Confirmed Deficit as of the End of FY 2013							
				Amount (US\$)			
Budget overrun				110,700			
Exchange-rate losses ⁷⁾				222,500			
Lack of resources				178,000			
Total ⁸⁾				511,200			

Budget overrun:

An overrun of about US\$ 110,700 was mainly caused by underbudgeting the general operational cost of the secretariat, and personnel costs, including back taxes, change of employment status.

Exchange-rate losses:

The exchange rate was set as US\$ 1 = JPYen 100 in FY 2013 budget. But, as the result of the sharp depreciation of the Japanese Yen against the US Dollar in FY 2013, the actual exchange rate when the contracts were signed, became on average US\$ 1 = JPYen 109, resulting in a deficit of about US\$ 222,500.

Lack of allocatable resources:

Compared to the finally available resources of US\$ 3,847,000 in FY 2013 against a total budgeted amount of US\$ 4,025,000 that was allocated in the Work Programme and Budget Plan of FY 2013, resulting in a deficit of US\$ 178,000. This amount also includes resource required for ARCP Multi-Year Projects in FY 2013.

Explanatory Notes to Final Financial Report FY 2013

1. The presented Final Financial Report of FY 2013 shows the situation of the APN finances, as of 31 March 2014. This report was presented to and approved by the 28th Steering Committee (SC) Meeting, held 22–23 September 2014 in Kobe, Japan.
2. The direct financial support APN received in FY 2014 and those funds from FY 2013 that were transferred to FY 2014 the overall amount of resources available amounted US\$ 3,847,000.
3. In column A under “Use of Resources”, allocations of funds as they were approved by the 18th IGM/SPG Meetings are shown: US\$ 4,025,000. The bottom of this column shows that the total amount of allocated funds exceeded the total resources available by US\$ 178,000.
4. Column B shows the actual amounts that were expended in each of the cost items.
5. Column C indicates what portion of the original budget allocation needs to be transferred to the next fiscal year as committed funds.
6. As shown in column D, some cost items closed with some budget overrun, resulting in a deficit of US\$ 110,700.
7. A deficit of US\$ 222,500 was due to the strong depreciation of Japanese currency to US Dollars.
8. FY 2013 closed with a total deficit of US\$ 511,200.

Financial Status Report Fiscal Year 2014 ¹⁾		Exchange Rates in FY 2014:		
As of 31 December 2014		US\$ 1 = JPYen 110		
		US\$ 1 = NZ\$ 1.20		
		US\$ 1 = GBP 0.67		
Resources Available:				
	Initial Resources²⁾	Confirmed Resources Available, as of 31 December 2014³⁾	Difference⁴⁾	
	a	b	c=b-a	
Direct Financial Contributions				
Ministry of the Environment of Japan	2,183,000	2,191,850	8,850	
Hyogo Prefectural Government	190,000	191,630	1,630	
USGCRP/NSF	0	0	0	
Ministry of Environment of Republic of Korea	50,000	50,000	0	
Ministry for the Environment of New Zealand (NZ\$ 30,000)	25,000	25,000	0	
Contribution to Specific Activity				
Climate and Development Knowledge Network (CDKN), Asia (GBP 8,000)	0	12,000	12,000	
Operational Resources from FY 2013 and before	2,427,130	2,427,130	0	
Returned Funds of Projects from April 2014 to December 2014	0	70,400	70,400	
Total	4,875,130	4,968,010	92,880	
Use of Resources:				
	Approved Allocation	Projected Expenditure in FY 2014⁹⁾	Resources to be carried over to FY 2015¹⁰⁾	Difference
	A	B	C	D=A-(B+C)
FY 2008 - FY 2013⁵⁾				
AOF & AOA 2011-2013	30,000	24,000	6,000	0
ARCP 2008-2013	661,610	366,780	245,610	49,220
CAPaBLE 2011-2013	276,250	174,810	9,800	91,640
LCI 2012-2013	256,600	141,640	114,960	0
EBLU 2012	15,400	15,170	0	230
RUSD 2011-2012	37,110	23,940	5,980	7,190
SCBCIA 2009	5,700	0	0	5,700
NSF Refunds	0	0	8,990	-8,990
Sub Total	1,282,670	746,340	391,340	144,990
FY 2014⁶⁾				
ARCP	1,200,660	595,990	604,670	0
CAPaBLE	458,500	369,860	88,640	0
Low Carbon Initiatives Framework	20,000	5,890	14,110	0
Climate Adaptation Framework	1,313,000	520,880	792,120	0
Biodiversity and Ecosystems Services Framework	43,000	0	43,000	0
One Annual Sub-Regional PDTW	25,000	25,000	0	0
Science-Policy Linkages	66,000	66,000	12,000	-12,000
PARR (Urbanisation) Programme Fellowships	30,000	30,000	0	0
20th IGM & 28th SC	120,000	120,000	0	0
4th Strategic Planning Workshop, 3R Scoping Workshop	56,000	34,410	21,590	0
Hyogo-Satoyama International Symposium	10,000	10,000	0	0
Hyogo-Zhuhai Expert Meeting on Air Pollution	50,000	50,000	0	0
SRC South Asia	15,000	15,000	0	0
SRC Southeast Asia	15,000	15,000	0	0
SRC Temperate East Asia	15,000	0	15,000	0
Planned Travel for Secretariat to APN Meetings	35,000	35,000	0	0
20th Anniversary Science Conference in 2016	3,000	0	3,000	0
3 Framework Publications	4,000	1,080	2,920	0
CAPaBLE 10 Years Publications	1,500	0	1,500	0
Annual Reports and Other Publications	20,000	20,000	0	0
Climate in AP: Book Review & IPCC Connections	2,500	0	2,500	0
Ad Hoc Travel for Scientific and Institutional Activities	25,000	25,000	0	0
Personnel	446,000	560,000	0	-114,000
General Maintenance and Operational Cost & Equipment Upgrade	64,000	80,000	0	-16,000
IGES Overhead	65,500	65,500	0	0
Sub Total	4,103,660	2,644,610	1,601,050	-142,000
Total⁷⁾	5,386,330	3,390,950	1,992,390	
Deficit as of 01st April 2014⁸⁾	-511,200			
Projected Balance in the Difference of FY 2014¹¹⁾	+ 95,870			
Projected Exchange Rate Gains, US\$ 1 = Yen 126	+ 36,330			
Projected Deficit as of 31 March 2015¹²⁾	-379,000			

Explanatory Notes to Financial Status Report FY 2014

1. The present Financial Status Report FY 2014 shows the situation of APN finances as of 31 December 2014. The final report of FY 2014 will be presented, as the Final Financial Report FY 2014, to the intercessional Steering Committee (SC) Meeting for its approval in autumn 2015.

Resources Available

2. Under column a, "Initial Resources" amounts are shown based on which the Draft Work Programme and Budget FY 2014 was created.
3. Under column b, the confirmed amounts of resources as they were made available to APN are shown, summing up US\$ 4,968,010. At this point APN gratefully acknowledges the enormous in-kind support it has been receiving in the course of FY 2014. A rough calculation indicates that the value of the in-kind support certainly matches the overall direct financial support received.
4. As column c shows that the total amount of available resources increased by US\$ 92,880 including US\$ 12,000 (GBP 8,000), a contribution of direct financial support from CDKN (Climate and Development Knowledge Network) Asia to the Science-Policy Dialogue the APN organised and held in Bhutan in January 2015.

Use of Resources

5. The upper part of column A, labelled as "FY2008 – FY2013", provides some important information on projects that were approved in past years but are still on-going. They are supported by committed funds that were carried over from the previous fiscal year. The total amount allocated is US\$ 1,282,670.
6. The lower part of column A shows the allocations of resources as they were approved as Work Programme and Budget FY 2015, totalling US\$ 4,103,660.
7. The overall amount that was allocated for on-going and new activities totals US\$ 5,386,330.
8. As a result, because more resources were allocated than actually available, FY 2014 started with a shortage of resources of US\$ 511,200.
9. The column B "Projected Expenditure in FY 2014" indicates the amounts that are actually expended by 31 December 2014 and those that are projected to be spent between 1 January and 31 March 2015, totalling US\$ 3,390,950 (shown at the bottom of this column).
10. For activities that will not be finalised yet by 31 March 2015, some resources must be carried over as committed funds. These figures are listed in column C as "Resources to be carried over to FY 2015" and total US\$ 1,992,390.
11. Under columns c and D, the differences are shown what was allocated against what was expended and/or needs to be transferred to the next fiscal year. In some cost items, i.e. in personnel and general operational costs, the expenditures exceed the allocated resources, respectively. A miscalculation of the costs needed for one staff, as well as some increased payments of social benefits, caused by the change of employment status of some secretariat staff, is the reason of the budget overrun. Combining columns c and D there is a positive balance of US\$ 95,870.
12. FY 2014 started with a shortage of US\$ 511,200 caused by the deficit in FY 2013. In the course of FY 2014, this deficit would be likely reduced to US\$ 379,000 by using the positive balance of columns c and D (US\$ 95,870) and some US\$ 36,330 that could be saved through exchange rate fluctuations. Also refer to Item Paper *IGM-SPG/20/02-02(c) Deficit Strategy*.

Deficit Strategy

1. Confirmed deficit of FY 2013

Confirmed deficit FY 2013	US\$ 511,200	<ul style="list-style-type: none"> • Budget overrun • Exchange rate losses • Lack of allocable resources
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2. Strategy to clear the existing deficit proposed by the Secretariat and endorsed by the SC

- i. As a matter of priority, allocate some of the **remaining, undisbursed and/or returned funds from APN funded activities**, expected to be on average US\$ 80,000 per year.
- ii. **Establish a cost item** in the budget plan to help to clear the deficit and to allocate **US\$50,000** in FYs 2015 and 2016.

3. Strategy to avoid future deficits in FY 2015

- i. Put aside **a contingency of 5%** of the total annual revenue of the fiscal year to allow some flexibility in the financial management (new opportunities, unforeseen expenses, etc.).
- ii. Budget planning shall be conducted on the basis of an **exchange rate of US Dollar/Japanese Yen that is 5% higher than the mean exchange rate** at the time of preparing the Work Programme and Budget Plan.
- iii. Resources in other currencies than US Dollar will be **converted to US Dollars as early as the contributions are received so as to secure the US Dollars for project remittances.**

4. Reduction of the deficit (also refer to column c and D in Item Paper SC/29/03-01b: Financial Status Report FY 2014)

Positive factors:

- i. **US\$ 10,480** (increase in the budget: US\$ 8,850 from MOEJ; US\$ 1,630 from Hyogo Prefectural Government); **US\$ 82,400** (US\$ 12,000 from CDKN; US\$ 70,400 from returned funds from finalised projects, as of 31 December 2014);
- ii. Unspent funds of **US\$ 144,990** from funds that were carried over from FY 2013; and
- iii. Some savings of approximately **US\$ 36,330** were made through exchange rate gains.

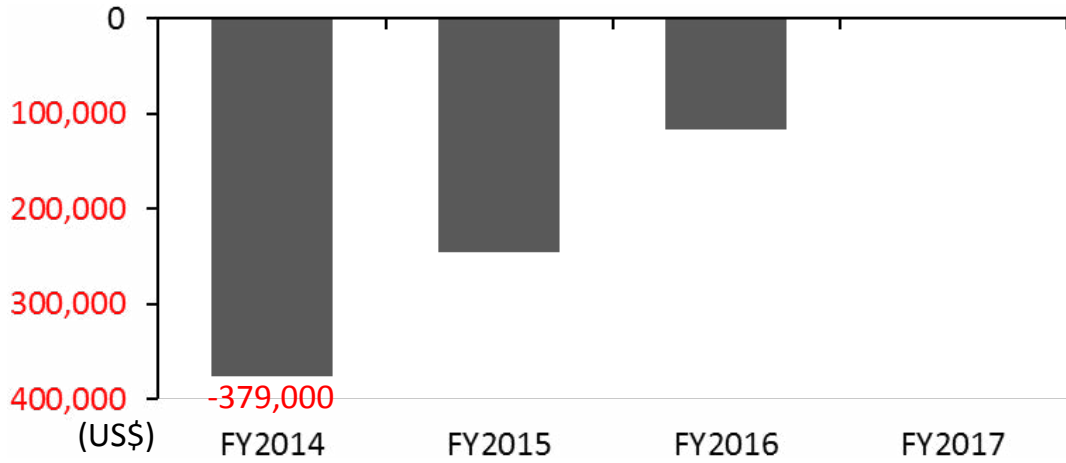
Negative factor:

- i. Budget overrun of approximately **US\$ 130,000** (US\$ 114,000 for personnel, and US\$ 16,000 for general operational costs).

As a result, as of 31 March 2015, the overall projected deficit decreased from **US\$ 511,200** down to **US\$ 379,000** (also refer to Item paper IGM-SPG/20/02-02b Financial Status Report FY 2014).

3. Steps to clear the remaining deficit

By applying the measures as described under item 2 above, the remaining deficit could be paid off in three fiscal years as seen below, under the assumption that US\$ 130,000/fiscal year can be made available to reduce the deficit: US\$ 50,000 from the new cost item, and US\$ 80,000 which is the past annual average amount of remaining, undisbursed and/or returned funds from APN funded activities (in the event that in one fiscal year less than US\$ 80,000 from remaining, undisbursed and/or returned funds is available, the shortage will be, upon approval from the SC, borne by the Contingency Fund):



Item 3

Item 3: Suggested Amendments to the Framework Document

The Steering Committee in its 28th Meeting in Kobe in September 2014 reviewed the decision and action points agreed at the 19th IGM that are related to continuously updating the APN Framework Document, and asked Ms Peldon Tshering and the late Mr. Louis Brown to take the lead in preparing suggested amendments for consideration and approval by the IGM at its 20th meeting.

Suggested amendments have been prepared and circulated on 23 January 2015 to national Focal Points for their comment and input. Among other things, revisions were suggested in relation to the mandate of the IGM (page 6) and SC (pages 6-7), as well as the mandate of, and guidance for the Secretariat (pages 12-13; 25).

Action Requested

The IGM is invited, under the present agenda item, to discuss the changes proposed and to raise any additional modifications considered appropriate. National Focal Points and other interested parties may further hold discussion in the margins of the IGM before Day 3 when the IGM is invited, under Item 13, to formally endorse the proposed amendments to the Framework Document.

Related Documents

IGM-SPG-20-03-App1: Suggested amendments based on the current effective version, with proposed insertions/deletions shown in line.

IGM-SPG-20-03-App2: Additional changes proposed at the IGM.

IGM-SPG-20-03-App3: The APN Framework Document as amended by the 20th IGM.

(6.A)**A. The Inter-Governmental Meeting (IGM)****1. Mandate**

The Inter-Governmental Meeting (IGM) is the APN's general policy and decision-making body. The IGM:

- i. sets policy for the programmes, finances and other activities of the APN, etc.;
- ii. adopts rules and procedures for the APN;
- iii. oversees the development and production of the APN's annual operating plan;
- iv. reviews and approves the annual financial report ~~and budget~~, budget, and long-term financial management plan for the APN;
- ~~v.~~ considers the APN's needs for resources to support its programmes and activities; identifies possible sources of such funding and considers and approves arrangements for securing such funding;
- vi. reviews and approves projects to be undertaken or supported by the APN, based on recommendations made by the SPG and CDC;
- ~~vii.~~ reviews and approves other activities to be undertaken or supported by the APN, based on recommendations made by SPG, the SC, the CDC, SRCs and the Secretariat;
- ~~viii.~~ provides guidance to the SC, SPG, CDC, SRCs and the Secretariat;
- ~~ix.~~ conducts regular reviews of, evaluates and approves the APN's long-term plans, especially its Strategic Plan, and the implementation of these plans;
- ~~x.~~ establishes SRCs when appropriate; and
- ~~xi.~~ performs other functions, as necessary, to achieve the mission and goals of the APN.

...

(6.B)**B. The Steering Committee (SC)****1. Mandate**

The Steering Committee (SC):

- i. acts on behalf of the IGM during the period between the IGMs, implementing IGM decisions; and
- ii. facilitates administrative and management arrangements necessary to implement the programme of activities of the APN, especially through thorough consideration of the APN budget; ~~and long-term financial management plan. In particular, the SC guides the Secretariat to:~~
~~In particular, the SC guides the Secretariat in:~~
iii. ~~developing~~ a. develop, with member countries, funding and in-kind financial support for the APN and its programmes and activities by inviting and encouraging ~~member~~

~~countries~~ contributions, and developing co-funding partnerships; and ~~to contribute funds or in-kind support;~~

~~iv. exploring~~ b. explore potential funding from other sources, e.g., international organisations, funding agencies ~~and~~, development banks, private foundations, and other stakeholders of the private sector;

~~v. liaising~~ iii. liaise with international global change research and research-related organisations and encouraging their involvement in and support for APN activities and programmes; and

~~vi. considering~~ iv. considers the potential attendance of observers as referred to in section 6.A.2.iv and 6.A.2.v.

...

(6.F)

F. The Secretariat

1. Mandate

The Secretariat:

~~i. facilitates the day-to-day operations of the APN;~~

~~ii. provides~~ operational support ~~to for the APN and, in particular, for the IGM, the organs and sub-organs of SC, the APN, SPG, the CDC, the SRCs, and other APN organs.~~ The Secretariat:

~~iii. implements IGM and SC decisions on behalf of these organs.~~

i. Assists these organs to assure effective implementation of the general policies of the APN;

ii. Works with the IGM and SC to assure effective implementation of their decisions, especially with respect to the Strategic and Operational Plans, the scientific activities and the finances. In this regard, the Secretariat:

a. Supports drafting and development of the APN's Strategic Plan, which is prepared together with a Status Report of the previous five-year Strategic Phase;

b. Manages the APN's calls for proposals processes, and assists the SPG and CDC in the effective review and evaluation of the proposals received and the submission of their recommendations to the IGM for approval;

c. Works closely with the IGM and the SC to obtain the financial resources needed, especially by identifying and engaging potential donors, which include member and non-member countries, international and regional organisations, and private foundations;

d. Prepares an annual report on the finances of the APN; a draft annual budget; and a long-term financial management plan for consideration and approval by the IGM and distributes these documents to nFP's well in advance of the IGM;

e. Prepares an interim status report on the budget for the SC for review and comment at its intersessional meeting;

f. Manages other aspects of the APN finances in a transparent and cost-effective manner;

ii. Supports the work of SRCs to assure effective implementation of APN programmes and related activities in the sub-regions and assist the SRCs in providing input on sub-regional needs and priorities to the IGM;

iv. Plans, organises and supports the conduct of APN meetings.

v. Communicates closely with all organs and members, the international global change community, and other stakeholders; and

vi. Facilitates other day-to-day operations of the APN.

2. Operations

- i. Resources and support for the Secretariat are provided by the host country, including the Central and Local Governments; ~~and may be augmented by other donors.~~ In addition, the host country provides the services of a senior expert in global change issues, seconded as the Director of the Secretariat.
- ii. The Secretariat operates under the administrative arrangements of an institution based in the host country. For further information, refer to Appendix 3 (page 17).

(Appendix 4)

...

Guidance for the APN-Secretariat

The Secretariat performs the daily operations of the APN and, in particular, assists the IGM, the SC, the SPG, the CDC and the SPGSRCs in implementation of the APN's Strategic and Operational Plans; programme; budget; and other activities, as appropriate.

In managing the APN finances, the Secretariat prepares and distributes annual financial reports; draft annual budgets and financial management plans for consideration and approval by the IGM. In addition, the Secretariat prepares and presents an interim status report on the budget to the SC at its intersessional meetings, for review and comment.

The Secretariat is expected to manage as a very high priority the ~~Annual Regional Call for Proposals and CAPaBLE Call for Proposals~~ calls for proposal processes for regional research and capacity building.

The Secretariat is expected to support APN Meetings, including the IGM, SC, SPG and CDC Meetings. This support ~~may include~~ includes planning, organising, and arranging logistics for the meetings; ~~carrying out~~ preparing and assuring timely distribution of meeting logistics documentation; assisting in ~~their~~ the conduct; ~~as needed~~ of the meetings at the guidance of the respective Chairpersons; and documenting the meetings, especially by keeping records ~~of the meetings~~ and preparing draft reports as needed.

The Secretariat is called upon to assure timely and effective APN communications and to work closely with all of its organs, with its members; with other regional institutions and networks; with the international global change research programmes; with policy makers; with donors and stakeholders; and with the scientific community and the general public (e.g., through brochures, the APN website, publications, etc.).

When travelling on behalf of the APN, Secretariat staff will receive reimbursement for travel, accommodation and daily subsistence, as appropriate. Secretariat staff is expected to submit a mission report, normally within a few weeks of the completion of the activity; ~~to the SC.~~

D. The Capacity Development Committee (CDC)

1. Mandate

The Capacity Development Committee (CDC) is responsible to the IGM, while reporting to the SC during the intersessional periods between IGMs.

The CDC:

- i. oversees the processes related to the operation of the CAPaBLE Programme;
- ii. develops strategies for the development and future of the CAPaBLE Programme; and
- iii. reviews and prioritises CAPaBLE proposals received for APN funding, for consideration by the IGM.

2. Membership

- i. the membership of the CDC consists of:
 - a. the Steering Committee Chair (ex officio);
 - b. the two SPG Co-Chairs (ex officio); and
 - c. one donor representative, invited by the IGM.
- ii. the CDC may co-opt up to four experts as members to participate in CDC activities for a term of one-year (renewable) among members with strong links to organisations and programmes that are involved in capacity development.

iii. additional representatives may attend, upon invitation, CDC meetings as observers.

3. Procedures

- i. convenes prior to the SPG Meeting and reports on the results of its work to the SPG;
 - ii the CDC elects one of its members to act as its Chair;
 - iii. the Chair is responsible, with the assistance of the Secretariat, for managing the CDC activities and coordinating communication among its members.
- ii. this report will include its review and prioritisation of CAPaBLE proposals.

THIRD STRATEGIC PHASE REPORT 2010-2015

Introduced by the Writing Task Committee, the main points for the report will be shared with members and approval of the report will be sought. The draft report, which will be fully redrafted and copy-edited, is available as an electronic file on the secure server or on your APN Key USB flash drive. A policy brief will also be published detailing the results.

EXECUTIVE SUMMARY

The APN took stock of the work it undertook in its third strategic phase from 2010 to 2015 and tasked a committee comprising members from its Intergovernmental Meeting (IGM) Steering Committee (SC) and Scientific Planning Group (SPG) to provide a review of the work accomplished in the 5-year phase. The result of the work is presented in this “Third Strategic Phase Report” and takes into consideration not only where the APN has been and what it has accomplished; but outlines the challenges it faces as it strategically moves forward into the future, celebrating 20 years of achievement.

During the 3rd Strategic Phase, the APN provided support for 132 projects through its competitive research and capacity development programmes. This number **has quadrupled since the first open call for projects in 2008**, and is an **increase of over 25%** since its second strategic phase (2005-2010). With over 250 peer-reviewed papers and the underlying philosophy that the regional research it undertakes engages at least two developing countries, the 3rd Strategic Phase is not only improving the research capabilities of nations in the region, but is engaging the developing country community in underpinning policy-relevant research. The extent to which **science is contributing to policy is further evident in that 69%** of the activities conducted had some form of **science-policy mechanism** built in to the project activities.

While actively implementing its **core activities** of the Annual Regional Call for Research Proposals (ARCP) and Scientific Capacity Building/Enhancement for Sustainable Development in Developing Countries (CAPaBLE) programmes, APN has also established three thematic frameworks in a specific response to internationally emerging issues and stakeholder needs. These are: Biodiversity and Ecosystems Services Framework (B&ES), Low Carbon Initiatives Framework (LCI) and the Climate Adaptation Framework (CAF). The future of the Frameworks will depend on the outcomes, relevance and stakeholder interest in the thematic areas as well as strategic discussions for the fourth Strategic Phase. In order to continue these Frameworks as an integral part of APN’s activities, there needs to be a mechanism whereby the Core Programmes and Frameworks co-exist in a financially stable equilibrium or to reconsider the core mechanisms in which APN operates in a dynamic and flexible way that would ensure that the needs of its stakeholders are being met.

APN members’ sense of ownership of the network has grown. The rotation system of national Focal Points (nFPs) as elected Steering Committee (SC) Members, the increased number of nFPs on the SC, the closer communications between the nFPs and the SPG Members and Sub-Regional Cooperation (SRCs) Committees have helped to achieve this encouraging trend. **The SRCs, in particular, have provided a unique platform for countries at the sub-regional level to address common problems, write proposals to address these problems and develop the capacity of young scientists through training workshops designed to increase their knowledge base and skills to compete effectively in proposals processes for funding.** While membership development and ownership is moving in a positive direction, more work to realize full engagement of member countries remains a challenge.

Web-based connections are the “here and now” and APN is taking full advantage of the opportunities the World Wide Web provides to network and promote its activities. As a key tool for communications the APN has developed its strategies to ensure alignment with web-based developments and has adopted some dynamic approaches to keep abreast of the developments in this area. The APN has embarked on an ambitious communications strategy that has led to the advanced development of its website incorporating a metadata

portal (E-Library), daily bulletins, and interactions with social media, including Twitter and Facebook. Outreach is bigger than ever, with over 2,000 email subscribers and almost 16,000 unique page views to the E-Lib system in the last year. The vision of growth in this area will be actively expanded in the next strategic phase through endeavours that ensure a robust e-platform for APN's growth and the community it serves.

Financially, the APN's budget has increased despite the hardships faced in the global economy during the timeframe of the present strategic phase. Some of the challenges remain at the forefront such as fluctuating exchange rates and budget cuts faced by some of APN's stakeholders. This said, the APN is growing exponentially in terms of the number of projects it conducts, and discussions on how to attract other member countries to pledge direct financial support to APN have formed the basis of a number of discrete discussions with stakeholders. **While finances have been steadily increasing in the APN there are issues with regard to the management requirements to undertake activities. This is a challenge for the future that APN must tackle.**

The period of the 3rd Strategic Phase has been witness to significant changes in the make-up of the "conventional" global change arena, with the transition of some global change programmes into the new "Future Earth" initiative. At the same time, major events such as the Rio+20 Summit, the post-2015 Sustainable Development Goals, the establishment of an IPCC-related platform for biodiversity, i.e. IPBES, and the evolving engagement of science and policy communities has kept the APN busy at what it does best – networking and partnering with the international community. The APN has embraced these changes through its dynamism, allowing the APN to meet not only the needs of the scientists and decision makers it serves in the region but those of the international science communities as well. The challenge for the APN in its next two decades will be to ensure alignment with the transforming global change arena.

With key phrases such as "policy-relevant science" and "science-policy interactions" being adopted broadly by the community at large these days, **the APN's niche in the global community has received considerable recognition, particularly as other institutions strive to adopt similar practices that the APN has been built over the last 20 years.** The APN looks forward to serving the Asia-Pacific region and partnering with the global change community to strive towards a better and more sustainable future for the people it serves.

Moving into its third decade, the APN must continue to address the extent to which it has been effective. While this is clear in the scientific outputs of the present Strategic Phase through the number of peer-reviewed papers, there remains a challenge to ensure continuous monitoring of capacity building success and policy-relevance. It is clear that capacity building and policy-relevant work is being undertaken by the APN, but measures for future success need to be established. It is also important to ensure that the outputs of the work conducted under the Frameworks are preserved through continuous synthesis of what has been learned and provided to policy and decision makers.

The world is coming together with a consensus that we need to work together to take science-informed action, and the APN is part of that endeavour. APN has demonstrated its ability to contribute to this global effort and looks forward to contributing to support the citizens of the Asia-Pacific region in the future.

**ARCP HIGHLIGHTED PROJECT 1:
REDUCING WATER INSECURITY THROUGH STAKEHOLDER
PARTICIPATION IN RIVER BASIN MANAGEMENT IN THE ASIA-PACIFIC REGION**

More information: <http://www.apn-gcr.org/resources/items/show/1554>

- Project Reference:** ARCP2008-15NMY-Nikitina; ARCP2009-03CMY-Nikitina
Project Leader: Dr. Elena Nikitina, EcoPolicy Research and Consulting, Moscow, **Russian Federation**
Countries engaged: Australia, China, Russian Federation, Thailand, Viet Nam
Project Summary: Water-related risks are attributed not only to escalating global and local changes, but to a high extent to failures in good water governance in river basins or their sub-basins. The key finding is that river basins in the Asia-Pacific region vividly demonstrate the emerging trend of state-centric governance evolving towards encompassing multi-stakeholder approaches. Broadening engagement, interaction and consolidating partnerships between public, private and civil society actors appears to be among the effective tools in good water governance. One of the messages is that stakeholder participation, related opportunities and barriers is a very 'context' oriented issue being dependent on existing specific national and local socio-economic, cultural, political and sustainability priorities. The project explored and compared stakeholder involvement and partnerships in water management in river basins in Australia, China, Russia, Thailand and Viet Nam, and findings are aggregated and contrasted to worldwide trends.



Activities

- Assessments in 4 countries and results and synthesis at 3 workshops
- 2 Policy and stakeholder roundtable dialogues
- 1 Policy Dialogue
- Networking, dissemination and interaction with many partners, including IHDP and GECHS

Outputs

- 20 peer-reviewed papers and 1 book
- Establishment of network "REWIND"
- Series of REWIND working papers
- Key messages for stakeholders on roles and best practices as well as conceptual framework engaging business, people and government stakeholders

Impacts

- Contributed to the APN science and policy agendas and provided policy-relevant information for stakeholders
- Sustained partnerships and networking activities with other relevant institutions
- Developed the capacity of all stakeholders in river basin management from local communities to national and regional levels

WHY IT'S HIGHLIGHTED (STRENGTHS)

- Engaged stakeholders from the beginning of the project activities, leading to a conceptual framework incorporating stakeholders from private sector, public and governments on river basin management.
- Project activities went beyond the initial objectives and produced tangible outputs for science, policy, private sector and the public
- Impacted both research and stakeholder communities through peer-reviewed publications and stakeholder dialogues.
- Good example of multi- and trans-disciplinary approaches to global change research

Item 4

**ARCP HIGHLIGHTED PROJECT 2:
VULNERABILITY OF HOMEGARDEN SYSTEMS TO CLIMATE CHANGE
AND ITS IMPACTS ON FOOD SECURITY IN SOUTH ASIA**

More information: <http://www.apn-gcr.org/resources/items/show/1566>

Project Reference: ARCP2009-15NMY-Marambe; ARCP2010-03CMY-Marambe

Project Leader: Prof. Buddhi Marambe, University of Peradeniya, **Sri Lanka**

Countries engaged: Bangladesh, India, Sri Lanka.

Project Summary: The changes in temperature and rainfall, current status of the diversity in homegardens, socio-economic characteristics of homegardeners, and the extent to which climate shocks have influenced the usage of adaptation strategies by the homegardeners under changing climate were studied in three sites in Sri Lanka and one site each in India and Bangladesh. All study sites experienced increased variability of seasonal rains over the past five decades (1961-2010). The minimum and maximum temperatures showed an increasing trend. The analysis of plant, tree and animal composition of homegardens over past two decades (1991-2010) revealed that they have not changed substantially despite the climatic variations. Studies homegardens showed resilience to climate change and considerable contribution to household food security. The type of employment, age, sex, education level of household head, experience in farming, homegarden size, diversity of homegardens, and perceptions towards climate change have influenced the decision of homegardeners to adopt different strategies such as, changes in planting dates, agronomic practices, and technology (use of new varieties and irrigation equipment, use of soil and water conservation measures), to cope up with climate change. Development programs to promote adaptation to climate change should be designed taking the above determinants into consideration.



Activities

- Research and analysis of 5 study sites in 3 countries
- Development of scenarios for climate change impacts
- Workshop to discuss final results and drafting of Policy Recommendations
- Dissemination Seminars, Debates, quizzes, at local and national levels in 3 countries

Outputs

- 6 peer-reviewed papers, book chapter and 6 conference papers
- detailed analysis on adaptation practices and level of resilience of homegardens to climate change impacts
- generated information for raising awareness and interest of stakeholders in 3 countries on the impacts of climate change on household food security

Impacts

- raised awareness of homegarden vulnerability and filled gaps in the understanding of resilience of homegardens & their contribution to food and nutrition security in households
- project scientists were called upon to serve in many national level committees that deal with food security and climate change issues
- received new funds and developed partnerships to sustain the project activities

WHY IT'S HIGHLIGHTED (STRENGTHS)

- Effectively interacted with decision makers and communities to assess vulnerability of home gardens
- Addressed gap analysis in climate adaptation strategies, particularly at local levels, and raised awareness on strategies for resilience
- Succeeded in developing long-term relationships with homegardeners and with decision makers, particularly in terms of assisting governments to develop effective adaptation strategies

**ARCP HIGHLIGHTED PROJECT 3:
IMPACT OF CLIMATE CHANGE ON FOOD SECURITY AND BIOSECURITY
OF CROP PRODUCTION SYSTEMS IN SMALL PACIFIC NATIONS**

More information: <http://www.apn-gcr.org/resources/items/show/1571>

Project Reference: ARCP2010-08NSY-Freeman

Project Leader: Dr. Angela Freeman, Dept. of Primary Industries, Victoria, **Australia**

Countries engaged: Australia, Kiribati, Tonga, Tuvalu, Vanuatu

Project Summary: Climate change is impacting on food security and biosecurity in the Pacific region by degradation of food production areas (sea level rise, salinity, drought), devastation caused by extreme weather events (cyclones, flooding) and impacts on recovery time such as replacement of lost crop germplasm and the need to import food substitutes. The aim of this project was to identify the key impacts of climate change on the unique cropping systems in four small Pacific nations (Tonga, Vanuatu, Kiribati and Tuvalu). Information was collected by the development of a questionnaire which was completed by Senior Agricultural Administrators, Biosecurity/Quarantine scientists, agricultural research and extension officers and farmers. Personal interviews, field trips and information sessions were also held in each country. Key issues examined included: country information; quarantine/biosecurity policy; quarantine/biosecurity practice; impacts of climate change on pests and diseases of crops; impacts of climate change on crop production; and country capacity and needs. The data was used to develop country reports (containing a summary of the data collected, key findings, priorities for future research and training), which provide solid data to enable development of strategies/policies to minimise these risks and to identify future research and training priorities and opportunities. At the final workshop, regional priorities shared by Australia and the Pacific countries were identified. The real need for such networks has to be seen within the context of the CROP agencies and their mandate in the Pacific. Working with them would be more cost effective than developing and maintaining new networks.

Item 4



Activities

- Conducted surveys in 4 PICs to identify critical impacts of climate change on food- and bio-security in agricultural systems, analysed data and identified risks
- Held workshop with invited experts from governments and FAO, SPC, ACIAR etc
- Documented outcomes in country reports for policy and strategy development and future investors

Outputs/Results

- Food security is impacted due to slow-onset and extreme events in all countries studied.
- There is a lack of individual and institutional capacity to deal with food security and biosecurity
- Future strategies to form regional networks and engage wide level of stakeholders, including communities, governments and investors

Impacts

- Countries recognised the value of developing regional networks between neighbouring and like countries as a feasible, low cost and sustainable way of acquiring assistance to deal with the impacts of climate change
- Countries demonstrated that they are ill equipped and lack scientific networks for seeking information and advice to ensure rapid response to incursions.

WHY IT'S HIGHLIGHTED (STRENGTHS)

- Strong engagement among decision makers and communities, which was evident from the onset from country-level data collection and analysis and final workshop that brought all countries together.
- Country-specific and regional research themes (addressing gaps) were identified including approaches to address lack of capacity (staff, finances, etc.) and capability (training, equipment, networks, etc.) to deal climate impacts on crop production systems.
- Recognized the importance of regional networking for more effective responses
- Good outputs for a one-year regional, research project.

**ARCP HIGHLIGHTED PROJECT 4:
COMMUNITY-BASED FORESTRY AND LIVELIHOODS
IN THE CONTEXT OF CLIMATE CHANGE ADAPTATION**

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

Project Reference: ARCP2010-12NMY-Uprety; ARCP2011-04CMY-Uprety (Paudel)

Project Leader: Dr. Naya Sharma Paudel, ForestAction Nepal, **Nepal**

Countries engaged: Bangladesh, Nepal, Viet Nam and Thailand

Project Summary: In Bangladesh, Nepal, Thailand and Viet Nam climate variability and extremes has been given little attention with a more reactive rather proactive approach. This study was undertaken in the rural agrarian villages depending on the forest resources of Bangladesh, Nepal, Thailand and Viet Nam with a view to understanding and documenting the trends of climate change and the adaptation measures to cope with adverse situations that might arise. The study was accomplished through intensive household surveys and analysis of long term meteorological data (up to 30 years). The results showed that resources, particularly natural resources and agriculture have been reduced or there has been change in patterns. Increasing trend of climate change along with anthropogenic activities are the main reasons for decreasing the natural resources and livelihood options of the community. The results of the analysis of long term climatic data particularly the changing trend of temperature and rainfall has strongly been supported by perceptions/opinions of the community people. Communities, based on their experiences, have already been adopting adaptation measures (anticipated) like changing planting time, using new technologies, etc. In the face of challenges of climate change and livelihoods, communities have strongly suggested to undertake new adaptation measures like construction of water reservoirs, strengthening afforestation programmes through community approaches, developing strong institutional mechanisms, introducing pest and disease resistant crop varieties, etc. for conservation of resources and their better livelihoods, which need strong support from the public and private sectors.



Activities

- Field-based research at 4 country sites using a multiple-research approach that combined natural and social sciences and conducted risk assessments
- Regional- and local-based workshops (analysis/synthesis)
- Multi-stakeholder seminars and workshops
- Local community training and awareness in rural agrarian villages

Outputs

- 5 peer-reviewed papers and 4 policy briefs (2 in local language)
- Provided 4 fellowships for master students
- Documented traditional knowledge of rural people in relation to climate change adaptation
- Developed training manuals and trained local communities

Impacts

- Impacted local communities and raised awareness on emerging practices on REDD+ and PES.
- Sustained activities through follow-up grant
- Outcomes acknowledged by policy makers and agencies working together on climate change issues

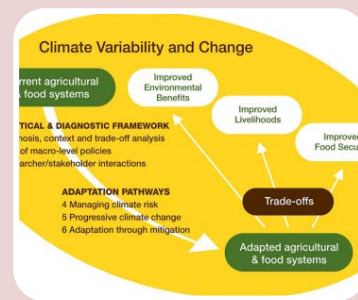
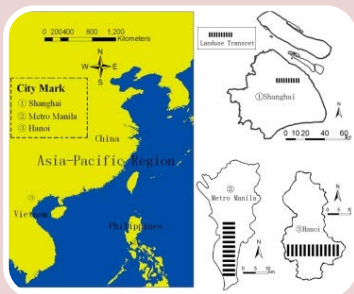
WHY IT'S HIGHLIGHTED (STRENGTHS)

- Engaged researchers (both natural and social science), local communities, policy makers and masters students effectively throughout the project activities
- Raised awareness among stakeholders and trained scientists and local communities on climate impacts and adaptation, including emerging practices
- Documented details of 'traditional knowledge' and sustained activities beyond the period of APN funding

ARCP HIGHLIGHTED PROJECT 5: ANALYSIS ON URBAN LAND-USE CHANGES AND ITS IMPACTS ON FOOD SECURITY IN DIFFERENT ASIAN CITIES OF THREE DEVELOPING COUNTRIES USING MODIFIED CA MODEL

More information: <http://www.apn-gcr.org/resources/items/show/1587>

Project Reference: ARCP2010-14NMY-Li; ARCP2011-06CMY-Li
Project Leader: Prof. Jianlong Li, Global Change Research Institute, Nanjing University, **China**
Countries engaged: China, India, Viet Nam
Project Summary: Urbanisation - a significant factor in global change - has led to conflicts between peoples' needs and sustainable development in the agriculturally important precincts of large Asian cities. Under this background, ecological problems in urban areas have arisen. The project developed and evaluated options for adapting to a changing climate to inform agricultural development, food security policy and donor investment strategies. The focus was to build and enhance scientific capacity and explore the quantifying urbanization level from the aspect of land use and connecting land use patterns with urbanization processes. The project adopted new approaches that integrated natural and social sciences in land use and cover change studies in order to overcome critical gaps in knowledge, such as how to enhance and manage trade-offs between agricultural production, food security, and environmental goals in the face of a changing climate. The project built an integrated technical review system model to green, healthy and sustainable low-carbon high-efficiency agriculture, which was highlighted in an integrated technical report for policy makers and the international community.



Activities

- Collected ecological field data and GIS data in 3 cities and 4 countries
- Built an integrated assessment automated system
- Held two project workshops
- Held two training workshops on GIS and remote sensing techniques

Outputs

- 2 computer models; patent of invention of digital monitoring software for forest and grassland in China in Jan. 4, 2012
- provided 3 fellowships and trained 20 young scientists in RS and GIS techniques
- published 4 peer-reviewed papers, 18 conference papers
- developed a database of land use, ecological, social and economic data and information on urban and peri-urban environments

Impacts

- Models developed can be modified for other sectors such as animal husbandry and agriculture.
- knowledge of urbanization characteristics for Asia's large cities and small cities in the view of landscape ecology has been promoted.
- The study has important theoretical and practical significance in urban planning and decision-making in eco-city construction

WHY IT'S HIGHLIGHTED (STRENGTHS)

- Engaged with CCAFS programme to highlight the impacts of urban and peri-urban development on ecological systems
- Sustained its activities beyond the period of APN funding with 3 follow-up grants
- Produced models and other technical systems that could be used in other countries and sectors.

Item 4

ARCP HIGHLIGHTED PROJECT 6: PERI-URBAN DEVELOPMENT AND ENVIRONMENTAL SUSTAINABILITY: EXAMPLES FROM CHINA AND INDIA

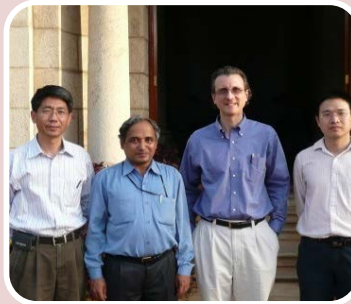
More information: <http://www.apn-gcr.org/resources/items/show/1556>

Project Reference: ARCP2008-17NMY-Sellers; ARCP2009-05CMY-Sellers

Project Leader: Dr. Jefferey M. Sellers, Univ. of Southern California, USA

Countries engaged: Australia, China, India, USA

Project Summary: Large-scale urban development is likely to be one of the primary sources of environmental change in Asia over the next decades. Understanding the dynamics and the ecological consequences of urban expansion is critical to crafting policies and institutions to manage it properly. Comparative analysis of these processes within and between different countries is an indispensable prerequisite to such an understanding. This study has assembled remote sensing, demographic, environmental and other data over forty years for a systematic comparison of urbanizing regions in China and India. The analysis has revealed strikingly different transformations of urban form in Chinese and Indian urban regions. In China peri-urban expansion has proceeded consistently regardless of city size in coastal regions with strong external investment, but less systematically in some inland regions and little in others. In India, peri-urban expansion has been less dramatic and has varied less between regions with higher and lower external investment. Indian patterns of peri-urban expansion also differ systematically from corresponding Chinese patterns.



Activities

- comparative mapping of peri-urban development
- comparative explanation of the local, regional and national variation in peri-urban dynamics,
- examination of the effects from urban developmental pathways on environmental degradation
- policy-relevant findings, and local and international capacity-building workshops

Outputs

- 23 peer-reviewed papers and 6 conference papers
- meetings with stakeholders in both countries have provided lessons for policy and aided the analysis.
- results presented at the IHDP Conference on Urbanization and Global Environmental Change and other international scientific conferences

Impacts

- policy: As a member of a number of advisory bodies, Indian collaborator was able to pass on the study outcomes to the government
- policy: report submitted in 2013 (in Chinese) to the Wuhan Development and Reform Commission, about the problem, policy, mechanism of development zones.
- generated six further related projects by collaborators, including two APN-funded projects

WHY IT'S HIGHLIGHTED (STRENGTHS)

- Built a research team and database for the study of urban development and its environmental consequences in Asia-Pacific countries.
- Project activities went beyond the initial objectives and produced tangible outputs for science and policy
- Impacted both research and stakeholder communities through peer-reviewed publications and stakeholder dialogues.

ARCP HIGHLIGHTED PROJECT 7: ROLE OF EXPERIMENTS IN SUSTAINABILITY TRANSITIONS IN ASIA

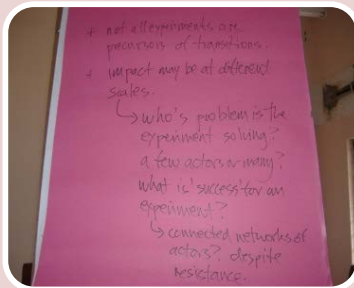
More information: <http://www.apn-gcr.org/resources/items/show/1562>

Project Reference: ARCP2009-11NSY-Roy

Project Leader: Dr. Joyashree Roy, Department of Economics, Jadavpur University, India

Countries engaged: China, India, Malaysia, Thailand and the Netherlands

Project Summary: The project involved organizing scoping workshops to develop an international research programme on the role of innovative development project-level experiments in ‘sustainability transitions’ in Asia. Two such workshops organized were “Role of Sustainability Transition in Asia” held in January 2010 at Jadavpur University, Kolkata, India and “Innovation and Sustainability Transition in Asia” held in January 2011 at University of Malaya, Kuala Lumpur, Malaysia. The process included preparation of a background paper setting the stage for initial discussion suggesting a conceptual framework, a strategy to analyse the main challenges and mechanisms for the development, up-scaling and governance of such experiments and a strategy to investigate the opportunities and barriers for sustainability experiments. It was successfully aimed to understand how experiments can /have influenced Asian development pathways and transform some of the unsustainable systems of provision (mobility, energy, food, water, housing) as well as what lessons can be learned about opportunities and barriers for policy makers and practitioners who facilitate to set up such experiments. The workshops brought together an international group of academics, practitioners and policy makers, especially from countries like China, Malaysia, Indonesia, Thailand, Viet Nam, The Netherlands and India engaged in this unique field to develop a collaborative research strategy.



Activities

- developed background papers and held 2 international workshops to understand how experiments can come to influence Asian development pathways and transform some of the unsustainable systems of provision (mobility, energy, water, housing, food); what lessons can be learned about opportunities and barriers for policy makers and practitioners and about the experiments' governance at a local level.

Outputs

- developed a consortium of partners interested in- and with capacity to- carry out tasks as explained above
- produced 143 working papers and contributed to the IHDP-IT Core Project
- prepared a solid ground for transfer (creation) of existing (new) context specific knowledge on the human dimensions of change in the Earth system

Impacts

- A research programme proposal outlining research strategy for: (a) inventorising, classifying and analyzing sustainability experiments; (b) analyzing main challenges and mechanisms for experiments development; (c) investigating opportunities and barriers for sustainability experiments as well as their governance at a local level as compared to the OECD contexts and a funding strategy, division of tasks, timeline, budget etc

WHY IT'S HIGHLIGHTED (STRENGTHS)

- Identified knowledge gaps which can form future semi long term research agenda for years to come. The pool of human resources and ideas about way forward in the field of sustainability transition in Asian context needs to be sustained in Asian context through active interaction and regional institutional leadership.
- Synthesised 10 years of work under the IHDP-IT Core Project
- Engaged in multi and transdisciplinary discussions that will serve will under Future Earth.

Item 4

ARCP HIGHLIGHTED PROJECT 8: FOOD SECURITY AND CLIMATE CHANGE IN THE ASIA-PACIFIC REGION: EVALUATING MISMATCH BETWEEN CROP DEVELOPMENT AND WATER AVAILABILITY

More information: <http://www.apn-gcr.org/resources/items/show/1589>

Project Reference: ARCP2010-16NMY-Huda; ARCP2011-08CMY-Huda

Project Leader: Associate Professor Samsul Huda, University of Western Sydney (UWS), **Australia**

Countries engaged: Australia, China and India

Project Summary: Crop adaptation to environmental stresses is central to sustainable agriculture. In eastern Australia, central India and China temperature has increased over the past 40 years. Cropping systems and varieties are designed so that water availability and crop water requirements are well matched, and crops are not exposed to extreme temperature and water supply conditions during critical crop development phases. Mismatches between crop and environment occur when the critical period of crop yield determination coincides with stressful conditions. Possible mismatches arising from realized and predicted warming are the focus of this project. The project demonstrated that, in some cases, the effect of regional warming can be positive, for example in northern China where the extended growing season leads to increased productivity in the winter wheat-maize system. We also identified examples of adaptation such as supplementary irrigation, breeding new varieties with better adaption to the new climate, or concentrating agriculture in areas more suited following climate change.



Activities

- Workshops in China, India and Australia to plan and monitor technical activities,
- Case studies in the three countries to draw conclusions on similarities and differences in the responses of cropping systems
- Early Career Researchers' Program for professional development within the project

Outputs

- 9 peer-reviewed research papers
- mismatches were identified in both water availability and extreme temperatures during critical growth phases
- 2 conference papers
- disseminated the outputs to decision makers
- developed capacity of 2 young researchers

Impacts

- An understanding of the impact of climate change on key crops enabled the Asia-Pacific farmers, community workers and policy agencies to better prepare and adapt to climate change, through changes to existing policy and practices
- enhanced the integration and communication between disciplines required in the area of food security and climate variability

WHY IT'S HIGHLIGHTED (STRENGTHS)

- Embraced capacity building and science-policy linkages through the Young Researchers and the consultations with stakeholders.
- Demonstrated strong regional collaboration among interdisciplinary partners.
- Project continuity through follow-up grants.

ARCP HIGHLIGHTED PROJECT 9: RECONSTRUCTION OF SEA LEVEL CHANGE IN SOUTHEAST ASIA WATERS USING COMBINED COASTAL SEA LEVEL DATA AND SATELLITE ALTIMETRY DATA

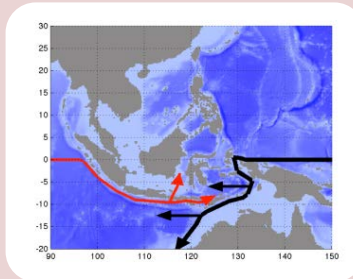
More information: <http://www.apn-gcr.org/resources/items/show/1602>

Project Reference: ARCP2011-21NSY-Manurung

Project Leader: Dr. Parluhutan Manurung, Geospatial Information Agency (BIG), **Indonesia**

Countries engaged: Indonesia, Viet Nam, USA and Italy

Project Summary: Low lying and densely populated coastal areas with thousands of small islands spreading across Southeast Asia are highly prone to sea level rise caused by global warming. Accurate sea level change maps in Southeast Asia are of great importance to scientists and decision makers in the region interested in past and present sea level change, and the answer to the question of what likely projected sea level rise will be in the future. Improving the near-coast satellite altimetry data processing will extend the coastal sea level record back in time and allow accurate mapping of sea level change in the region as well as supporting various potential applications of sea level data in the coastal zone project reconstructed sea level change in Southeast Asia seas by combining the global tide gauge data record, which spans many years but is sparse in spatial distribution, with the modern satellite altimetry record, which is just short of 20 years long but has, essentially, global coverage. The results show that the sea level trends in the region are some of the highest observed globally during the altimetric record, but the trends fluctuate on multi-decadal time scales due to wind forcing. Reconstructed sea level maps could be further validated using local tide gauge and along track altimetry data. Efforts have been made to explore use of coastal altimetry by conducting two workshops and training sessions and assisting the local community to build an autonomous capacity for development and processing of sea level information.



Activities

- developed software for sea level reconstruction maps
- explored know-how about coastal satellite altimetry processing and its applications
- conducted trainings and workshops with participants consisting of scientists, students and government representatives
- disseminated outcomes via various mechanisms to science, policy and general public

Outputs

- 7 peer-reviewed publications and 2 conference papers
- list of recommendations to provide a future scientific roadmap to stakeholders in Indonesia
- 7 fellowships and trained 20 young scientists
- outreached to media channels via newspapers, TV and news websites

Impacts

- demonstrated knowledge transfer and capacity building of on coastal satellite altimetry have been successfully achieved
- raised awareness and outreached to general public and decision makers through a variety of tools including local newspapers, website and TV

WHY IT'S HIGHLIGHTED (STRENGTHS)

- Networked with global change programme, WCRP; developed capacity of young researchers and impacted the scientific community through peer-reviewed papers.
- Accomplished beyond the original objectives and had significant outputs for a one-year project, including peer-reviewed papers, road map for decision-makers, capacity building and interaction with media.

Item 4

ARCP HIGHLIGHTED PROJECT 10: MANAGING ECOSYSTEMS SERVICES IN ASIA: A CRITICAL REVIEW OF EXPERIENCES IN MONTANE UPPER TRIBUTARY WATERSHEDS

More information: <http://www.apn-gcr.org/resources/items/show/1557>

Project Reference: ARCP2008-18NMY-Braimoh; ARCP2009-06CMY-Braimoh

Project Leader: Ademola K. Braimoh, Global Land Project, **Japan**,

Countries engaged: China, Indonesia, Japan and Thailand

Project Summary: Human well-being depends on the maintenance of ecosystem services. Upper tributary watersheds provide diverse services such as water provision, soil renewal for agriculture, mitigation of floods, groundwater recharge, soil erosion control, nutrient abatement and carbon sequestration. However policy makers have found it hard to find ways of incorporating the benefits derived from ecosystem services into decision making. One reason is the difficulty of characterizing ecosystem services in a manner that policy makers can use it. Several promising but still insufficiently tested governance mechanisms are being explored, for example, payments for ecological services. All approaches need to consider costs and other disadvantages or risks of ecosystem services conservation to various user groups, and trade-offs intrinsic to ecosystem maintenance. This project addressed these pertinent issues by reviewing experiences across a wide range of projects and illustrating solutions and their limitations through three in-depth case studies in China, Indonesia and Thailand. The project report includes an account of the current state of biodiversity in Southeast Asia and analyses biodiversity loss vis-à-vis climatic and anthropogenic drivers with special attention to deforestation and habitat loss. It also includes a review of ecosystem services management mechanisms including spatial land-use planning, delineation for biodiversity conservation, watershed protection, forestry, agriculture, tourism and multiple uses. Case studies in China, Indonesia, and Thailand inventoried and conducted a valuation of ecosystem services based on a multi-stakeholder perspective, model deforestation and terrestrial carbon and provide policy insights into enhancing long-term sustainable use and conservation of services from ecosystems in Southeast Asia.



Activities

- Undertook critical reviews on land-use, vegetation and climate impacts on biodiversity and ecosystem services and institutional mechanisms, such as payment for ecosystem services, community-based management, etc.
- Conducted 3 case studies of ecosystem services management in China, Indonesia and Thailand
- Held workshops to synthesise findings and proffer policies for sustainable land management



Outputs

- produced 12 peer-reviewed publications, policy briefs and conference papers
- Developed a framework for analyzing Ecosystem Services-
- Analyzed governance structures vis-à-vis the delivery of Ecosystem Services
- Identified trade-offs and incentives for Ecosystem Services conservation



Impacts

- collaborative, institutional and policy-oriented research and synthesis activities are expected to facilitate informed environmental policy and practice
- disseminated findings to CBD COP20 in Nagoya, Japan.
- created strong regional networks among global change programmes (IHDP, IGBP), UNCBD and UNU.
- sustained activities beyond APN funding

WHY IT'S HIGHLIGHTED (STRENGTHS)

- Created policy relevant information for biodiversity and ecosystem services that could potentially contribute to IPBES first assessment
- Developed strong regional partners among science and policy communities (local through national and international) and adopted interdisciplinary approaches.

**CAPaBLE PROJECT 1:
CLIMATE CHANGE AND VARIABILITY IMPLICATIONS ON
BIODIVERSITY YOUTH SCENARIO SIMULATIONS
AND ADAPTATION**

More information: <http://www.apn-gcr.org/resources/items/show/1633>

Project Reference: CBA2006-05NMY-Aalsbersberg and CBA2007-02CMY-Aalsbersberg

Project Leader: Prof. Bill Aalsbersberg, University of South Pacific, **FIJI**

Project Summary: This project aimed to identify the impacts of climate change on Pacific Islands’ biodiversity that can threaten their sources of sustenance, economy and maintaining their tradition and culture. It also aimed to determine how communities can ensure the sustainability of biodiversity, and how community youth can contribute to resource management to ensure sustainability and maintaining abundance of biodiversity. The project used drama as an innovative tool to raise public awareness and undertake adaptation implementation as a base step to increase community and environment resilience and ensure food security and sustainable livelihoods. As a result, coastal and marine rehabilitation and protection, waste management and food security and agriculture were highlighted and implemented as adaptation measures for climate change and sustainability of biodiversity. Enhancement of awareness on climate change and variability impacts on sustainable biodiversity and practical applications of soft measure adaptation practices were highlighted and implemented with youth contribution.



Activities

- 4 Drama workshops in Tuvalu, Solomon Islands and Fiji
- 51 climate change theatre performances
- 10 soft measure adaptation activities

Outputs

- 138 youth and 127 people have gained knowledge in climate change risk assessment
- Outreach to audiences that totalled 9,130

Impacts

- Enhanced awareness of CC&CV impacts on sustainable biodiversity and soft measure adaptation practices
- Tuvalu community identified flooding, drought and tidal waves as major climate change threats on their biodiversity.
- Solomon Islands community identified soil and coastal erosion due to heavy rainfall, storm surge and cyclone as major climate change threats on their biodiversity

WHY IT'S HIGHLIGHTED (STRENGTHS)

- Improved skills of youth and community on climate change risk assessment and adaptation planning
- Identified coastal and marine rehabilitation and protection, waste management and food security and agriculture as highlighted areas where adaptation measures for climate change and sustainability of biodiversity are needed
- Effectively reached communities through an innovative way that involved cultural drama.

Item 4

**CAPaBLE PROJECT 2: ENHANCING THE CLIMATE CHANGE
ADAPTATION CAPACITY OF LOCAL GOVERNMENT UNITS AND
SCIENTISTS IN THE PHILIPPINES**

More information: <http://www.apn-gcr.org/resources/items/show/1646>

Project Reference: CBA2008-09NSY-Peñalba

Project Leader: Dr. Linda Peñalba, College of Public Affairs, University of the Philippines Los Baños,
PHILIPPINES

Project Summary: This Project aimed to create awareness and develop the capacity of LGUs, communities and regional universities to effectively respond to climate change for sustainable development. Five vulnerable municipalities in four provinces were chosen as study sites namely: Kawit and Rosario, Cavite, Guagua, Pampanga, San Juan, Batangas and Ilagan, Isabela. Hands-on training on vulnerability assessment and climate change adaptation plan preparation were conducted using data from the most vulnerable barangays within the municipalities. Every learning and alliance building opportunities were maximized through participatory research, coaching and interactive discussion about climate change issues. To further amplify the awareness-raising objectives, vulnerability assessment was done through public consultations. Some of the lessons that can be learned from this project are: 1) hands-on and output-oriented training can yield significant tangible results; and 2) project-introduced interventions can be institutionalized and sustained.



Activities

- Climate change awareness raising seminar
- Hands-on training on vulnerability assessment and climate change adaptation plan preparation
- Five mini-workshops to discuss adaptation plan preparation with LGUs
- Six dissemination forums



Outputs

- 61 local governmental representatives are participated
- Share the project outcome at dissemination forums where 555 local people participated
- A booklet on Climate Change and Municipal Level Adaptation Planning and three journal articles were produced



Impacts

- Enhanced vulnerability assessment and climate change adaptation planning skills of LGUs
- Build the partnership between UPLB, other public educational institutions, communities and LGUs towards science-based climate change adaptation planning
- Climate risk management and climate change adaptation plans mainstreamed and integrated into the development plans of the partner LGUs

WHY IT'S HIGHLIGHTED (STRENGTHS)

- High level of local policy makers participation led to enhanced capacity on vulnerability assessment and climate change adaptation planning
- Effectively disseminated project outcomes at science, policy and community levels
- Influenced local level policy makers (Local Government Units) to integrate climate risk management and climate change adaptation plans into annual investment and land-use plans for municipalities
- Built partnerships among local institutions

CAPaBLE PROJECT 3: PROMOTING SUSTAINABLE USE OF WASTE BIOMASS IN CAMBODIA, LAO PEOPLE'S DEMOCRATIC REPUBLIC AND THAILAND: COMBINING FOOD SECURITY, BIO-ENERGY AND CLIMATE PROTECTION BENEFITS

More information: <http://www.apn-gcr.org/resources/items/show/1662>

Project Reference: CBA2009-11NMY-Sang-arun & CBA2010-01CMY-Sang-arun

Project Leader: Dr. Janya Sang-arun, Institute for Global Environmental, **JAPAN**

Project Summary: This project's aims were to promote the use of waste biomass for food and energy production, and identify viable approaches for utilizing biomass conversion technology in Cambodia, Lao PDR, and Thailand. Based on the project's reviews and surveys, composting and biogas generation were found to be viable technologies for converting waste biomass to a useful resource. The project developed country-specific guides for technology selection and implementation of urban organic waste utilization projects in the 3 countries. The guides were translated into local language: Khmer, Laotian and Thai and distributed to participants at respective national-based workshops. Other potential donors were identified to implement the pilot projects in selected cities and continue the training on GHG calculation at the national level in Cambodia and Thailand.



Activities

- Analysed waste composition in four major cities in Cambodia and Lao PDR
- Surveyed the current status of municipal solid waste management and organic waste utilization in Cambodia, Lao PDR and Thailand
- Conducted a pilot experiment on organic waste utilization for energy purpose
- Conducted 3 national capacity building workshops

Outputs

- Composting and anaerobic digestion are identified as the most promising technologies in the studied countries
- Developed country specific guides for technology selection and implementation of urban organic waste utilization for food production, energy use, and climate change mitigation
- 256 participants attended the capacity development workshops
- Produced a journal article

Impacts

- Identified that urban organic waste utilization project could largely contribute to improved solid waste management, increase food and energy security, reducing the potential health hazards, and creating job opportunities in Cambodia, Lao PDR, and Thailand
- Share the guiding document with national governments of Cambodia and Lao PDR and influence to implement the project at city level
- Participants understood the linkage between waste management and climate change and also the benefits of waste management
- Identified other financial resources to continue project activities in other cities

WHY IT'S HIGHLIGHTED (STRENGTHS)

- A detail country level analysis and result comparison among the participating countries
- Closer collaboration between national, local policy makers and municipal staff from project implementation stage
- Produced local language guides and distributed among local government officials
- Identified potential donors to continue project activities in other cities

Item 4

CAPaBLE PROJECT 4: NATIONAL DIALOGUES ON ADAPTING BIODIVERSITY MANAGEMENT TO CLIMATE CHANGE

More information: <http://www.apn-qcr.org/resources/items/show/1683>

Project Reference: CBA2011-05NSY-Schang

Project Leader: Dr. Scott Schang, Environmental Law Institute, USA

Project Summary: This project sought to build national capacity in Viet Nam and Bhutan to make biodiversity laws, policies, and management more adaptable to climate change. A National Dialogue was organized in each country to bring together 91 participants including scientists, policymakers, academics, resource managers, and civil society groups to identify climate change impacts, prioritize biodiversity adaptation needs, and discuss steps for developing and implementing a plan of action. Five representatives of each country attended both national workshops, in order to facilitate regional exchange and cooperation around climate change adaptation measures. The Dialogues were guided by two publications on climate change adaptation released by Environmental Law Institute, USA. Each National Dialogue helped build the capacity of scientists, resource managers, academics, and civil society members to understand and begin to apply the concepts of adaptive management to biodiversity protection, management, and sustainable use.



Activities

- Two National level workshops /dialogue in Viet Nam and Bhutan



Outputs

- 91 stakeholders from scientific and academic institutions, government agencies and ministries, and nongovernment organizations were trained at the National Dialogues.
- Produced a list of priorities and needs for using and strengthening national and local biodiversity management systems to respond to climate change.
- Established a template for similar workshops in other countries, especially in Asia



Impacts

- Build the capacity of scientists, resource managers, academics, and civil society members to understand and begin to apply the concepts of adaptive management to biodiversity protection, management, and sustainable use
- Fostered stronger, more institutionalized relationships between scientists and policymakers, and helped build a national “community of practice” to eventually educate others about the nexus of climate change and biodiversity management and the role of ecosystem-based adaptive management.
- Strengthen the understanding of policymakers of the status and priority areas for reform in existing legal and policy frameworks

WHY IT'S HIGHLIGHTED (STRENGTHS)

- Effective knowledge and skill transfer activity using developed country's capacity and knowledge
- Identify correct audience who are engaged in improving national level policies
- Effective use of available data and resources
- Stronger co-financing mechanism

**CAPaBLE PROJECT 5: DRYLAND DEVELOPMENT PARADIGM (DDP)
APPLICATION FOR MOST VULNERABLE TO CLIMATE & LAND USE CHANGE
OF PASTORAL SYSTEMS IN SOUTHERN KHANGAI MOUNTAINS OF MONGOLIA**

More Information: <http://www.apn-gcr.org/resources/items/show/1663>

Project Reference: CBA2009-12NMY-Togtohyn and CBA2010-02CMY-Togtohyn

Project leader: Dr. Chuluun Togtohyn, Institute for Dryland Sustainability (IDS), National University of Mongolia, **MONGOLIA**

Project Summary: The project objectives was to develop policy framework for sustainable development of Dryland in the Tuin and the Baidrag river basins of Bayanhongor aimag, located in the Southern Khangai Mountains, in order to increase its adaptive capacity and resilience to climate change. The project has conducted Dryland Development Paradigm (DDP) for analysis of pastoral social-ecological systems in the Tuin and Baidrag river basins. Ecological vulnerability (drought, stocking rate relative to carrying capacity) and social vulnerability (livestock number per capita, distance to the market, livestock loss during zud) assessment trends showed that social-ecological vulnerability has increased in the desert-steppe region, compared to other ecological zones in Mongolia. Results indicate that the desert-steppe region is becoming more vulnerable to climate change, land-use change and transition in market economies. In coping with greater socio-ecological vulnerability due to both climate-related disasters and market forces in Mongolia, project identified the need of adaptive policy regulation and innovative solutions.



Activities

- Dryland Development Paradigm (DDP) for analysis of pastoral social-ecological systems in the *Tuin* and *Baidrag* river basins
- Conducted social surveys
- Held community and regional level workshops
- Conducted participatory workshops

Outputs

- Eight key implications for research, management and policy implementation for the *Tuin* and *Baidrag* river basin social ecological systems were identified
- Developed management plan of social-ecological system of *Tuin* river basin (2010-2015)
- Identify adaptation options of the *Baidrag* river basin
- Produced adaptation based-new proposal on administrative-territorial division
- Produced 21 publications based on project outcome

Impacts

- Study has concluded that social-ecological vulnerability have increased in desert steppe region compared to other ecological zones.
- Identified importance of local knowledge in achieving sustainable development in the *Tuin* and the *Baidrag* river basin.
- Project outcomes have used to creating a *Tuin* river basin sustainable management plan
- Shared the project outcome with international community through more than 20 national, regional, and international events

WHY IT'S HIGHLIGHTED (STRENGTHS)

- Stronger community level involvement
- Effective use of traditional knowledge
- Identified future research gaps and policy needs
- Developed stronger partnerships with *Tuin* River Basin Consul and produced *Tuin* river basin sustainable management plan

Item 4

**CAPaBLE PROJECT 6: DEVELOPING THE CAPACITY FOR
TEACHING BIODIVERSITY AND CONSERVATION
IN THE ASIA-PACIFIC REGION**

More information: <http://www.apn-gcr.org/resources/items/show/1664>

Project Reference: CBA2010-03NSY-Indrawan

Project leader: Dr. Mochamad Indrawan, University of Indonesia, **INDONESIA**

Project Summary: The project aim was to develop the capacity to conduct research on environmental issues and to teach advanced courses in related to environmental resource management in the Asia Pacific Region. A training programme was conducted during summer 2010 involving young scientists from 11 countries. The training consists of three workshops: Experimental Design & Data Analysis (6 days), Scientific Paper Writing (1 day), and Field course on Biodiversity, Conservation and Sustainable Development (6 weeks). Considering sustainability of the training programme a website was developed that serves to advertise programme activities and handle the application process. The project established stronger partnerships between potential donors and institutions to continue its activities. Through this partnership, the training programme has successfully continuing it activities up to present (July 2014).



Activities

- Six day workshops on Experimental Design & Data Analysis
- One day workshop on Scientific Paper Writing
- Six week field course on Biodiversity, Conservation and Sustainable Development
- Established a program website and alumni forum



Outputs-

- Provided training for young scientists from 11 countries (Experimental Design & Data Analysis -29 participants, Scientific Paper Writing-32 participants, and field course-20 participants)
- Established a website for future management of the program (www.pfs-tropasia.org) and a web-based alumni network
- Developed partnership with World Agroforestry Institute (ICRAF) and the Center for International Forestry Research (CIFOR)
- University of Gajah Mada signed an MOU with the Ministry of Forestry Indonesia to collaborate in running research activities and training courses at Alas Purwo.
- Four scholarships to attend the international meeting



Impacts

- Increased the capacity of participants on biological field research, data analysis and environmental resource management
- Increased the capacity of institutions in regional developing countries to conduct research on environmental issues
- Established partnerships with potential partners to continue the training program in the region

WHY IT'S HIGHLIGHTED (STRENGTHS)

- Sustainability of training programme
- Additional partners and donors identified to continue the training programme
- Effective use of APN funds and local resources
- Attracted local media attention and disseminated the project outcomes to general public

**CAPaBLE PROJECT 7: WEB-BASED 'DISCUSSION-SUPPORT'
AGRICULTURAL-CLIMATE INFORMATION FOR REGIONAL INDIA**
More information: <http://www.apn-gcr.org/resources/items/show/1668>

Project Reference: CBA2010-07NSY-Stone
Project leader: Prof. Roger Stone, University of Southern Queensland, **AUSTRALIA**
Project Summary: This project investigated and developed an innovative approach to the delivery of climate risk information for farmers in Andhra Pradesh. To capture the needs of the farmer/users and extension specialists, project has conducted expert participation workshops and farmer-oriented workshops. Following workshops three '2nd Life' videos have been created which captured farmer decisions plus actual climate forecasts relevant for the needs of the farmers. The project demonstrated that it is possible to provide video productions of discussion environments that contain real-world decisions and climate forecasts in real time. It is also suggested that in developing new technology to deliver climate forecasting and associated outputs for farmers, social aspects in relation to farmer discussions, as well as delivering the core climate science output, must be addressed.



Activities

- Expert participation workshops and meetings
- Farmer-oriented and user-driven workshops
- Farm field walks
- Video production activities

Output

- Produced three 'Avatar' videos (in Telugu, Hindi and English languages), which discussed real-life farming situation in Andhra Pradesh, the relevance of climate forecasts on offer and what action the farmers may consider
- Distributed the videos through local television media
- Based on feedback obtained at farmer workshops, the 'eLearning' web-based portal team set about developing the pilot customizable, web-based climate 'discussion-support' portal.

Impact

- Project demonstrated innovative education approaches (such as video series that developed under the project) can provide effective means of enhancing discussion-support in relation to climate variability, climate forecasting and real-world farmer decisions.
- Enhanced opportunity for farmers and advisors to gain ownership of climate forecast information relevant to real farming practices in India
- Outcome led to a 3-year research project on developing web-based "discussion-support" agricultural climate information tools for the Australian sugar cane farming industry and evaluating their role in supporting enhanced climate risk management.

WHY IT'S HIGHLIGHTED (STRENGTHS)

- Improve the understanding and level of awareness of the farmers on climate forecast information and its benefit
- Effective use of international and local experts knowledge
- Identify key aspects that must consider when applying new technologies to deliver climate forecasting and associated outputs to farmers

Item 4

CAPaBLE PROJECT 8:
GRADUATE CONFERENCE ON CLIMATE CHANGE AND PEOPLE
More information: <http://www.apn-gcr.org/resources/items/show/1673>

Project Reference: CBA2010-12NSY-Pradhananga

Project Leader: Mr. Dhiraj Pradhananga, The Small Earth Nepal (SEN), **NEPAL**

Project Summary: International Graduate Conference on Climate Change and People was organized in Kathmandu, Nepal from 15 to 19 November 2010. At the conference, 17 experts from fields as diverse as biodiversity, water resources, climate change science, natural hazards, anthropology, biogeography, policy, equity, and ethics shared their experiences and opinions with 117 representing from 15 countries of Asia Pacific region. The conference focused on multidisciplinary capacity building of graduate students and encouraged participants to engage actively in the lecture sessions, interacting with experts, in group discussions, in panel discussions, and in the formation of a network for communicating with one another beyond the conference on climate change issues. The technical sessions of the conference provided an opportunity for graduate and undergraduate students to gain first-hand experience on how to deal with global change issues on national and international levels and also it provided a platform for the graduate students' voices and ideas to be expressed and heard.



Activity

- Five days International Graduate Conference

Output

- 117 participants from 15 countries of Asia Pacific region were participated
- Shares of knowledge and experiences among students and experts
- Build a network among scientists, researchers and the students
- Published a declaration and shared in the 16th COP meeting at Cancun, Mexico.
- Established Eco Generation Network

Impact

- Initiate Highland to Ocean project (H2O)
- Create Bangladesh Youth Empowerment Society (BYES)
- Sensitizing the participants about the climate change issues
- Build the organizational capabilities on project management and successfully implement three APN funded projects

WHY IT'S HIGHLIGHTED (STRENGTHS)

- High level of youth participation
- Built strong networks among participants
- Organizational capacity development on project development and management
- Significantly advanced the careers of 2 young researchers – one from Cambodia and one from Nepal.

CAPaBLE PROJECT 9: GLOBAL CHANGE AND CORAL REEF MANAGEMENT CAPACITY IN THE PACIFIC: ENGAGING SCIENTISTS AND POLICY MAKERS IN FIJI, SAMOA, TUVALU AND TONGA

More information: <http://www.apn-gcr.org/resources/items/show/1673>

Project Reference: CBA2010-15NSY-South

Project Leader: Prof G. Robin South, Institute of Marine Resources, University of the South Pacific, **FIJI**

Project Summary: Integrating global change into policies across various national government sectors, and then translating this into actions that lead to sustainable management of coastal ecosystems is an enormous challenge. Under this project the above challenge was addressed through face-to-face dialogue between coral reef experts and government personnel responsible for coral reef management policies in Pacific Island countries. Four successful workshops on Climate Change Adaptation were held in June to August 2010. 130 senior officials from Fiji, Samoa, Tonga and Tuvalu were participated. For each country a national dossier was developed and it included a series of issues (including gaps) pertinent to each country which were used in the development of national coral reef plans. Countries were re-visited to review progress on established plans. Although progress varied in the four countries, it was evident that collaboration between relevant government departments needed to be improved and that there was a need for the establishment and implementation of management systems that will be on-going and self-financing given the resources available.



Activities

- Four workshops on Climate Change Adaptation
- Project progress review visit (after 8 months of workshop)
- Literature review

Outputs

- 130 senior officials from Fiji, Samoa, Tonga and Tuvalu were participated
- Identified common and recurrent themes in target countries related to coral reef and climate change issues and policies
- Make recommendations on the four themes (fisheries, marine managed areas, global change and multi-sectoral, multi stakeholder consultations) in Fiji, Samoa, Tonga and Tuvalu
- Identified challenges surrounding coral reef conservation and management
- Workshop report and four national coral reef action plans were formulated

Impacts

- Identified priority actions for coral reef management
- Governments recognize the need for integrated planning on addressing coral reef management
- Samoa and Tuvalu were requested technical assistance in development of national ocean policies

WHY IT'S HIGHLIGHTED (STRENGTHS)

- Engaged senior government and civil society representatives from four participating countries
- Detailed analysis of current and future research and policy needs, as well as challenges in coral reef management and policy implementation
- Identified clear future directions for effective coral reef management
- Conducted an assessment to measure the progress of workshops

Item 4

**CAPaBLE PROJECT 10: CLIMATE CHANGE INTEGRATED EDUCATION
MODEL: BUILDING ADAPTIVE CAPACITY FOR THE NEXT GENERATION
(MALAYSIA, INDONESIA, THAILAND, PHILIPPINES AND LAO PDR)**

More information: <http://www.apn-qcr.org/resources/items/show/1687>

Project Reference:

CBA2011-09NSY-Aligaen

Project leader:

Mr. Julito C. Aligaen, Southeast Asian Ministers of Education Organization Regional Education Center for Science and Math (SEAMEO RECSAM), **MALAYSIA**

Project Summary:

This project on Climate Change Integrated Education was aimed to integrate climate change issues across learning areas in the basic education curriculum with the end goal of learners studying and solving real world issues, informing and developing them to be responsible enough to manage their own future without compromising the sustainability of the earth's resources. The project conducted two series of workshops and 17 school-based learning projects involving 161 teachers, educators, and curriculum specialists. The project designed a learning curriculum to present real world issues (i.e. climate change issues) to learners in real context not only in the classroom but outside the classroom as well.



Activities

- Two series of workshops (total 10 national level workshops) in Malaysia, Indonesia, Philippines, Lao PDR and Thailand
- 17 School-Based Learning Projects (SBLP) were conducted



Outputs

- 161 teachers, educators and curriculum specialists from 22 secondary schools from 5 participating countries were involved
- Developed 22 school-based learning project proposals and implemented 17 projects (Malaysia (4), Indonesia (4), Philippines (3), Thailand (3) and Lao PDR (3)).
- Identified and introduced two concepts; "Sustainability Science: an Organic Approach" and "Not Enough Time to Carry out Authentic Learning: The Economic Perspective of Learning".
- Discovered four core competencies or skills that are needed to carry out lifelong learning process (communication skills, collaboration skills, problem solving skills and dialogue and negotiation skills)



Impacts

- Provided an innovative learning approach to secondary schools student
- Educated the young people and improved their scientific literacy
- Real-life learning approach provides and helps to shape the students' perspective on the accountability of their lifestyle and learning in the context of sustainability
- Developed capacity of teachers and curriculum specialists to develop and conduct school based projects
- Identified importance of Integrating of climate change issues into or across the school curriculum

WHY IT'S HIGHLIGHTED (STRENGTHS)

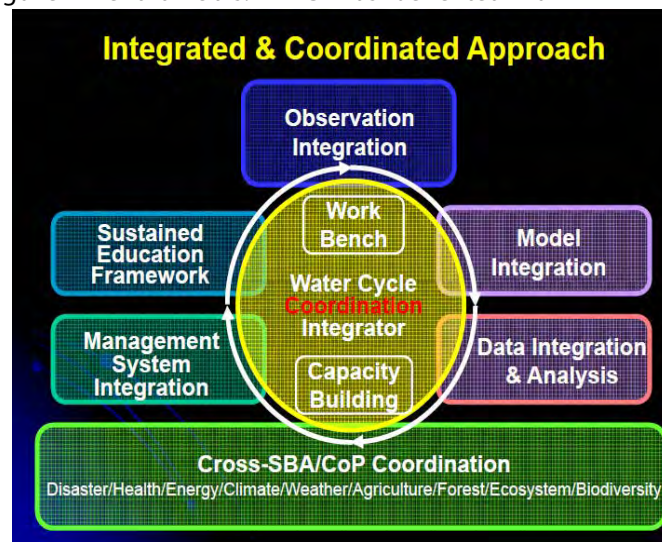
- Developed a high level of awareness among secondary school students on climate change issues
- Improved capacity of teachers and curriculum specialists to apply integrated learning approaches to develop and conduct school-based projects
- Strong regional collaboration
- Conducted a progress assessment of 17 School-Based Learning Projects (SBLP)

ASIAN WATER CYCLE INITIATIVE (AWCI) A REGIONAL COOPERATIVE FRAMEWORK

The Asian Water Cycle Initiative was established in 2005 to address the water-related issues in Asia under the framework of GEOSS. It consists of 20 member countries in Asia including 19 APN member countries. AWCI conducts various activities such as establishment of a regional cooperative framework, implementation of national river basin demonstration projects, developing database and models, and conduct of training workshops to develop capacity of Asian researchers, practitioners and administrative & local government officials. AWCI has benefited from APN financial support for more than eight years through nine projects including five regional research (ARCP) and four capacity development activities (CAPaBLE).

APN has contributed US\$ 733,193 for AWCI research and capacity development activities. Six APN funded AWCI projects have completed their activities during the third strategic phase. Based on outcome of the AWCI projects, it shows great success throughout years as regional cooperative framework for monitoring and predicting water related disasters and promoting efficient use of water resources. Under the APN funded AWCI projects, the following outcomes directly supported water-related regional issues in Asia:

- Analysed a historical climate and hydrology trend using Mann-Kendall test over Asia including AWCI 18 countries.
- Proposed a numerical model for a drought early warning system, called the Water and Energy Budget-based Distributed Hydrological Model (WEB-DHM).
- Developed advanced tools and methods to enable climate change impact assessments on water cycle in basins in Asia
- Developed and/or validated various technologies and their uses for sustainable flood risk management in Asia
- Developed detailed hydrological models in four river basins the Tone River (Japan), Meghna River (Bangladesh), Pampanga River (Philippines), and Huong River (Viet Nam).
- Completed collection of in-situ data from the 18 AWCI demonstration basins and archiving in the Data Integration and Analysis System (DIAS). DIAS is an essential tool enabling the advanced research studies and activities focusing on effective transformation of observation information and scientific knowledge into information relevant for local water resources and risk management.



AWCI Implementation design

AWCI has conducted several training courses and workshops under AWCI capacity development initiatives, two of which were supported by APN during the 3rd strategic phase. Capacity was developed on how to use the global model precipitation for future climate projections to assess climate change impacts on basin hydrological regimes and conduct climate change assessments for adaptation options.

AWCI annually conducts International Coordination Group (ICG) meetings of participating countries, experts, and universities, to plan GEOSS/AWCI activities. These meetings help members to share information for cooperative activities, advanced technologies and other innovative practices which help to develop policy options for effective flood disaster risk reduction in Asia. These meetings have developed human connections, which has significantly strengthened cooperative collaboration on regional water issues. AWCI directly contributes to the GEOSS (water societal benefit) and, in collaboration with UNU and JAXA, AWCI has developed module-based capacity building programmes.

Item 4

CAPACITY DEVELOPMENT ON INTEGRATION OF SCIENCE AND LOCAL KNOWLEDGE FOR CLIMATE CHANGE IMPACTS AND VULNERABILITY ASSESSMENTS

More information: <http://www.apn-gcr.org/resources/items/show/1699>

Project Reference: CIA2009-02-Pulhin

Project Leader: Dr. Juan Pulhin, Department of Forestry and Forest Governance, College of Forestry and Natural Resource, University of the Philippines Los Baños, **Philippines**

Countries engaged: Philippines, New Zealand

Project Summary: Water-related risks are attributed not only to escalating global and local changes, but to a high extent to failures in good. The reality of climate change calls for a need to understand how it might affect a range of natural and social systems, and to identify and evaluate options to respond to these effects. The capacity, however, to conduct vulnerability and adaptation assessments in the Philippines is still limited, particularly with gaps in downscaling simulated scenarios and mainstreaming research findings into decision-making. A project, undertaken with funding from the APN, trained key stakeholders in Albay on impacts, vulnerability and adaptation assessments using a computer-based modelling system and participatory approaches. SimCLIM was used and developed for Albay Province (AlbayClim) as an innovative tool for assessing and creating climate change scenarios. This aided in characterizing future risks specific for the province. Case studies were conducted in upland and coastal communities to demonstrate the assessment of impacts, vulnerability and adaptation to climate change and sea level rise. The AlbayClim system was complemented with participatory techniques to solicit knowledge and experiences of the local people. This put into context the source of vulnerability, as well as facilitated mainstreaming adaptive responses.



Activities

- LGU training on modelling vulnerability assessments at the local level
- Assessment conducted with scientists and local government units at the provincial level
- local community training on impacts of climate change and transfer of knowledge on science and local indigenous knowledge on adaptation
- Foruengaging all stakeholders



Outputs

- Climate model adapted to local needs
- Media coverage
- Peer reviewed journal articles, with citations in the IPCC AR5
- toolkits and manuals to sustain the activities in the province



Impacts

- partnership created with the Philippine's Climate Change Commission
- created sustained and trusting partnerships between local government units and scientists
- Managed to change the mindset of decision-makers via science that adaptation measures should be a long-term response to climate change as well as an extreme-impact-based responses

WHY IT'S HIGHLIGHTED (STRENGTHS)

- The success of this project was made possible through a strong collaboration and partnership between the implementing scientists and government officials concerned.
- Stressed the need for science and local knowledge to be further integrated for more robust assessments climate change, impacts, vulnerability and adaptation.

CHAPTER III: CONCLUSION

1. APN as an Institution

APN's function, role and ability to facilitate the implementation of research and capacity development in developing countries and provide holistic approaches linking the natural science of global environment change with socio-economic aspects are key for effective responses. The expansion of the science-policy approaches to other regions may be pertinent and worthwhile by sharing best practices.

Other main areas highlighted during the 3rd strategic phase need to be considered as APN transitions into its 4th Strategic Phase from April 2015.

Some of these are:

- Identifying best practices and global change knowledge and sharing the information with the public, private sector and practitioners;
- Sharing national experiences across borders on what has already been done;
- Considering a second generation of projects that are more complex in nature and larger in scope;
- Protecting the strong uniqueness of APN and the niche it serves in the Asia-Pacific region;
- Enhancing Member Countries' commitment by re-confirming the benefit and potential of being actively engaged in the APN;
- Further strengthening interactions among APN Members, as well as scientists and policy makers, by using mechanisms such as the Sub Regional Cooperation (SRC);
- Strengthening the Co-Financing Partnerships for action-oriented research; and
- Continuing to mobilise funds. In doing so, developed and developing countries need to be involved.

2. APN's Agenda in Science, Policy and Capacity Development

Most member countries noted in the year of the 3rd strategic planning process (i.e. in 2009) that important topics for the countries in region are climate (particularly adaptation, vulnerability and climate extremes); water, agriculture and food security; capacity building in earth observations (through collaboration with bodies such as the Global Earth Observation System of Systems [GEOSS]); education for sustainable development; integrated global change science and society; the integration of human dimensions in GC research; social and physical aspects of mega-cities; biofuels; air quality and human health; ecosystem degradation and desertification.

This continued into the 3rd strategic phase with topics such as ecosystem services, low carbon initiatives and adaptation standing out in most sectors. Strong partnerships are evident, for example, with GEO and GEOSS through the projects funded by the APN under the AWCI and the annual Asia-Pacific GEOSS symposia, in which APN has spoken at for the past 5 years. Also evident is the increasing interest and strengthening of partnerships in ecosystem services and biodiversity with policy bodies, including such initiatives as REDD+, PES and MRV systems being funded by the APN.

While it is clear that specific research priorities are not going to change or emerge on an annual timescale, the APN has aimed to identify topics that are of concern for the region, and addresses this on an annual basis to ensure dynamism and to facilitate its annual calls for proposals for research and capacity building activities. Setting the context on highlighted topics better illustrates the relevance to the global change community, policy makers and stakeholders.

In the present strategic phase, **Biodiversity and Ecosystems Services** and **Climate Change** and associated research and capacity development in impacts, vulnerability, adaptation and mitigation has continued to dominate the APN Science Agenda. These are further promoted through the establishment of the three Frameworks of the APN on Low Carbon Initiatives (strong links here with LoCARNet and Sustainable Development), Ecosystems, Biodiversity and Land Use (following the development of an Opportunity paper, with links to IPBES) and the APN's Climate Adaptation

Framework (14 projects currently being undertaken, that address many issues in the policy arena that pertain to adaptation, risk, and loss and damage).

In addition to this, emphasis is increasingly being placed on **effective pathways and transformations to sustainability, increasing resilience, and disaster risk reduction** as evidenced in the proposals being submitted and projects being undertaken by the APN. The international community is also responding through Rio+20 Summit, Planet Under Pressure, Future Earth and the IPCC as indicated in its 5th Assessment Report.

Interdisciplinary and/or transdisciplinary research is seen as key for policy-relevant research. The 3rd strategic phase saw more engagement of natural and social scientists, more engagement of decision makers and more research activities with an interdisciplinary flavour.

With regard to the challenges faced by APN member countries at the beginning of the strategic phase, the priority needs of members in terms of research and institutional capacity and a qualitative analysis indicated the constraints (or implementation gaps) faced by members, particularly developing country members, in conducting meaningful research in global environmental change.

These included the **lack of adequate human resources** (experts, scientists) and **research tools** (toolkits) and/or models; applying research and/or **mainstreaming research into policy processes**; inadequate research facilities (such as laboratory, equipment, etc.); **training on the use of appropriate methods/analysis; data access/availability; finding suitable international collaborators/appropriate experts**; and **assistance or training in writing research proposals**.

In particular, in the present strategic phase, APN has kept abreast of emerging topics, particularly those that are significant for the region. These are well documented in the present report and the impacts of the projects conducted under the APN's Core Programmes, Frameworks and Focused Activities can be summarized in numbers:

In the strategic phase covered by this report:

Over **6500 People**
engaged in scientific research, policy and capacity development

Over **800 Outputs**
outputs (technical papers, reports, proceedings, toolkits, manuals, etc.)

Over **250 Scientific Articles**
peer-reviewed papers

Over **69% Science-Policy Engagement**
projects engaged with decision makers and practitioners from local to national and regional levels

3. Recommendations for APN's 4th Strategic Plan

The following recommendations are provided against the goals of the APN:

1. **Supporting regional cooperation in global change research on issues particularly relevant to the region**

- Strategic discussions are needed in order to confirm the importance of, and our commitment to, the two main pillars of APN's global change activities, i.e. ARCP and CAPaBLE, on the one hand; and the focused activities around the three frameworks, on the other.
- Develop a more robust funding strategy for Frameworks if they are to play an important role in the APN's future by way of responding to stakeholders' needs.
- There remain significant gaps in the region that can continue to be addressed by the APN through national and international initiatives.

2. Strengthening appropriate interactions among scientists and policy makers, and providing scientific input to policy decision making and scientific knowledge to the public

- The APN must continue to address the *extent* to which it has been effective. This is clear in the scientific outputs of the present strategic phase through the number of peer-reviewed projects, but less clear in terms of capacity building and policy-making. It is clear that capacity building and policy-relevant work is being undertaken by the APN, but more examples of the extent to which these are happening needs to be addressed.
- APN is encouraged to devise some metrics for successful policy-relevant outputs, although detailed metrics are not realistic.
- It is important to ensure that the outputs of the work conducted under the frameworks are preserved through synthesis (such as the recent Climate synthesis of the APN in 2011) of what has been learned and provided to policy and decision makers.

3. Improving the scientific and technical capabilities of nations in the region including the transfer of know-how and technology

- Institutional and individual capacity building must continue to take precedence in the region in order for meaningful research to be undertaken by developing countries.

4. Cooperating with other global change networks and organisations

- APN must continue to secure and serve its niche in the region through important partnerships with all stakeholders sectors (including the private sector, foundations, etc.) and empowering its membership by promoting ownership of the APN.
- APN should follow closely the development in global environmental change at the international level, including that of bodies such as IPCC, IPBES, Future Earth, UN-relevant bodies, ASEAN, SAARC and other sub-regional bodies as well as continue its partnerships with the more conventional GC programmes, including WCRP and START.

DRAFT 4TH STRATEGIC PLAN 2015-2020

Introduced by the Task Committee, the key elements of the 4th Strategic Plan will undergo a final review with a view to endorsement by the IGM for the new phase to be implemented from 01 April 2015.

The Strategic Plan is attached as Appendix [IGM-SPG/20/04-02-App1](#).

MESSAGE FROM THE DIRECTOR 1

RATIONALE..... 2

1. VISION, MISSION AND GUIDING PRINCIPLES 2

2. IMPLEMENTATION STRATEGY..... 3

3. APN ACTION AGENDA 4

4. APN MANAGEMENT APPROACH..... 7

5. ACKNOWLEDGEMENTS 8

Appendix 1. Conceptual Framework of Solutions-Oriented Research..... 9

Appendix 2. Research Pathways..... 9

Appendix 3. Communication & Outreach Major Objectives 11

APN Fourth Strategic Plan

The world is coming together with a growing consensus that we need to work together to take science-informed action, and APN is part of that endeavour. APN demonstrates its ability to contribute to this global effort vis-à-vis its Fourth Strategic Plan and looks forward to contributing to supporting the citizens of the Asia-Pacific region in the future.

MESSAGE FROM THE DIRECTOR

It is our honour and pleasure to present APN’s Fourth Strategic Plan (2015-2020) in the year of 20th anniversary of APN, which was established in 1996.

Societies’ ability to respond to global change depends on the resilience of human and environmental systems in the face of these changes. Improving the understanding of the Earth’s systems and its interactions with human societies, improving predictions of longer-term causes and trends of climate change, and preparing nations for future events by applying effective management tools of impact of Global Change are grand challenges.

The Asia-Pacific Network for Global Change Research (APN) will continue its mission to enable countries in the Asia-Pacific region to address these challenges successfully. Projects and activities funded by APN are aimed at integrating across the natural and social science disciplines to find solutions to global change problems that are of major concern in the region.

To realise its mission, APN’s Fourth Strategic Plan (2015-2020) was developed based on the evaluation of its third strategic phase, which ran from 2010 to 2015.

With the support from its members and key partners and steered by the strategies stipulated in the present document, APN will reinforce its efforts in designing solutions- and action-oriented collaborative research on global change and sustainability in the Asia-Pacific region, strengthening evidence-based science-policy linkages, informing decision-making and enhancing public awareness, particularly in developing countries.

Peldon Tshering
 Chair, Steering Committee
 Asia-Pacific Network for Global Change Research (APN)

Hiroshi Tsujihara
 Director, Secretariat
 Asia-Pacific Network for Global Change Research (APN)

Item 4

RATIONALE

The Asia-Pacific region is home to more than half of the world's population with development aspirations that challenge the sustainability of natural resources, communities and their cultural heritage. Achieving these aspirations is further complicated by the impacts of natural and anthropogenic changes in the Earth's bio-geophysical system.

Recent research and supporting observations have provided new insights into these changes and their impacts but have, at the same time, raised a number of new and challenging issues and questions. APN seeks to identify and address these issues through scientific research, capacity building, science-policy dialogue and awareness-raising.

The Asia-Pacific Network for Global Change Research (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. These changes manifest themselves differently at regional and local scales and require place-based solutions.

APN strives to enable the countries of the region to:

1. participate in, and benefit from, cooperative research in the region that contributes to the development of sound science-based response strategies and measures;
2. develop scientific capacity to understand and address these important issues; and
3. strengthen interactions among scientists and policy makers to support scientifically sound and evidence-based decision-making.

Finally, recognising the interactive role of regional processes in the overall Earth system, APN also aims to link the initiatives it sponsors with related projects conducted in other regions and under the aegis of global-scale programmes.

1. VISION, MISSION AND GUIDING PRINCIPLES

Vision

An Asia-Pacific region that is successfully addressing the challenges of global change and sustainability.

Mission

The mission of APN is to enable investigations of changes in the Earth's life support systems and their implications for sustainable development in the Asia-Pacific region through support for research and science-based response strategies and measures, effective linkages between science and policy, and scientific capacity development. APN, therefore, supports investigations that will:

1. Identify, explain, project 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 and sustainable development.

Goals

- Goal 1.** Supporting regional cooperation in global change research on issues particularly relevant to the region
- Goal 2.** Enhancing capabilities to participate in global change and sustainability research and support science-based decision-making

- Goal 3.** Strengthening appropriate interactions among scientists and policy makers, and providing scientific input to policy decision-making and scientific knowledge to the civil society and the public
- Goal 4.** Cooperating with other global change and sustainability networks and organisations

APN Guiding Principles

- Strengthen APN's unique niche and shared ownership among members.
- Broaden APN's financial base.
- Encourage participatory processes involving scientists and policy-makers to identify emerging issues and support decision-making.
- Ensure both high scientific quality and regional relevance.
- Provide opportunities for sharing knowledge and best practices.
- Recognize the special challenges of developing countries.
- Encourage stakeholder engagement throughout projects from design to implementation and evaluation.
- Emphasize interdisciplinary and transdisciplinary research.
- Communicate Network results broadly to scientific communities, policy makers and the general public.

2. IMPLEMENTATION STRATEGY

In order to achieve its mission, APN has identified the four goals mentioned above. Each goal may be achieved primarily through support of competitively selected activities in research, capacity building and science-policy dialogue.

Goal 1. Supporting regional and international cooperation in research on global change and sustainability issues particularly relevant to the region

This is the highest priority goal of APN. It addresses APN's core belief that regional and international cooperation is essential to understand and respond to the effects of global change and address the challenges of sustainable development, relevant to the Asia-Pacific region.

Key Investment Instrument: Underpinning knowledge creation

Examples of activities for potential focus under this goal include:

- a. Facilitating and supporting collaborative global change and sustainability research projects in the region;
- b. Organising regional meetings to highlight global change research and its possible implications for policy-making; and
- c. Systematically identifying key scientific priorities and emerging scientific issues for the region.

Goal 2. Enhancing capabilities to participate in research on global change and sustainability and to support science-based decision-making

It is vital that APN member countries have the capacity to conduct high quality research regarding global change that provides underpinning scientific input for policy makers and policy-making processes. APN believes that research must involve local scientists and that their capacity must be enhanced in order to develop and continue their research as well as analyse and utilise their research outcomes.

Key investment instrument: Local capacity development

Examples of activities for potential focus under this goal include:

- a. Supporting capacity development of early-career researchers in global change and sustainable development;
- b. Supporting capacity development of policy makers, community leaders, resource managers, etc.; and

- c. Cooperating with other international capacity development programmes.

Goal 3. Strengthening appropriate interactions among scientists and policy makers, and providing scientific input to policy decision-making and scientific knowledge to civil society and the public

APN recognises that policy decisions are made in a complex environment where many factors must be considered. APN's approach is to focus on strengthening appropriate links between the science and policy communities and other stakeholders. In addition, APN realises the importance of raising public awareness of global change issues based on sound science. Accordingly, APN will use public fora to raise public awareness of global change issues when appropriate opportunities arise.

Key Investment Instrument: Facilitation of science-policy interaction

Examples of activities for potential focus under this goal include:

- a. Pursuing existing or creating new fora for discussion and interaction between scientists and policy-makers;
- b. Supporting training workshops for scientists to develop skills and techniques in providing science-based tools to support policy development;
- c. Encouraging stakeholder involvement in all phases of projects.

Goal 4. Cooperating with other global change and sustainability networks and organisations

It is vital that APN continues to develop strong partnerships with other global change and sustainability networks and organisations and, as a regional network, be aware of current and emerging research and related activities in the region and throughout the world. This goal supports each of the first three goals above and enables APN to operate efficiently and effectively within the global change and sustainability communities.

Key Investment Instrument: Defining regional context of global issues

Examples of activities for potential focus under this goal include:

- a. Organising collaborative projects in areas of common interest;
- b. Inviting other global change research organisations to be involved in APN meetings and committees and for APN to be represented at relevant meetings organised by others;
- c. Setting complementary agendas and initiating cooperative arrangements where appropriate.

3. APN ACTION AGENDA

3.1 Research Agenda

APN fosters the understanding of global environmental change by conducting regional research through collaboration and capacity development. APN's activities promote research that improves understanding of the physical, biological and human dimensions of change in the Earth system and advances science that informs decision-making regarding adaptation, mitigation and sustainable development in the following specific areas:

1. Climate Change and Climate Variability;
2. Biodiversity and Ecosystems;
3. Changes in the Atmospheric, Terrestrial and Marine Domains;
4. Resources Utilisation and Pathways for Sustainable Development; and
5. Risk Reduction and Resilience.

The above themes are often interrelated and involve the interface of natural, social, behavioral, economic and political sciences. In the 4th Strategic Phase, APN will increasingly emphasize this interdisciplinary and transdisciplinary approach in addressing regional issues (see Appendix 1).

APN will continue to support research on thematic issues, such as climate adaptation, low carbon approaches, biodiversity and ecosystem services.

APN supports a range of research topics and other scientific activities as shown in the examples listed, although not exhaustive, in Appendix 2, 'Research Pathways'

APN serves the scientific and decision-making communities and other stakeholders in the Asia-Pacific region. APN will invest in the identification of applicable methodologies and the development of new tools to improve the effectiveness of knowledge transfer between scientists and decision makers. APN recognises the importance of developing capacity and, therefore, APN will support research proposals that incorporate capacity development as a core element.

Examples of activities that APN might support are:

- a. Promoting and strengthening global change and sustainability research, including addressing and identifying gaps via syntheses and assessment work, particularly under the five thematic areas identified in the Research Agenda.
- b. Developing pathways and effective mechanisms to achieve sustainable development and develop adaptation strategies,
- c. Encouraging place-based (site-specific) integrative research particularly from developing countries; and
- d. Contributing to the evolving global change arena, including the Intergovernmental Panel for Climate Change (IPCC) and the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES), the post-2015 Sustainable Development Goals, and Future Earth.

3.2 Capacity Development Agenda

In addition to supporting capacity development under its research agenda, APN also has a focus Capacity Development Agenda (CAPaBLE)¹. CAPaBLE is enhancing scientific capacity to improve decision-making related to global change and sustainability. This includes *capacity development* for early-career scientists and *capacity enhancement* for experienced leading scientists in developing countries.

Examples of capacity development activities that APN will undertake are:

- a. Capacity development in the context of the five thematic areas under Research Agenda;
- b. Establishing criteria and metrics for evaluating successful capacity development;
- c. Contributing to capacity development components of the evolving global change arena, including the IPCC and IPBES, the post-2015 Sustainable Development Goals, and Future Earth;
- d. Continue its capacity development efforts at levels from the local to the national, regional and global, particularly in developing countries; and
- e. Continue to emphasise the successful “partnership” approach of CAPaBLE as the key for securing investment from stakeholders.

3.3 Science-Policy Agenda

APN is committed to strengthening evidence-based science-policy linkages, informing decision making and enhancing public awareness. One important role of science is to provide the underpinning information for policy- and decision-making. Conversely, it is important to provide a forum for those stakeholders to express their needs.

¹ Born in 2003 as a World Summit for Sustainable Development (WSSD) Type II Partnership Initiative.

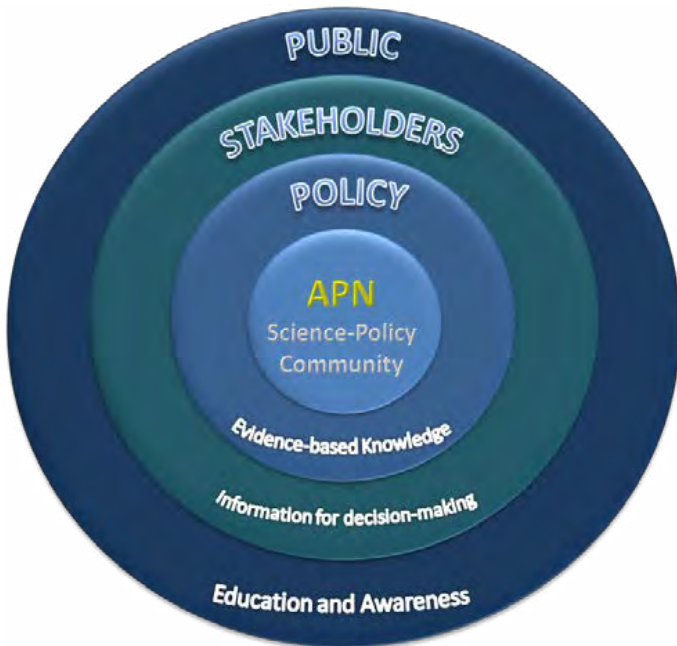


Figure 1. Levels of interaction for discussing and disseminating evidence-based knowledge from solutions-oriented research for decision-making

Examples of activities that APN will support are:

- a. Strengthening science-policy interactions/linkages across APN's Action Agenda.
- b. Empowering APN members to share best practices and identify opportunities to promote science-policy interactions.
- c. Fostering policy publications on high priority topics, including, for example, policy-briefs, synthesis reports and assessments.
- d. Cooperating with partners in global change research and sustainable development.
- e. Developing a set of metrics for evaluating the effectiveness of science-policy linkages.
- f. Raising awareness of and disseminating information to the policy- and decision-making communities, civil society and the public.

3.4 Communication and Outreach Agenda

As a key tool for communications APN is developing improved strategies to ensure alignment with web-based developments and has adopted some dynamic approaches to keep abreast of the developments in this area. APN has embarked on an ambitious communication and outreach agenda that has led to the development of its website incorporating a metadata portal (E-Library), daily bulletins, interaction with social media, including Twitter and Facebook. Outreach is more extensive than ever, with over 2,000 email subscribers and almost 16,000 unique page views to the E-Lib system in 2013. The growth in this area will be actively expanded in this Strategic Phase through endeavors that ensure a robust e-platform for APN's growth and the community it serves.

I. Overall Target

The overall target of this communication and outreach strategy is to contribute to achieving APN's vision, mission and goals by strategically engaging different target audiences with tailor-designed information using the most appropriate tools for each group, produced in collaboration with key stakeholders.

To effectively implement this communication and outreach strategy, it is necessary to identify key messages and most appropriate content, format and channels to present these messages to each of the audience groups. In order to achieve the overall target, therefore, it is important to engage knowledge owners in the design and planning phase to determine project- or activity-specific messages for each communication campaign.

II. Target audiences

1. APN Members, governments, international organisations and donors, including present and potential funding partners
2. decision makers and practitioners
3. scientists and researchers and their respective institutions
4. peer organisations
5. the media
6. private sector and general public

III. Major objectives

The major objectives are tabulated in Appendix 3.

IV. Communication tools and products

1. Print media/e-publications (project reports, synthesis reports, books, information sheets, policy briefs, posters, brochures, etc.)
2. Mass media (newspapers, magazines, TV, radio etc.)
3. Electronic media
 1. Owned media (web news, database, e-newsletters, mailing lists, APN Alumni site, blogs, video, infographic, etc.)
 2. Social media (free-flowing information exchange, interactive use of handheld devices, informal communications)
4. Events (workshops, meetings, exhibition, press briefings, etc.)

4. APN MANAGEMENT APPROACH

APN Framework Document sets out the roles and responsibilities of the organs and sub-organs of the organisation and details APN's arrangements and procedures. Under this framework APN will apply the following key management approaches as listed below.

I. Involvement of Member Countries

APN will:

1. Continue to promote the many benefits of APN membership and strengthen member countries' sense of ownership and assist them in facing the challenges presented by global change and sustainability;
2. Encourage member countries' representatives to play an active role in promoting APN's Action Agenda at the national, regional and international levels; and
3. Assist member countries to establish national global change and sustainability research programmes, and encourage collaboration with neighbouring countries, facilitated as appropriate by the secretariat.

II. Management of Projects and Activities

1. APN will conduct programmes and other activities in four main areas, namely research, capacity development, science-policy linkages, and communication and outreach.
2. Proposals submitted under open calls will be selected through an international peer review process. In so doing, APN will actively expand its pool of reviewers to match the range of themes for APN's work programme.
3. APN will further improve the administrative structure for project management that ensures, among others:

- disseminating outputs, including appropriately quantified data, by project leaders in a form that is useful to stakeholders;
- continuing the policy of retaining a portion of project funds until project completion.
- developing measures for evaluating the effectiveness of science-policy linkages.

III. Financial Resources and Management

1. APN, with the guidance of the Steering Committee and support of the Secretariat, will look into diversifying APN funding sources, encouraging more direct financial and in-kind contributions from members, and strengthening the opportunities for co-funding partnerships with member countries, both developing and developed, and other bodies, as appropriate.
2. With continued generous support (financial and in-kind contributions) from the Hyogo Prefectural Government, APN Secretariat will maintain its headquarters in Kobe. APN will also continue to extend its relationship with Hyogo Prefecture in areas of common interest.
3. APN will continue to have its financial affairs checked by an internationally credited external auditor.

IV. Alignment with the Global Change and Sustainability Communities

1. Communicate and collaborate closely with organisations in the evolving global change and sustainability communities² to achieve APN's goals. Such collaboration will include joint research projects, scientific capacity development activities, science-policy interfacing, enabling Asia-Pacific participation in international meetings, scoping workshops and developing and strengthening networks of scientists and policy-makers.
2. Encourage APN-initiated and APN-funded projects to proactively seek collaboration with institutions and organisations that provide co-sponsorship and in-kind contributions.
3. Seek the active involvement of relevant institutions to collaborate in its activities.
4. Consider establishing partnerships with programmes of the global change and sustainability research communities, as appropriate.

V. Communication and Outreach

APN will strengthen its Communication and Outreach Agenda, especially through the development of new communication tools, organising outreach activities, establishing/ strengthening partnerships. The different target audiences, such as government representatives of Member Countries, the scientific research community and other interested parties will be engaged in this endeavour with tailor-designed information that is produced in collaboration with these stakeholder groups.

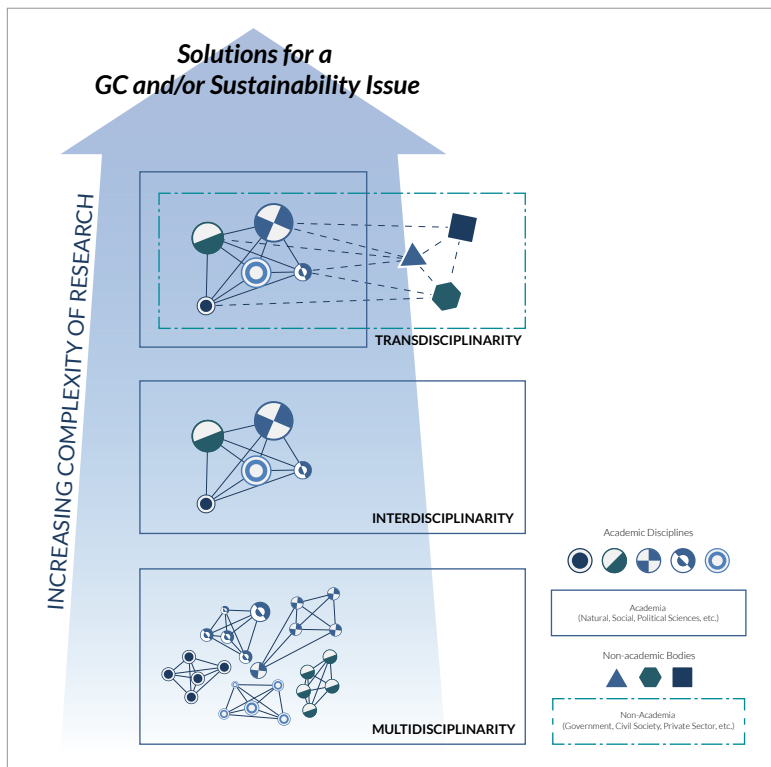
5. ACKNOWLEDGEMENTS

APN extends its deepest appreciation to the Fourth Strategic Plan Task Committee who worked diligently and tirelessly to realise the 4th Strategic Plan. They are Dr. W.A. Matthews, Dr. Kanayathu Koshy, Dr. Eileen Shea, Dr. Alexander Sterin, Dr. Akio Takemoto and Dr. Luis M. Tupas.

² For example, at the time of writing, global change programmes of ICSU's core Global Change Programmes have, or are in the process of, transitioning into a new 10-year initiative, Future Earth. For latest information of programmes and partners that APN is working with, refer to APN website www.apn-gcr.org.

APN also gratefully acknowledges its national Focal Points and Scientific Planning Group Members to develop the present strategic plan.

Appendix 1. Conceptual Framework of Solutions-Oriented Research



Appendix 2. Research Pathways

APN supports a range of research topics and other activities that help achieve its objectives. Without prejudice to APN's decisions, the following list of indicative topics provides examples of the range of research that may be of interest to APN.

The information outlined below is not in any order of priority and is not exhaustive. It is provided, essentially, to facilitate in-country discussions and to assist those interested in working with APN. Please refer to APN website (www.apn-gcr.org) for accurate and extensive information of projects that APN has funded in the past.

Research on these topics transcend beyond disciplinary and thematic issues, thus APN also encourages proposals that address crosscutting issues covering research topics below.

1. Climate Change and Climate Variability

- Regional scenarios for climate change including climate extremes
- Implications of global change for predictability and stability of the Asian Monsoon, and societal consequences
- Synergies between adapting to current natural climate variability and that of future human-induced climate change
- Adaptation measures in the Asia-Pacific region
- Aerosols, clouds, climate, and human health
- Mitigation options and their implications for sustainable development
- Climate change and climate variability in cryosphere and water and food security
- Integrated assessment techniques
- Interactions between global change and regional change
- Climate change and water, food and health management
- Climate change and food systems

Item 4

- Regional climate model downscaling for adaptation, risk, resilience that could be transferred to the local level (including remote communities, districts, cities, etc.)
- Risk reduction and resilience in the context of climate change

2. Ecosystems and Biodiversity

- Changes in the carbon cycle and the water cycle
- Global change and mountain systems
- Coastal marine ecosystem
- Freshwater ecosystems, lakes and rivers
- Agriculture ecosystems, forests, rangelands, watersheds
- Water quality and quantity, water reuse
- Applied agricultural technology
- Natural resources and environmental management
- Fish-stock/live-stock assessments, natural and cultured
- Interactions between global change and regional change
- Invasive species
- Integrated assessment techniques
- Climate change, biodiversity and ecosystem services
- Global change and water, food and health management
- Holistic assessment involving several issues in the same ecosystem

3. Changes in the Atmospheric, Marine and Terrestrial Domains

Atmospheric Change:

- Air quality changes at various spatial and temporal scales and their impacts
- Source and sink fluxes of greenhouse gases
- Impacts of increasing atmospheric carbon dioxide and air pollutants on agricultural and natural ecosystems in the Asia-Pacific region
- Downscaled climate change scenarios
- Uncertainty analysis
- Impacts of pollution on climate systems

Changes in the Oceans and Coastal Systems:

- Aspects of physical and biogeochemical cycles and ecosystems in oxygen minimum zones (OMZ)
- Ocean acidification
- Decline and degradation of marine biodiversity, e.g., mangroves and coral reef ecosystems
- Impacts of developmental activities on the ecology and socio-economic systems of the Asia-Pacific region
- Understanding regional ocean climate variability and implications for fisheries and aquaculture
- Impacts of increasing sea surface temperature fluctuations

Terrestrial changes

- Structure and composition of the marine food web and its response to physical forcing and chemical regimes in coastal up-welling systems
- Research and information networks for land system change
- Assessment and enhancement of land use sustainability
- Nature, extent, causes and impacts of land use and land cover change
- Urban land use change
- Global change implications of urban sprawl/urban development

4. Resources Utilisation and Pathways for Sustainable Development

- Environmental implications of regional policy aimed at energy security and carbon limited society
- Renewable energy systems and sources
- Economic impacts of global change on the Asia-Pacific region through the food trade chain
- Transfer of environmental burden (external cost) associated with enhancing regional material/products flow
- Environmental implications of trans-boundary trade of resources and wastes
- Regional strategies and initiatives to reduce, reuse and recycle materials
- Regional water resource issues related to international river flows

- Biofuels and bioenergy technology to offset fossil fuel consumption
- Global environment change and land use planning
- Global change impacts and sustainable development
- Technology or equipment that are environmentally friendly (recyclables, biodegradable materials, life cycle analysis of materials, etc.)
- Globalisation (lifestyle, consumption patterns, transport systems, etc.) and global change
- Global change impacts of multilateral financial institutions
- Governance and institutional dimensions of global change
- Sustainable management of urban areas, coastal zones, etc.
- Technology development and knowledge transfer in waste management systems

5. Risk Reduction and Resilience

- Health
- Extreme weather events and coastal hazards
- Food and water security
- Information to address climate-related disaster risks
- Vulnerability assessment for ecosystems, communities, businesses and natural resources
- Climate change and hydrology and water resources at regional/provincial levels
- Risks assessment of coastal ecosystems
- Integrated modelling that reduces vulnerability and improves resilience by looking at a combination of: climate vulnerability, impacts and adaptation; economics; social and human dimensions
- Regional downscaling for adaptation, risk, resilience that could be transferred to the local level (including remote communities, districts, cities, etc.)
- Inter-trans disciplinary research and assessment of: Impacts of extreme weather events and slow onset events at regional, sub-regional and local levels (what are the gaps; what is the status quo?)
- Reducing loss by revisiting current aspects of Disaster Risk Management strategies across local, national and regional (including transboundary) scales.
- Non-economic/non-insurable losses due to climate – extreme and slow onset events (cultural, health, psychological, social, etc.)
- Integrating the risks identified through climate change adaptation and disaster risk reduction into regional planning: What is the present scientific understanding on adaptation, disaster risk reduction, and loss & damage?

APN recognises the importance of linkages between science and policy, i.e., two way communications between the communities that use scientific information (policy makers and decision makers in society) and scientific communities. These are:

- Research of best practices in science-policy interface options potentially appropriate for APN (e.g., IPCC, science briefings, publications)
- Development of additional science-policy interface approaches potentially appropriate for APN
- Publication of guidelines for APN scientists based on APN's knowledge/experience
- Training and capacity development for science-policy interfacing
- Science-policy interfacing relating to global change
- Transforming scientific knowledge to policy (e.g., communicating science, translating scientific knowledge into decision making processes, knowledge brokers, stakeholder involvement)

Appendix 3. Communication & Outreach Major Objectives

Objectives / stakeholders	a) governments and donors, including potential funding partners	b) decision makers and practitioners	c) scientists and researchers	d) peer organisations and science-policy forums	e) media	f) private sector and the general public	g) APN members
1. To raise awareness about APN's activities and achievement over the past decades	Y	Y	Y	Y	Y		Y
2. To effectively and widely disseminate solution-oriented technical outputs and outcomes and findings of APN activities in suitable form and format	Y	Y	Y	Y	Y	Y	Y
3. To inform about APN's opportunities, including for funding and partnership	Y	Y	Y	Y	Y	Y	Y
4. To foster effective communication among APN members to support better ownership of the Network	Y	Y	Y				Y
5. To facilitate effective communication among scientist, researchers and practitioners		Y	Y				Y

Item 5: Sub-Regional Committee Meetings

Instructions for the parallel sessions

- In this parallel session **SA, SEA and TEA SRCom** members will group into their respective sub-regions to discuss SRC activities.
- The agendas of the parallel sessions are available under item 5.
- Each sub-regional group is asked to provide a summary of the discussion for submission to the APN Secretariat.
- After the sub-regional parallel session, the elected Chair, Vice-Chair and rapporteur of each sub-regional group will attend the SRC chairs meeting which will be held in main meeting room (Malhar) from 17:00 to 17:30 on 25 March 2015.
- SRCom members are asked to **report to the IGM under Item 7**, preferably via PowerPoint presentation on Thursday 26 March 2015 at the IGM based on discussion at this parallel session and chairs' meeting.
 - 9:00-9:10 Report from South Asia
 - 9:10-9:20 Report from Southeast Asia
 - 9:20-9:30 Report from Temperate East Asia
- The sub-regional committee representatives should hand their presentation and report to Secretariat members before the 8:45 on 26 March 2015.
- Members are requested to proceed to their respective sub-regional groups according to the following table:

Sub-regional Groups	Member Countries	Room Assigned
South Asia	<ul style="list-style-type: none"> • Bangladesh • Bhutan • India • Nepal • Pakistan • Sri Lanka 	Board Room 1
Southeast Asia	<ul style="list-style-type: none"> • Cambodia • Indonesia • Lao PDR • Malaysia • Philippines • Thailand • Viet Nam 	Marva
Temperate East Asia	<ul style="list-style-type: none"> • China • Japan • Mongolia • Republic of Korea • Russian Federation 	Board Room 2

APN South Asia Sub-Regional Committee Meeting**25 March 2015, Kathmandu, Nepal***(Boardroom One: 14:30-17:00)*

Draft Agenda

A rapporteur for the meeting & presenter of the outcomes to the IGM are to be assigned by the SRC Members

(APN Secretariat is not available to take minutes or make a report for the IGM)

14:30-14:35 (5 min)	Welcome Remarks and Brief Introduction The 2014/15 SA-SRC Chair, Ms. Peldon Tshering, nFP Member for Bhutan will welcome participants of the 6 th South Asia Sub-Regional Committee meeting; provide remarks and give a short introduction of the meeting and its objectives.
14:35-14:40 (5 min)	Chair of the SA-SRCom for 2015–2016 Ms. Tshering will facilitate the election of a new Chair and new Vice Chair of the SA-SRCom for 2015/16. The newly elected Chair and Vice Chair will preside over the Sub-Regional committee Meeting.
14:40-14:45 (5 min)	Item 1. Adoption of the Draft Agenda The Meeting Chair will seek adoption of the present draft agenda. Items of Any Other Business (AOB) may be raised.
14:45-14:55 (10 min)	Item 2. Review and discussion of the action points of 6th SA-SRC Meeting Refer to draft Chairperson's summary and action point document <u>IGM-SPG-20-05(a)-App1</u>
14:55-15:40 (45 min)	Item 3. South Asian Association for Regional Cooperation (SAARC) <i>Mr Dhan Bahadur Oli</i> , Director SAARC, will provide an overview of SAARC initiatives related to global change (10 min) with follow-up discussion (35 min).
15:40-16:00	Coffee break
16:00-16:15 (15 min)	Item 4. Partnerships with other regional networks Members will finalise the organisational list for future collaboration that will be presented at the 20th IGM/SPG.
16:15-16:30 (15 min)	Item 5. Science-Policy Dialogue Mr. Chenchu Tshering will share the outcomes of the Science-Policy dialogue. A short discussion with the members will follow.
16:30-16:55 (25 min)	Item 6. Any other Business Tentative plans will be made for future events. The discussion should be guided by the following: <ul style="list-style-type: none"> – Updated Proposals: Status – Identify SA-SRC regional priorities for the 2015-2016 (aligned with MDG & SDG) – Host of the 7th SA-SRC meeting – Any Other Business (AOB)
16:55-17:00 (5 min)	Closing and Final Remarks The Chair will deliver the concluding remarks and all participants and a group photograph will be taken.

After the SA-SRCom Meeting, the new SA-SRC Chair, Vice-Chair and rapporteur will attend the SRC Chairs' meeting, which will be held in the main meeting room (Malhar) from 17:00 to 17:30.

6th APN South Asia Sub-Regional Cooperation Meeting Bhutan, 22nd January 2015

Review of the 5th APN SA-SRC Meeting and 19th IGM action points related to SA-SRC activities

Ms. Peldon TSHERING, Chair of the SA-SRC Committee presented highlights of the 5th SA-SRC Meeting, and SA-SRC committee meeting, in Sri Lanka and Cambodia, respectively. She provided the status of complete and incomplete action points from the 5th SA-SRC meeting and the Cambodia meeting at the 19th IGM/SPG.

Objectives of the 6th SA-SRC Meeting

Ms. Taniya Koswatta, APN Secretariat Coordinator provided a brief explanation about the background of APN Sub-Regional Cooperation and Meeting objectives. Members then discussed establishing partnership activities and agreed to prepare a list of organizations/institutions for future collaboration.

ACTION 1: *Members will provide a list of research organizations that are relevant to APN partnership activities by 28th February 2015. The final list will be compiled and shared with members by 10th March 2015. During the SA-SRC parallel session at the 20th IGM, members will discuss organizations for future collaboration and present the information at the 20th IGM/SPG. Information collection is continuing*

APN South Asia Science-Policy Dialogue

Dr. Linda Anne Stevenson, Division Head of Communication and Scientific Affairs presented brief overview of the outcomes of the SA-SPD. All members expressed their views that the dialogue was a successful event and, therefore, similar kinds of dialogues should continue at the national level. These dialogues should be seen as a starting point in strengthening science and policy linkages.

ACTION 2: *The structure of the dialogue policy brief will follow a similar format as the Southeast Asia policy brief. In addition, the brief will incorporate outcomes of the Café Kiosks discussions and the games and recommendations for action will be categorized in to three different levels (i.e. regional, national, and city/community/local levels). Participation of high level policy makers should be considered in next dialogue.*

Secretariat update-

- Press release was published 28th January 2015
- Three news articles were published by Ms. Sahana Ghosh in different news websites
- Dr Saleemul Huq contributed to guest article for *thethirpole.net* based on discussion at the SPD
- Dr. Stevenson will share the outcome of SPD in the 3rd World Conference on Disaster Risk Reduction

Continue Partnerships with Other Regional Networks

A strategic discussion among the members on the continuation of partnerships with SAARC, UNEP and LoCARNet were held.

ACTION 3: *The APN secretariat will send a letter to the SAARC director regarding possible partnership with SAARC. The National Focal Point for Nepal will share the contact details of the SAARC director and invite SAARC director to the APN 20th IGM/SPG.*

The APN secretariat will send letters to the following organizations enquiring about mutually beneficial partnership activities: South Asia Co-operative Environment Programme (SACEP), UNEP Regional Office for Asia and the Pacific, CIMOD, International rice research institution (IRRI), International Centre for Research in Agroforestry (ICRAF), Climate Action Network South Asia (CANSAs), Clean Air Asia and international Water Management Institute (IWMI)

Secretariat update-

- *Mr. Mahendra Thapa, nFP of Nepal share the contact details of SAARC representatives*
- *APN director sent the IGM invitation on 17 February 2015*

Sub-Regional Committee and Cooperation Activities in the Fourth Strategic Phase

A discussion on membership development among the SA-SRC member countries and identified focus areas for the SA-SRC group for fourth strategic phase ensued. Members agreed that collaboration activities with partnering organizations are strategic to enhance South Asia sub regional activities.

ACTION 4:

(a) Focuses area: SA-SRC committee focuses on regional priority issues that are related to the APN and also aligned with Millennium Development Goals and Sustainable Development Goals.

(b) Membership: To ensure country participation at the APN meetings, especially at the Sub-regional level, any National focal point that is absent for two consecutive meetings without justification, the APN Director can consider informing relevant ministries about their absence.

SRC members feel that India participation in SA-SRC activities is crucial and requests that the APN Director follows up with the Ministry of Environment of Forests and Climate Change of India in order that an Indian national Focal Point can be identified at the earliest possible time.

(c) Financial development: APN will share concept note of APN-Country Financial Partnership MOU with South Asia National focal point members. National focal points members will explore possible collaborative activities. **Will be sent after the IGM discussion on co-finance**

Secretariat update-

- *APN secretariat continuously trying to engage Ministry of Environment of Forests and Climate Change of India and wrote to Mr Sanjeev Sharma, PPS of the secretary and Mr Ravi Shankar Prasad, Joint Secretary Climate Change adaptation division regarding new nFP member of India. However, APN not received any feedback yet.*

APN 20th Anniversary Celebration Activities

Members agreed on the importance of increasing awareness of APN activities during the APN 20th anniversary. Members will share the outcome of the APN's 3rd Strategic and general overview at any local events in their respective countries during the 20th anniversary year from 01 April 2015 to March 31 2016.

ACTION 5: The APN secretariat will send a brief general 5-slide presentation, including 3rd strategic phase outcomes, to members. This will mainly be for environmental day on 5th June 2015 as well as opportunities that members may have to share the information at local events. **Continuing**

The 7th APN SA-SRC Meeting

Mr. Sajjad Ahmad, nFP for Pakistan, will explore possibilities of hosting the 7th SA-SRC meeting in Pakistan. If Temperate East Asia SRC does not host the 2015 annual PDTW, then the SA-SRC will host the workshop as a back to back event to the 7th SA-SRC meeting. The focus areas will be climate vulnerability and adaptation. If Pakistan is unable to host the meeting, Bangladesh will explore the possibility to host the meeting.

ACTION 6: The APN secretariat will share the outcome of the 6th SA-SRC with Mr. Sajjad Ahmad. Mr. Ahmad will inform the APN Secretariat (within 10 days) about the possibilities of hosting the 7th SA-SRC meeting

Secretariat update-

- *Mr. Sajjad Ahmad has informed that the Ministry of Climate Change expressed their willingness to host 07th SA-SRC meeting in Islamabad, Pakistan. Official announcement will be announced after receiving official approval from Ministry of Climate Change.*

Future Plans/Activities

A. Update of on SA-SRC proposals

- Based on the recommendation of SPG-Pre meeting members, members may discuss proposal status of two proposals that were submitted to APN 2014 call.

B. Identify SA-SRC regional priorities for the 2015-2016

- Discussion session aims to identify new and emerging issues/priorities/hot topics in the South Asia region to focuses on APN 2015-2016.
- During the 6th SA-SRC members agreed to focuses on regional priority issues that are related to the APN and also aligned with Millennium Development Goals and Sustainable Development Goals.

C. 7th SA-SRC meeting

Background:

- Mr. Sajjad Ahmad has informed that the Ministry of Climate Change expressed their willingness to host the 7th SA-SRC meeting in Islamabad, Pakistan. Official announcement will be made after receiving official approval from the Ministry of Climate Change.
- If Pakistan is unable to host the meeting, Bangladesh will explore the possibility of hosting the meeting.
- If Pakistan hosts the meeting, the focus area will be climate vulnerability and adaptation.

Discussion:

- Confirm the 7th SA-SRC meeting host country
- Discuss the tentative date for the meeting
- Suggested agenda item or discussion session for 7th SA-SRC meeting

D. Any Other Business(AOB)

- SA committee report to the SRC chairs meeting and 20th IGM

APN Southeast Asia Sub-Regional Committee Meeting**25 March 2015, Kathmandu, Nepal***(Marva Meeting Room: 14:30-17:00)*

Draft Agenda

A rapporteur for the meeting & presenter of the outcomes to the IGM are to be assigned by the SRC Members

(APN Secretariat is not available to take minutes or make a report for the IGM)

14:30-14:35 (5 min)	Welcome Remarks and Brief Introduction Mr. Muhammad Helmi Abdullah, nFP alternate of Malaysia and Chair of the 7 th Southeast Asia Sub-Regional Cooperation Meeting will provide remarks and give a short introduction to the meeting.
14:35-14:40 (5 min)	Self-Introduction and Election of Officers Mr. Muhammad Helmi Abdullah will facilitate the election of a Chair and Vice Chair of the SEA-SRCom for 2015/2016. The elected Chair and Vice Chair will preside over the Sub-Regional committee Meeting.
14:40-14:45 (5 min)	Item 1. Adoption of the Draft Agenda The elected Chair of the Meeting will seek adoption of the agenda. Items of Any Other Business (AOB) may be raised.
14:45-15:00 (15 min)	Item 2. Review of the action points of 7th SEA-SRC Meeting Refer to action points document <u>IGM-SPG-20-05(b)-App1 Action Points</u> .
15:00-15:15 (15 min)	Item 3. Update of Myanmar Engagement Item paper provides an update on Myanmar membership development. The Chair will facilitate discussion and request each member to share their opinion.
15:15-15:30 (15 min)	Item 4. Updates on initiating ASEAN Collaboration Item paper provides progress of ASEAN collaboration. The Chair will facilitate discussion and request each member to share their opinion.
15:30-15:50	Coffee break
15:50-16:55 (65 min)	Item 5. Future Plans/Activities Tentative plans will be made for future events. The discussion should be guided by the following: <ul style="list-style-type: none"> – Update of Seed Grant proposal – Identify SEA-SRC regional priorities for the 2015-2016 – 8th SEA-SRC meeting – Any Other Business(AOB)
16:55-17:00 (5 min)	Closing and Final Remarks The Chair will deliver the concluding remarks and all participants will have a group photograph taken.

After the SEA-SRCom Meeting, the new SEA-SRC Chair, Vice-Chair and rapporteur will attend the SRC Chairs' meeting, which will be held in the main meeting room (Malhar) from 17:00 to 17:30.

**7th APN Southeast Asia Sub-Regional Cooperation Meeting (7th SEA-SRC)
8 July 2014, Vientiane, Lao People's Democratic Republic (Lao PDR)**

1. Status update of Seed Grant Proposal on Scoping Workshop on Climate Change Adaptation in Urban Planning in SEA

Dr. Erna Sri Adiningsih, SPG member for Indonesia, provided updated information on the full proposal for submission under CAPaBLE programme. Members agreed to modify the proposal including following:

1. Budget plan according to APN 2014 regulation
2. Include additional (in-kind or monetary) funding support from participated country and institutions
3. Integrate solid waste management to summer school curriculum
4. Identify participant selection criteria
5. Include a collaborator from Lao PDR

Action:

Dr. Kim Chi Ngo will be involved in the Proposal Preparation Committee.

Mr. Virasack Chundara will nominate a collaborator from Lao PDR.

Revised proposal is to be submitted to the 2014 APN Call for Proposal. **Completed**

2. Open discussion on how Myanmar can be engaged in APN and SEA-SRC activities

Ms. Khin Cho Cho Shein, presented an overview of current activities related to global change research undertaken by Myanmar. Members recognised the importance of Myanmar's engagement in APN activities and they expressed their strong support for Myanmar to become an APN member country.

Action:

APN Secretariat will send the official letter to DMH, Myanmar.

Ms. Shein will inform DMH regarding APN membership.

Secretariat update:

- Official letter to the director of metrological Myanmar sent on 22 July 2014.
- Follow up communication was held between Ms Shein and APN.
- At the 28th SC meeting, SC noted that APN should consider scientific level engagement with Myanmar.

3. APN 20th Anniversary Celebration Activities

Members welcomed the idea of celebrating APN's 20th anniversary at national and regional levels.

Action:

SEA members are to provide information on future activities where APN can showcase its activities – **incomplete**

How to enhance Southeast Asia countries participation in APN activities

a) Enhancing collaborative activities with other Southeast Asia regional networks

To expand APN activities in Southeast Asia, members suggested engaging with ASEAN.

Actions:

Mr. Sundara will share contact information of Dr. Raman Letchumanan, ASEAN. **Mr. Sundara shared the contact details of Dr. Larry Maramis and Ms. Natalia Derodofa.**

APN Secretariat to contact ASEAN and initiate collaborative engagement.

Secretariat update-

- APN send the official invitation to ASEAN on 14th Oct 2014
- Follow up communication was continued, but did not receive any feedback from ASEAN

b) Self-sustainable mechanisms for sub-regional committees and cooperation

Action:

SEA-SRC members are asked to consider cost effective way to hold sub regional meetings.

Continuing

c) Sub-regional committee and cooperation activities in fourth strategic plan

Actions:

SEA-SRC evaluation report is to be revised by adding recommendation session. **SEA-SRC evaluation report integrated to APN 3SP report**

4. Proposal Development Training Workshop (PDTW)

Secretariat update:

- Three proposals were received from PDTW trainees for 2014 annual call.
- All three proposals passed stage one review step and step two review process is ongoing
- Post workshop questionnaires analysis discovered that workshop was successful and further modification is needed to training curriculum. Training curriculum will be update based on the participants' comments.

5. The 8th APN SEA-SRC Meeting

Mr. Ginting noted that Indonesia is willing to host the 8th SEA-SRC meeting in Jakarta in early August 2015. Dr. Boonjawat suggested identifying an appropriate ASEAN working group before the SRC meeting and inviting a representative to attend.

Action:

Mr. Ginting and APN Secretariat will make preparations for the 8th SEA-SRC- **Ministry of Environment requested additional information on meeting arrangement and APN shared information accordingly.**

Secretariat is to consider increasing time allocation for sub-regional parallel session. – **Completed**

Invite a representative from ASEAN to attend the next SEA-SRC meeting.-**Continuing**

Updates on Myanmar Engagement

Background

- APN invited Dr. Tun Lwin to 7th SEA-SRC meeting based on the recommendation of SEA sub-regional committee.
- On behalf of Dr. Lwin, Ms. Khin Cho Cho Shein, Director, Department of Meteorology and Hydrology has represented Myanmar at the 7th SEA-SRC meeting.
- During the 7th SEA-SRC, members recognised the importance of Myanmar’s engagement in APN activities and they expressed their strong support for Myanmar to become an APN member country.
- Official letter with explanation on APN membership was sent to the director general of the Department of Meteorology and Hydrology (DMH) Myanmar on 22 July 2014.
- Follow-up communication was made by Ms. Shein. She informed that attorney general of DMH has raised issues on financial and annual contribution that may arise after becoming an APN member county and requested more information. APN Secretariat provided further information; however, APN has not received a feedback from Myanmar.
- At the 28th SC meeting, SC noted that APN should consider scientific level engagement with Myanmar.
- APN is presently funding four ongoing projects under ARCP and Climate Adaptation Framework (CAF) that involved Myanmar scientists.

Discussion points

- Effective way to approach to a scientific representative from Myanmar and establish communication
- Myanmar representation at the 8th SEA-SRC meeting (whether SRC committee is continuing to invite Department of Meteorology and Hydrology for the next SEA meeting or approach another institution relevant to the committee’s interest)
- Dr. Tun Lwin, former Director General of Department of Meteorology and Hydrology, shows interest to work with SEA-SRC. He is presently acting as a collaborator in an APN-funded project activity.

Updates on Initiating ASEAN Collaboration

Background

- APN invited Dr. Raman Letchumanan, Head of the Environment Division, ASEAN Secretariat, to the 6th SEA-SRC. Due to a conflict in schedule, he was unable to participate in the meeting.
- During the 7th SEA-SRC, members stressed the importance of establishing collaboration with ASEAN in SEA-SRC activities.
- Members requested to identify relevant working group in ASEAN and contact ASEAN to initiate collaborative engagement.
- APN has identified two working groups – the ASEAN Cooperation on Global Environmental Issues and the ASEAN Cooperation on Climate Change, both of which shared same interests with APN.
- APN sent the official invitation on collaboration to ASEAN on 14 October 2014 and follow-up communication was continued. However, APN did not receive any reply from ASEAN.
- During the 7th SEA-SRC, members decided to invite an ASEAN representative to 8th SEA-SRC meeting

Discussion points

- Identify effective approach to initiate contact with ASEAN;
- Identify a representative from ASEAN to attend the 8th SEA-SRC meeting; and
- Explore within the current membership and identify scientists involved in either of these two ASEAN Working Groups: ASEAN Cooperation on Global Environmental Issues and ASEAN Cooperation on Climate Change.

	APN goals				SEA goals		Remarks
	Supporting regional cooperation in global change research	Strengthening appropriate interactions among scientists and policy makers	Improving the scientific and technical capabilities, including the transfer of know-how and technology	Cooperating with other global change networks and organisations	Identifying and discussing scientific research, capacity development and other related needs that are common to the sub-region	Strengthening interactions among scientists and policy makers in the sub-region	
ASEAN Working groups or Environmental cooperation group							
ASEAN Cooperation on Global Environmental Issues	1	0	1	0	1	0	Led by Thailand
ASEAN Cooperation on Transboundary Haze Pollution	0	0	0	0	0	0	Related to 3R
ASEAN Cooperation on Environmental Education	0	0	1	0	0	0	
ASEAN Cooperation on Environmentally Sound Technologies (EST)	0	0	1	0	0	0	LCI/3R related
ASEAN Cooperation on Environmentally Sustainable City	1	0	1	0	0	1	-Cities related studies and activities are closely related to SEA-Seed grant proposal -LCI related/IGES involved
ASEAN Working Group on Coastal and Marine Environment (AWGCME)	1	0	1	0	1	0	ARCP research related to coastal and mangrove
ASEAN Cooperation on Nature Conservation and Biodiversity	1		1				BES framework
ASEAN Cooperation on Water Resources Management	1	1	0	1	0	0	
ASEAN Cooperation on Climate Change	1	1	1	1	1	1	Led by Vietnam

Future Plans/Activities

A. Update of Seed Grant proposal

- Based on the recommendation of SPG-Pre meeting, members may discuss related activities and future plan for the summer school.
- Identify possible time frame for the Kick-off Meeting
- Explore possibilities of holding project Kick-off Meeting and 8th SEA-SRC meeting as back to back events

B. Identify SEA-SRC regional priorities for 2015-2016

Discussion session aims to identify new and emerging issues/priorities/hot topics in the Southeast Asia region to be the focus of APN in 2015-2016.

C. 8th SEA-SRC Meeting

Background:

- Indonesia will host the 8th SEA-SRC meeting and members agreed to hold meeting in early August 2015.
- Members identified renewable energy, energy security and food and water, waste management and climate adaptation and mitigation as topics that will be discussed during the 8th SEA-SRC meeting.

Discussion points:

- Discuss the tentative date for the meeting
- Suggest agenda item or discussion session for 8th SEA-SRC meeting

D. Any Other Business (AOB)

- SEA committee report to the SRC chairs meeting and 20th IGM
- 20th APN anniversary celebration activities in the SEA region

APN Temperate East Asia Sub-Regional Committee Meeting**25 March 2015, Kathmandu, Nepal**

(Boardroom Two: 14:30-17:00)

Draft Agenda

A rapporteur for the meeting and presenter of the outcomes to the IGM are to be assigned by the SRC Members

(APN Secretariat is not available to take minutes or make a report for the IGM)

14:30-14:35 (5 min)	Welcome Remarks and Brief Introduction Prof. Kensuke Fukushi, Co-Chair of the Temperate East Asia Sub-Regional Committee will provide remarks and give a short introduction.
14:35-14:40 (5 min)	Self-Introduction and Election of Officers Prof. Kensuke Fukushi will facilitate the election of a Chair and Vice Chair of the TEA-SRCom for 2015/2016. The elected Chair and Vice Chair will preside over the Sub-Regional Committee Meeting.
14:40-14:45 (5 min)	Item 1. Adoption of the Draft Agenda The elected Chair of the Meeting will seek adoption of the agenda. Items of Any Other Business (AOB) may be raised.
14:45-15:00 (15 min)	Item 2. Review of the action points of TEA-SRC Meeting Please refer to document number <u><i>IGM-SPG/20/05/-TEA-SRCom 02 –Action points</i></u>
15:00-15:40 (40 min)	Item 3. Future TEA activities Chair will lead the discussion and discussion should be guided by the following: <ul style="list-style-type: none"> – TEA Science-Policy Dialogue – Annual PDTW (based on the regional rotation, the 2015 annual PDTW to be held in TEA) – Strategies to enhance TEA committee activities
15:40-16:00	Coffee break
16:00-16:30 (30 min)	Item 4. Future Plans/Activities Tentative plans will be made for future events. The discussion should be guided by the following: <ul style="list-style-type: none"> – Outcomes and decisions on Item 3 concerning SPD and PDTW – Plans for 20th anniversary of APN (regional and national activity) – Next TEA Sub-Regional cooperation meeting: Identify host, venue, focus areas and date – Any Other Business(AOB)
16:30-16:35 (5 min)	Closing and Final Remarks The Chair will deliver concluding remarks and all participants will have a group photograph taken.

After the TEA-SRCom Meeting, the new TEA-SRC Chair, Vice-Chair and rapporteur will attend the SRC Chairs' meeting, which will be held in the main meeting room (Malhar) from 17:00 to 17:30.

APN Temperate East Asia Sub-Regional Committee Action Points

1. Temperate East Asia members agreed to form a Sub-Regional Cooperation Committee

Updates

- APN Temperate East Asia Sub-Regional Cooperation Scoping Meeting was held in Vladivostok, Russia on 25-26 February 2013.
- At the 18th IGM, the TEA-SRCom was established and held a parallel session on TEA activities.
- The SRC groups were institutionalised at the 19th IGM/SPG.
- Due to the absence of some TEA committee members at the 19th IGM, the parallel session of TEA committee was not held. Members agreed to communicate through emails.

2. General Themes for discussing in future meetings:

Updates

During the Scoping Meeting, members suggested the following themes:

- Impacts of changing climates on biodiversity ecosystems in marine protected areas (MPAs)
- Indirect and direct health impacts of climate change
- Responding to slow onset events (such as impacts on Human-Biodiversity coupled systems)
- Regional climate and extremes

At the 18th IGM, the following areas were identified:

- “Marine and/or terrestrial biodiversity and ecosystem changes under stress of climate change and human activities” was identified as the theme of common interest in the TEA committee.
- Members identified that regional collaboration is needed to enhance the capacity of young scientists in the TEA region.

3. National Focal Points, members and participants are to **provide contacts of experts in taxonomy in biodiversity and marine protected areas**. This is needed as a first step to realising a proposal in MPAs.

Updates

- Japan SPG member introduced Dr. Kozo Watanabe from Ehime University as a representative from Japan for the proposal development training workshop.
- Korean SPG member introduced Dr. Kang Kangwon as the representative from Korea.
- Proposed to hold a back-to-back meeting with AOF biodiversity meeting to develop a proposal.
- As the ARCP programme will not continue in fiscal year 2014, members agreed not to hold any proposal development training workshop.

4. The AOF activity led by Japan and ROK on Ecosystem Services & Biodiversity for IPBES will be up to the entire TEA members. Some of TEA member participated to the workshop.

5. Future Temperate East Asia meetings

- 2013/2014 —TEA committee meeting was not held. The budget was reallocated to 2014/2015 year.
- 2014/2015—Japan expressed the willingness to hold the TEA committee meeting, but due to unavoidable circumstances, the meeting was cancelled.

Future TEA Activities

This item paper provides background information and discussion points on future TEA activity. The background information is gathered based on first Temperate East Asia (TEA) Scoping Workshop and electronic communication between TEA members.

A. TEA Science-Policy Dialogue

Background

- During the 16th IGM, START introduced sub-regional dialogues as a partnership activity and IGM approved to hold sub-regional level policy dialogues.
- The Southeast Asia Science-Policy Dialogue was held from 19 to 21 July 2012 in Bangkok, Thailand in partnership with START.
- The 18th IGM approved to hold Science-Policy Dialogues in South Asia and Temperate East Asia regions involving SRC committees and to synthesise the findings of 3 sub-regional dialogues.
- South Asia Science-Policy Dialogue was held from 19 to 21 January 2015 in Thimphu, Bhutan. CDKN and LoCARNet were partnered.
- Based on discussion at the 19th IGM Sub-regional chairs meeting, the Chairs suggested holding a TEA-SPD in 2015/2016 in order to synthesise findings and publish the findings before end of 20th Anniversary of the APN.

Discussion session may focus on the following:

- Whether TEA committee is interested in holding a science-policy dialogue in the TEA region.
- If yes, identify host and tentative dates of the dialogue.
- Requested budget allocation for sub-regional dialogue is 40,000 USD (*Note: final allocation may change based on IGM decision*).
- Identify cost-effective possibilities to reduce meeting costs. This may include organising the dialogue as a back-to-back event with other international events where more policy makers are involved.

B. Annual Sub-Regional PDTW

Background

- SEA and SA sub-regions agreed to give the opportunity to the Temperate East Asia group to hold the 2015 annual proposal development training workshop.
- The South Asia region expressed their willingness to hold 2015 PDTW if the TEA group is not ready to organise a training workshop.

Discussion session may focus on the following points:

- Requested budget allocation for the 2015 annual PDTW is 22,000 USD (*Note: final allocation may change based on IGM decision*).
- If TEA committee decides to take the opportunity, members need to identify host and tentative dates to hold the meeting
 - Note: In 2014, APN selected the participants through an open call process which took two months from announcement, application period and up to selection of participants.

C. Strategies to enhance TEA committee activities

Considering two years of inoperativeness of TEA committee, members are encouraged to discuss and identify effective ways to enhance the communication and activeness among TEA members.

D. Plans for 20th anniversary of APN (regional and national activity)

This discussion session aims to identify events (national or regional level) that APN can be involved with to be able to showcase its activities. The identified events or activities must be a cost-effective way to celebrate the 20th anniversary. Also, it should provide a way to interact with new partners or donor community and enhance awareness on APN activities.

E. Next TEA Sub-Regional cooperation meeting

Background

- 2013/2014 —TEA committee meeting was not held; budget was reallocated to 2014/2015 year.
- 2014/2015—Japan expressed its willingness to hold the TEA committee meeting, but due to unavoidable circumstances, the meeting was cancelled.

Discussion session may focus on the followings:

- Identify host, venue, focused areas and dates to hold the meeting.
- The budget allocation for the next TEA Meeting is 15,000 USD.
- Identify cost-effective possibilities for reducing meeting costs.

F. Any Other Business(AOB)

TEA committee report to the SRC chairs' meeting and 20th IGM.

Item 6: Sub-Regional Chairs' Meeting

Under this item, Chairs, Vice-Chair and rapporteurs of each sub-regional group will gather and discuss the following points:

1. The Chair of each sub-regional group will have three minutes to provide brief updates on their sub-regional activities in 2014/2015.
2. Based on the brief updates, the Chairs will continue the discussion and identify common issues among the sub-regions.
3. Suggestions and comments for IGM on SRC activities.
4. APN sub-regional science-policy dialogues (SPD) and synthesis — the Chairs need to identify future activities related to SPD;

Background

- *SEA-SPD was held in July 2012.*
- *SA-SPD was held in January 2015.*
- *TEA-SPD*

Based on the last sub-regional chairs meeting suggestion, TEA-SPD is proposed to be held in 2015/2016 in order to synthesise findings and publish them before end of 20th Anniversary of the APN.

Discussion points:

- *Is the TEA group ready to host a TEA SPD?*
- *Suggestions for SPD synthesis activity.*

5. Annual Proposal Development Training Workshop (PDTW) – Chairs need to identify the sub-region that will host the 2015 and 2016 annual PDTWs

Present status:

- *SEA has held five PDTWs*
- *SA has held four PDTWs*
- *TEA has held one PDTW*

At the last SRC Chairs meeting at the 19th IGM, SEA and SA sub-regions agreed to provide opportunity to Temperate East Asia group to hold the 2015 annual proposal development training workshop. However, if TEA group is not willing to organise a training workshop, the South Asia group will hold the 2015 annual proposal development workshop.

6. Future of SRC activities and AOB

Note from the Secretariat: A summary of the SRC Chairs Meeting is attached as Appendix 1 below.

Item 6 Appendix 1. Summary of SRC Chairs Meeting

The Meeting was attended by Mr. Sabar Ginting (Indonesia), Dr. Kensuke Fukushi (Japan), Dr. Tsogtbaatar Jamsran (Mongolia), Mr. Sajjad Haider Yaldram (Pakistan), Dr. Henry Adornado (Philippines), Mr. Ajith Silva (Sri Lanka), Dr. Jariya Boonjawat (Thailand) and Ms. Taniya Koswatta (Secretariat).

The Chairpersons of the three regional groups provided updates on sub-regional activities that have been conducted by the sub-regional committee members during fiscal year 2014/2015. Members discussed regional priorities and identified priority themes for each group as follows:

- » **South Asia:** sustainable consumption and production, energy security, and extreme events.
- » **Southeast Asia:** renewable energy, and water security.
- » **Temperate East Asia:** land use and climate change.

Regarding sub-regional science policy dialogues, members identified the importance of science and policy interaction and agreed to continue the dialogue to strengthen collaboration between scientists and policy makers. The Chair of the TEA committee expressed his committee's willingness to hold the Temperate East Asia Science Policy Dialogue (TEA-SPD) in Mongolia in autumn 2015. Further, to effectively use financial resources, TEA committee members agreed to hold the Sub-Regional Committee Meeting and annual Proposal Development Training Workshop (PDTW) as back-to-back events with the TEA-SPD. The South Asia group expressed their willingness to hold the PDTW if the TEA members are unable to hold the annual PDTW.

Sub-regional chairs agreed to discuss about synthesising science policy dialogues in the next IGM after completing the TEA-SPD. South Asia chair commented that for future dialogues, APN may consider solution-based approaches rather than research-based approaches. The SEA chair requested other sub-regional groups to promote the APN 20th anniversary through regional and national activities. Finally, the chairs appreciated the extended time allocation for the sub-regional parallel meetings at the IGM.

**APN South Asia (SA) Sub-Regional Committee Meeting
Chair's Report to the IGM
25 March 2015**

1. 2014/15 SA-SRC Chair, Ms. Peldon Tshering (nFP-Bhutan) welcomed the participants of the 6th SA-SRC participants meeting and provided remarks and gave a short introduction of the meeting including the objectives of the meeting.
2. Ms. Peldon Tshering (nFP Bhutan), the 2014/15 SA-SRC Chair, facilitated the election of new Chair and Vice-Chair of the SA-SRC for 2015/16.
 - **Chair elected for the SA-SRC (2015/16): Mr. Sajjad Haider Yaldran of Pakistan**
 - **Vice-Chair elected SA-SRC (2015/16): Mr. Ajith Silva of Sri Lanka**
3. The newly appointed Chair presided over the SA-SRC Meeting and Vice-Chair acted as the rapporteur of the meeting.
4. **AGENDA ITEM 1.**
Participants adopted the Draft Agenda provided by the Secretariat.
5. **AGENDA ITEM 2.**
The Chair invited the participants to review and discuss the action points of the 6th SA-SRC Meeting.
 - Action Point 1. Participants noted that only Nepal, Sri Lanka and Bangladesh have given the lists of their national level Research Institutions and Pakistan tabled a tentative list of them. Pakistan, Bhutan and India were requested to submit their respective lists according to the format given by the Secretariat by 30th April, 2015. It was noted that, if need arises, the SPG member of the respective country will be first contacted for contact details of the relevant research agencies.
 - Action Point 2. SPG members informed the committee that a very successful Science-Policy Dialogue has been conducted in Bhutan in January 2015.
 - Press releases and a good media coverage have been given for this programme;
 - Bhutan will prepare a presentation and share with others in due course;
 - Dr. Stevenson has made a presentation of this at the 3rd World Conference on Disaster Management.
 - Action Point 3. The Committee noted that SAARC has not responded to the email sent by the Secretariat seeking possible partnerships and collaborations although the nFP for Nepal had conveyed necessary contacts to the SAARC Secretariat.
 - The Committee recommended the Secretariat to write a letter to SAARC Secretariat with all details of the APN and what APN is looking forward from SAARC Secretariat.
 - Action Point 4. The Committee considered the SRC and cooperative activities in the 4th Strategic Phase. There were three factors to be considered under this action point.
 - a. *Focus Areas*
The Committee decided it is best to focus activities towards Sustainable Development Goals (SDGs)
 - b. *Membership*
 - The Committee felt that it is very important to get the presence of India in the APN.
 - The Committee recommended the Secretariat to communicate with Indian authorities for the appointment of nFP and SPG member as soon as possible.

- The Committee agreed with the Secretariat's decision to notify the respective Ministry if a relevant nFP is absent for more than two meetings.
 - c. *Financial Development*
 - The committee decided to request the Secretariat to communicate with other countries about co-financing arrangements like what it has been doing with Cambodia and Sri Lanka.
- Action Point 5. The Committee noted that the Secretariat has not send the brief 5-slide presentation including the 3rd Strategic Phase outcomes to the members and decided to remind the Secretariat to send it as soon as possible.
- Action Point 6. The Chair of the Committee informed the committee that the Government of Pakistan has agreed and approved to host the 7th SA-SRC Meeting and the possible time will be in between 25th of September, 2015 to 10th October, 2015 (the exact days have to be decided)

6. AGENDA ITEM 4.

The Committee considered the proposed partnership with other regional networks and noted that this was discussed under the Agenda Item 3 as well. Ms. Christmas de Guzman of the Secretariat informed the committee that a list of regional networks is available for discussion by the committee.

7. AGENDA ITEM 5.

Mr. Chencho Tshering, SPG Member Alternate for Bhutan presented the outcomes of the Science Policy Dialogue which was held in Bhutan in early this year.

8. AGENDA ITEM 6.

The Committee considered Any Other Business under following topics.

- a. Updated Proposals.
 - Dr. Giashuddin Miah, SPG Member for Bangladesh informed the Committee that two proposals have been considered and one was recommended by the SPG-SC to the IGM as a regional project (Project Name : Building Climate Resilience in Farming Systems in Sloping Lands of South Asia).
- b. Identification of SA-SRC regional priorities for 2015/2016 – The Committee decided to align all research priorities with SDGs. Three priority areas were also selected:
 - Sustainable Consumption and Production (Bhutan will develop a concept note on “paperless office or government”;
 - Energy security;
 - Extreme events (cyclones, floods etc.).
- c. Host of the 7th SA-SRC Meeting
 - Pakistan has agreed to host the meeting
- d. Any Other Business
 - The Committee felt that Afghanistan could be invited to APN as a member and decided to recommend it to the IGM.

**APN Southeast Asia (SEA) Sub-Regional Committee Meeting
Chair's Report to the IGM
25 March 2015**

Participants:

Cambodia:	Sundara SEM (nFP), Veasna KUM (SPG)
Indonesia:	Sabar GINTING (nFP), Erna Sri Adiningsih (SPG)
Malaysia:	Muhammad Helmi ABDULLAH (nFP Alternate), Fariza YUNUS (SPG)
Philippines:	Henry ADORNADO (SPG)
Thailand:	Sureeporn KERDKANKAEW (nFP Alternate), Jariya BOONJAWAT (SPG)
Viet Nam:	Phan Dinh TUAN (nFP Alternate), Kim Chi NGO (SPG)
Observes:	Subramaniam MOTEN (SPG invited expert), Tomoko ISHIKAWA (LCS-Rnet/LoCARNet)

SEA-SRCom Meeting

- Muhammad Helmi ABDULLAH, nFP Alternate for Malaysia facilitated welcome remarks, self-introduction and election of Chair and Vice Chair for 2015/2016.
- Sabar GINTING was elected Chair for 2015/2016.
- Henry ADORNADO was elected Vice chair for 2015/2016.
- Jariya BOONJAWAT was elected rapporteur for the meeting.

1. Review of the Action Points of 7th SEA-SRC Meeting

(a) Status of "Climate Change Adaptation (CCA) in Urban Planning in SEA" by Erna Sri ADININGSIH

- The proposal was submitted to APN, and if approved by the IGM, next steps will be:
 - o Defining the roles of participating countries;
 - o The SPG Members for Indonesia, Thailand and Viet Nam will work out more details on project management.
 - o Draft timeline:
 - Management plan developed by SPG Members for Indonesia, Thailand and Viet Nam (end of April 2015)
 - Selection of participants by nFP and SPG (Final Draft in May)
 - Call for application (June)
 - Announcement (August)

(b) Status of "Climate Change Adaptation in Urban Planning in Southeast Asia" (Cont'd)

- Timeline:
 - o Kick-off meeting back to back with SEA-SRC in August 2015 in Jakarta, Indonesia.
 - o 3 TOT Workshops:
 - Workshop 1 (2015, Indonesia) Indonesia and Malaysia
 - Workshop 2 (2016, Thailand) Thailand, Cambodia, Lao PDR and Myanmar
 - Workshop 3 (2016, Viet Nam) Viet Nam and Philippines

2. Update of Myanmar Engagement

- The SEA-SRC recognised Myanmar as IGM approved country and has invited Dr. Tun Lwin to join the 7th SEA-SRC Meeting in Lao PDR based on the recommendation of Dr. Subramaniam MOTEN.
- On behalf of Dr. Lwin, Ms. Khin Cho Cho Shein has represented Myanmar in the meeting.

- An official letter with explanation from APN Secretariat to Ms. Shein, Director of DMH was sent on July 2014. However, APN did not receive a positive response from Myanmar regarding engagement as a member country.
- At the 28th SC meeting, the SC suggested that scientific engagement of Myanmar with APN should be first sought.

3. Updates on Initiating ASEAN Collaboration

- Sundara SEM approached Dr. Raman LETCHUMANAN, Head of Environment, ASEAN Secretariat in October 2014 but he was retired at the time. Later, Mr. SEM contacted Dr. Larry MARAMIS and Ms. Natalia DERODOFA.
- APN sent an official invitation to ASEAN in October 2014 but didn't receive any feedback.
- Sabar GINTING as Chair of SEA-SRC will contact ASEAN Secretariat in Jakarta, Indonesia directly.

4. Future Plan/Activities

- APN 20th Anniversary Celebration:
 - o June/July Climate Expo Bangkok
 - o August PDTW, Cambodia*
 - SEA-SRC meeting/Kick-off meeting of Climate Change Adaptation in Urban Planning, Indonesia
 - o October LoCARNet, Malaysia
 - o October and November Viet Nam
- *APN 20th Anniversary Logo will be promoted where possible
- Future Activities according to 4SP:
 - o Renewable energy and water security
- Next IGM/SPG Meeting:
 - o Thailand may propose to host the 21st IGM/SPG Meeting in 2016, with the 2nd TOT Workshop of Climate Change Adaptation in Urban Planning as a back-to-back event.

**APN Temperate East Asia (TEA) Sub-Regional Committee Meeting
Chair's Report to the IGM
25 March 2015**

Participants

China: Jiutian ZHANG (nFP Alternate)
Japan: Yuko HOSHINO (nFP Alternate), Kensuke FUKUSHI (SPG)
Republic of Korea: Soojeong MYEONG (SPG, via video call)
Mongolia: Tsogtbaatar JAMSRAN (SPG)
Russian Federation: Konstantin LUTAENKO (nFP Alternate), Alexander STERIN (SPG)
Observers: AILIKUN (SPG invited expert), Chuluun TOGTOKH (invited project leader)

Election of Chair and Vice-chair for 2015/2016

The following officers for the TEA-SRCom were elected for 2015/2016:

Chair: Dr. Tsogtbaatar Jamsran (SPG member, Mongolia)
Vice-Chair: Dr. Kensuke Fukushi (SPG member, Japan)

Activity 2015/2016

- The SPG Member for Mongolia expressed the willingness to hold in Mongolia the TEA Science-Policy Dialogue on climate change and land management.
- The agenda of the dialogue will be finalised in due course by the consensus of five countries.
- The annual Proposal Development Training Workshop (PDTW) will also be organised in Mongolia.

Item 8-1: Core Programmes and Science Frameworks

The IGM is asked to consider and discuss the Core Programmes and Science Frameworks of the APN. Note that recommendations for funding new and continuing projects under the ARCP and CAPaBLE Programmes will be considered on Day 3 under Item 11.

CORE PROGRAMMES

Annual Regional Call for Research Proposals (ARCP) Programme

(a) 2014 Awards Process and Programme Management

At the 19th IGM in Siem Reap, Cambodia, the APN approved 24 projects under the ARCP programme; 13 of which are continuing multi-year projects and 11 of which are new projects. The status of these activities, and the awards allocated to them is attached as [IGM-SPG/20/08-01-App1](#).

Proposal for funding for the 2014 ARCP Projects were submitted to NSF/USGCRP, but until the time of writing of this paper, the status of the proposal is still pending. Therefore, there were no funds from USA/USGCRP allocated for the 2014 ARCP projects.

This year, despite of the late start (most ARCP projects just started their activities in October 2014), projects could make significant progress to be reported to the APN. There are 13 projects seeking approval for continuation for FY 2015/2016. The progress reports are being reviewed by the SPG Sub-Committee and the SPG, and recommendations for continued funding will be made on day 3 under Item 11 of the 20th IGM/SPG Meeting.

(b) Call for Proposals under ARCP Programme

It was agreed during the 19th IGM/SPG Meeting, the Call for Proposal for ARCP Programme will be deferred by one year to 2015, to ensure consistency and sustainability of the ARCP Programme in terms of supporting both new and ongoing activities. Following this decision, there was no Call for Proposals launched under ARCP Programme in 2014 and we are expecting to launch the call for proposals for regional research activities in FY 2015/2016.

CAPaBLE Programme

(a) CAPaBLE Programme Management

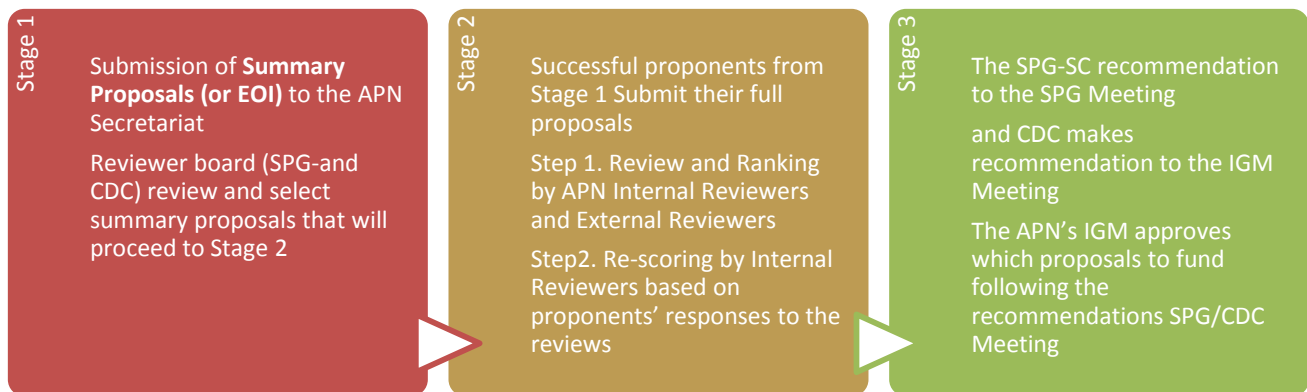
At the 20th IGM in Siem Reap, Cambodia, the APN approved 12 projects under the CAPaBLE programme; 1 of which are continuing multi-year projects and 11 of which are new projects. In addition, the APN approved PARR Fellowship Programme which since then is managed under CAPaBLE Programme. The status of these activities, and the awards allocated to them, including a status of where the funds were allocated from, is attached as [IGM-SPG/20/08-01-App2](#).

(b) 2014 Annual Call for Capacity Building Proposals under CAPaBLE Programme

The 2014 Call for CAPaBLE proposals was launched on the 20th June 2014, together with the Call for Focussed Activities under Climate Adaptation Framework. The Call for Proposals under Core Programmes and APN Science Frameworks were launched together taking into account the suggestions from 9th SPG Pre-Meeting to have a single stream of Call for Proposals for activities under APN's Science Agenda in order to have better efficiency in the review process. The proposals submission and review process is illustrated in the following diagram.

Advisory Service

VOLUNTARY component of the core programmes and focused activities Calls for Proposals to provide advice on the appropriateness of a proposal intended for submission for APN funding consideration.



This year, the advisory service was implemented as year-round service where proponents can submit queries through 'Online Advisory Service' section in APN website.

At stage 1, APN received **61 Summary Proposals under CAPaBLE Call for Proposals**. After review by the SPG and CDC, **21 proponents were asked to submit their full proposals, from which only 20 proponents submitted** and one additional proposal from a seed grant project was included. In total, 21 full proposals are considered for funding recommendation. SPG recommendations for funding will be discussed separately on Day 3 under Item 11 of the 20th IGM/SPG Meeting Agenda. Please also refer to [IGM-SPG/20/11-02 \(CAPaBLE\)](#) under Item 11 in your folders for a summary spreadsheet of the full proposals. Similar to the 2013 Call for Proposals, all full proposals was re-reviewed by the reviewers this year. All proposals also underwent reviews by the external reviewers.

APN SCIENCE FRAMEWORKS

Climate Adaptation Framework

(a) 2014 Call for Focussed Activities under Climate Adaptation Framework

The Call for Focussed Activities under Climate Adaptation Framework was launched on 20th June 2014 together with Call for Proposals under CAPaBLE Programme. The proposals submission and review process follows the same procedure as CAPaBLE Programme.

At stage 1, APN received **69 Expression of Interest (EOI) under Climate Adaptation Framework**. After review by the SPG and CDC, **24 proponents were asked to submit their full proposals**. All invited proponents submitted their Full Proposals, making a total of 24 proposals available for funding consideration.

SPG recommendations for funding will be discussed separately on Day 3 under Item 11 of the 20th IGM/SPG Meeting Agenda. Please also refer to [IGM-SPG/20/11-01\(CAF\)](#) under Item 11 in your folders for a summary spreadsheet of the full proposals.

Low Carbon Initiatives Framework

Continuation for LCI Synthesis activities

During the 19th IGM, LCI projects' synthesis activity under LCI framework was approved. During as APN side event, conducted at the 3rd LoCARNet meeting, LCI project leaders and collaborators participated and shared their opinion on synthesis activities. Results of discussion are as follow:

1. It was agreed to produce a booklet with policy recommendations from six projects—2 pages for each project.
2. The booklet will provide balanced information to policy makers and follow a mixed style with example from case studies.
3. Data collection is planned to be continued until end of May 2015, and it is tentatively planned to publish the brief at the end of the September 2015.
4. For synthesis report, it is suggested to involve content editor and publish the findings.

Project Status

Four multiyear projects are continuing their second year activities and one project LCI2012-03NMY(R)-Lopez has been terminated based on SPG-SC recommendation.

Proposed activities under 2015/2016 fiscal year

Due to discontinuation of LCI2012-03NMY-Lopez project, APN has a carry-over balance of 21,100 USD (deducting the deficit of 17,400 USD under LCI framework) for future LCI activities. APN is planning to hold collaborative activity with LoCARNet, with specific objective of delivering APN's research outcomes to wider audience.

Expected Meeting or events under LCI

1. LoCARNet will hold its fourth annual meeting in Malaysia in 2015.
2. "Regional Forum on Climate Change (RFCC) - Low Carbon and Climate Resilient Societies: Bridging Science, Practice, and Policy", will be held from 1st – 3rd July, 2015 at Asian Institute of Technology, Thailand.

As partner organisation, the APN has organised side event during the 2nd and 3rd LoCARNet annual meeting, and plan to continue to organise side event at the 4th annual meeting or Regional Forum on Climate Change based on the relevancy of the meeting topic. These side events may be held to promote APN/LCI activities.

Project Reference Number	Title	Project summary	Project Leader	Email	Project Duration	Award Announced	2014 Awarded (based on 19th IGM Recommendation)	2015 Committed	2015 Mortgage	2016 Mortgage	Remarks
ARCP2014-01CMY-Meinke	Improving the robustness, sustainability, productivity and eco-efficiencies of rice systems throughout Asia	The demand for rice is expected to double, a challenging target in the midst of competing demands for land and water, and a changing and variable climate. The project uses in-country RD&E combined with modelling to design more efficient rice systems. Collaboration and training meetings increase the capacity of scientists and organisations, and strengthen a network of researchers.	Professor Holger Meinke, University of Tasmania, AUSTRALIA	holger.meinke@utas.edu.au ; David.P.arsons@utas.edu.au	3 years	Apr-14	50,000 (Retained from 2012/2013 fund)	-	-	-	Project is still on its 2nd year.
ARCP2014-02CMY-Li	Development of an integrated climate change impact assessment tool for urban policy makers (UrbanCLIM)	This project proposes to develop a co-evolutionary urban climate change decision support tool (UrbanCLIM), to support climate change impact and risk assessment for the major sectors: health, transport, water. A participatory assessment approach will be applied through working with local urban policy makers and planners.	Dr. Yinpeng Li, International Global Change Institute, Waikato University, NEW ZEALAND	yinpengli@climsystems.com	3 years	Apr-14	40,000 (Retained from 2012/2013 fund)	-	-	-	Project is ongoing.
ARCP2014-03CMY-Quynh	Carbon fluxes and emission from the Red River (Viet Nam and China): human activities and climate change	This work aims to calculate the carbon fluxes and carbon emission from the Red River, which concern to the global warming. The SENEQUE/Riverstrahler model which allows to relate the water quality and carbon transfers in the drainage network to the constraints resulting from human activity and natural conditions in the watershed will be applied for different scenarios of the past, present situations and possible future changes in 2050s horizon for the whole Red River basin.	Dr LE Thi Phuong Quynh, Institute of Natural Product Chemistry (INPC), Vietnam Academy of Science and Technology (VAST), VIETNAM.	quynhlt@yahoo.com	3 years	Apr-14	36,000 (Retained from 2012/2013 fund)	-	-	-	Project is ongoing.
ARCP2014-04CMY-Miyata	Toward CarboAsia: integration and syntheses of terrestrial ecosystem flux data in tropics/subtropics and croplands in Asia by activating regional tower-based observation networks	Toward CarboAsia, the carbon budget assessment covering the whole Asian terrestrial ecosystems, it is required to fill data gaps in tropical/subtropical forest and croplands. By utilizing the framework of Asia Flux (http://www.asiaflux.net/), we will hold workshops and training courses to encourage and activate tower-based flux observation networks in south-eastern and southern Asia, thereby promoting data integration and syntheses of carbon and water cycles in tropical/subtropical forest and croplands in Asia.	Dr. Akira Miyata, National Institute for Agro-Environmental Sciences, JAPAN	amiyat@niaes.affrc.go.jp	3 years	Apr-14	40,000 (Retained from 2013/2014 fund)	-	40,000	-	Project is ongoing.
ARCP2014-05CMY-Ailikun (prev Manton)	Coordinated Regional Climate Downscaling Experiment (CORDEX) in Monsoon Asia	A series of three CORDEX workshops will be held in 2013, 2014 and 2015 in South Asia, East Asia and South East Asia. The workshops will foster synergies and coherence between the various climate downscaling and vulnerability, impact and adaptation (VIA) communities in the Asia Pacific region through direct engagement. The workshops will be scientific in nature and will cover state-of-the-art climate downscaling research, training and capacity building.	Professor Michael Manton, Chair Scientific Steering Committee for Monsoon Asia Integrated Regional Study (MAIRS), Monash University, AUSTRALIA	michael.manton@monash.edu	3 years	Apr-14	40,000 (Retained from 2013/2014 fund)	-	40,000	-	Project is ongoing.
ARCP2014-06CMY-Li	Assessing Spatiotemporal Variability of NPP, NEP and Carbon Sinks off Global Grassland Ecosystem in response of Climate Change in 1911-2011.	This project will be realized to provide an integrated technical method and report of the assessing variability of NPP, NEP and carbon sinks of global grassland ecosystem in response of climate change and human activity in the global scale and long-term under the different temporal and spatial from three developing countries to worldwide for farmers, policy makers and international community and disseminate the findings	Professor. Jianlong Li, Nanjing university, CHINA	jlli2008@nju.edu.cn ; njianlong@sinac.com	3 years	Apr-14	36,000 (Retained from 2013/2014 fund)	-	25,200	-	Project is ongoing.
ARCP2014-07CMY-Tangang	Southeast Asia Regional Climate Downscaling Project (SEACLID)	1. Carry out joint regional climate downscaling for a common SEA domain with RegCM4 using 5 CMIP5 GCMs and 3 RCPs under the SEARCI on the basis of shared workloads. 2. Collectively analyze model performances, create ensemble regional climate projection for the SEA region, and establish SEARCI web portal and data center for efficient data dissemination freely to users in the region	Prof. Fredolin Tangang, University Kabangsaan Malaysia, MALAYSIA	ftangang@gmail.com ; tangang@ukm.my	3 years	Apr-14	40,000 (Retained from 2013/2014 fund)	-	40,000	-	Project is ongoing.
ARCP2014-08CMY-Prabhakar	Assessing community risk insurance initiatives and identifying enabling policy and institutional factors for maximizing climate change adaptation and disaster risk reduction benefits from risk insurance	This project aims to assess the benefits accrued through community level risk insurance experiences in the region, evaluate barriers limiting its penetration, and identify interventions for greater risk insurance penetration leading to climate change adaptation and disaster risk reduction.	Dr. S.V.R.K. Prabhakar, Institute for Global Environmental Strategies, JAPAN	prabhakar@iges.or.jp	2 Years	Apr-14	36,000 (Retained from 2013/2014 fund)	-	-	-	Project is ongoing.

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ARCP2014-09CMY-Gomboev	"Boreal and tropical (monsoonal) forests and forest-steppes in Asian-Pacific region in territory of Russia, Mongolia and China: a comparative estimation of the contribution to softening of global climatic changes and working out of measures on adaptation to them"	Comparative evaluation of the contribution of different forest ecosystems (boreal, tropical, forest-steppe) in the Asia-Pacific region in Russia (Buryatia), Mongolia and China in climate change mitigation and development strategies to increase this contribution: a) assessment of forest condition; b) assessing the carbon budget; c) study of good practice in sustainable forest management aimed at reducing emissions from deforestation and forest degradation, conservation and development (storage) of carbon stocks; d) develop a mechanism for fair distribution of costs and benefits (including the sale of carbon, ecosystem services) on the mitigation of climate change among stakeholders in accordance with national institutional capabilities	Prof. Bair O. Gomboev, Baikal Institute of Nature Management of Russian Academy of Sciences, RUSSIAN FEDERATION	bgom@binm.bscn.et.ru	2 Years	Apr-14	40,000 (Retained from 2013/2014 fund)	-	-	-	Project is ongoing.
ARCP2014-10CMY-Shrestha	Discharge Scenario and Water Based Adaptation Strategies in South Asia	The project aims to understand the climate and changing climate of the region and its water resources consequences affecting people. Observed hydro-meteorological data and IPCC climate scenarios will be used for simulation of river flows using distributed/physical-based hydrological models for development of future water scenarios.	Dr. Madan Lal Shrestha, The small Earth Nepal, NEPAL	info@smallearth.org.np , madanls@hotmail.com	2 Years	Apr-14	36,000 (Retained from 2013/2014 fund)	-	-	-	Project is ongoing.
ARCP2014-11CMY-Yamada	"Adaptation of Solid Waste Management to Frequent Floods in Vulnerable Mid-Scale Asian Cities"	This study aims to propose a model of resilient and adaptable solid waste management (SWM) against flood in Asian tropical/pluvial countries, in order to adapt to frequent flood events that would be influenced by climate change. State of arts of urban SWM during and aftermath of flood will be evaluated, and resting and re-planning of SWM will be supported by novel tool to assess resiliency & vulnerability of SWM against flood. Cooperative assistance in emergency case between municipalities or between municipality, industries and NPOs will be promoted through strategic efficiency evaluation.	Dr.Masato Yamada, National Institute for Environmental Studies (NIES), JAPAN	myamada@nies.go.jp	2 Years	Apr-14	33,000 (Retained from 2013/2014 fund)	-	-	-	Project is ongoing.
ARCP2014-12CMY-Sellers	Mega-Regional Development and Environmental Change in China and India	This research applies remote sensing and GIS to compare urbanization patterns and their effects on land use and ecosystems in four matched cases of Chinese and Indian mega-regions. Models of alternative trajectories will be developed to assess alternative policies and institutions to address the regional dimensions of urbanization. Regional stakeholder workshops and participation in stakeholder and academic forums will further reinforce capacity building.	Assoc. Prof. Jeffery M. Sellers, University of Southern California, USA	sellers@usc.edu	2 Years	Apr-14	37,000 (Retained from 2013/2014 fund)	-	-	-	Project is ongoing.
ARCP2014-13CMY-Sthiannopkao	Developing Scientific and Management Tools to Address Impacts of Changing Climate and Land Use Patterns on Water Quality in East Asia's River Basins	The project aims to address, "what possible effects of climate and land use pattern changes have on water quality and ecology in East Asia's river basins?" A model showing interactions among climate, hydrology, land use, water quality, and ecosystems will be built for the temperate climate of Korea and tropical climate of Southeast Asia. Specifically, the expected impact of climate change related to extreme events on loading of nutrients and microorganisms under land use pattern changes will be determined. The project's outreach components will allow us to educate high school students and farmers with knowledge produced from this study.	Assistant Prof. Suthipong STHIANNOPKAO, Dong-A University, REPUBLIC OF KOREA	suthisuthi@gmail.com	2 Years	Apr-14	36,000 (Retained from 2013/2014 fund)	-	-	-	Project is ongoing.
ARCP2014-14NMY(B&ES)-Salmo	Influence of Mangrove Biodiversity on Accumulation of Carbon and Resilience to Sea Level Rise: A Comparative Assessment Among Disturbed, Restored and Intact Mangrove Systems	Mangroves provide vital ecological and socio-economic services such as supporting fisheries and forestry products, stabilizing shorelines, sequestering carbon and improving water quality. Mangrove sediments can also store massive amounts of carbon that may increase mangrove forest resilience to climate change by maintaining forest floor elevations relative to sea level rise. Mangrove deforestation threatens biodiversity and carbon pools in mangroves and ultimately their resilience to sea level rise. Using a standardized method, the project aims to create a regional research network to evaluate the role of mangrove biodiversity in carbon storage and resilience to sea-level rise among disturbed, restored and intact mangroves.	Dr. Severino G. Salmo III, Ateneo de Manila University, Quezon City, PHILIPPINES	ssalmo@ateneo.edu	3 Years	04-Apr-14	40,000 (Retained from 2014/2015 fund)	25,000 (Retained from 2014/2015 fund)	-	20,000	Project is ongoing.

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ARCP2014-15NMY-Wu	Comparative Analysis of Pollution Sources at the Hangzhou Bay & Mekong River Mouths	At the interface between land and ocean there exist continuous material exchanges where the terrestrial ecosystems discharge nutrients into oceans to provide food sources for oceanic organisms but also causes red tides that are detrimental to fisheries. As climate change continues and human alteration of terrestrial ecosystems intensifies, ecological impacts on river deltas and fisheries have become a major environmental concern. The proposed work is to deploy a process-based model to quantitatively examine how recent changes in land use, including rural restructuring of towns, villages, and farmlands, affect nutrient transport from terrestrial ecosystems to two very important deltas in Asia: Mekong River and Qiantang River watersheds	Professor Jiaping Wu, Institute of Islands and Coastal Ecosystems, Zhejiang, CHINA	jw67@zju.edu.cn	3 Years	04-Apr-14	45,000 (Retained from 2014/2015 fund)	20,000 (Retained from 2014/2015 fund)	-	45,000	Project is ongoing.
ARCP2014-16NMY-Babel	Developing an operational water security index, and its application in selected diverse regions of Asia	The project will: (a) establish a practical framework to develop a water security index (WSI), using appropriate dimensions, sub-indices and indicators at local and basin scales; (b) implement the index diverse study areas in Asia; and (c) assess the status of water security at different time scales: past, present, and future. Through interactions/feedback with/from relevant stakeholders throughout the duration of the project, policy guidelines for actual operationalization of the index will be developed	Professor Mukand S. Babel, Asian Institute of Technology (Water Engineering and Management), Pathumthani, THAILAND	msbabel@ait.asia	2 Years	04-Apr-14	40,000 (Retained from 2014/2015 fund)	40,000 (Retained from 2014/2015 fund)	-	-	Project is ongoing.
ARCP2014-17NMY-Dey	Impacts of Crop Residue Removal for Biomass Energy on Soil Function; Studies to recommend Climate Adaptive Agricultural Waste Management	The project aims to investigate the impacts of biomass burning to soil through a series of activities that includes: (i) site selection; (ii) data gathering on seasonal variations of soil characteristics; (iii) estimation of crop residue characteristics, analysis of residual ash and assessment of GHG & SPM release; (iv) impacts assessment of residue-burning and residue-keeping on biomass growth, yield & crop performance, disease occurrence, post-ante analysis on soil functions, soil carbon & soil bio-chemistry, etc; and (v) develop strategy and dissemination	Dr Dipayan Dey, South Asian Forum for Environment (SAFE), Kolkata, INDIA	safeinch@gmail.com	2 Years	04-Apr-14	40,000 (Retained from 2014/2015 fund)	30,000 (Retained from 2014/2015 fund)	-	-	Project is ongoing.
ARCP2014-18NMY-Heath	Development of an evidence-based climate change adaptation toolkit to help improve community resilience to climate change impacts in Uttarakhand, India	The state of Uttarakhand in India has recently experienced unprecedented flooding and loss of life on account of a serious climate-related extreme event. This activity will use Participatory Integrated Approaches (PIAs) to identify the risks, vulnerabilities and opportunities resulting from climate change impacts on communities in the Nainital region, Uttarakhand, India. The results will be used to develop a climate change adaptation toolkit, which is based on a set of scientific and evidence based methodologies or tools to guide policy makers during the adaptive response planning process and to help communities cope better with those risks and vulnerabilities identified	Dr Lance Heath, Australian National University Climate Change Institute, Canberra, AUSTRALIA	lance.heath@anu.edu.au	2 Years	04-Apr-14	40,000 (Retained from 2014/2015 fund)	45,000 (Retained from 2014/2015 fund)	-	-	Project is ongoing.
ARCP2014-19NMY(B&ES)-Liang	Coastal forest management in the face of global change based on case studies in Japan, Myanmar and the Philippines	The proposed research will examine community-based forest management, including local knowledge in vulnerable communities to identify best practices and their integration with planning of human settlement and facilities to strengthen community resilience to climate change impacts as well as evaluate effectiveness and needs of policy interventions through a bottom-up process. The project will assess potential benefits of coastal forests in adaptation to and mitigation of climate change. Three project sites, one each in the Philippines, Myanmar and Japan, suffer frequent typhoons or tropical cyclones. The comparative perspective will explore how different countries and local communities manage coastal forests to cope with coastal hazards under similar bio-physical conditions, but different socio-economic contexts and draw on their experiences for developing context-based solutions	Liang Luohui, United Nations University Institute for Sustainability and Peace (UNU-ISP), Tokyo, Japan	liang@unu.edu	2 Years	04-Apr-14	40,000 (Retained from 2014/2015 fund)	40,000 (Retained from 2014/2015 fund)	-	-	Project is ongoing.

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ARCP2014-20NMY-Mishra	Climate Change Adaptation through Optimal Stormwater Capture Measures: Towards a New Paradigm for Urban Water Security	Climate change is expected to deteriorate urban water security by altering rainfall pattern into more intense events with longer dry days. The resulting impact is more floods in rainy season and water scarcities in dry season due to increasing surface runoff and decreasing groundwater recharge respectively. Both of these manifestations are similar to that of urbanization, and therefore these impacts can be largely minimized by introducing modified on-site stormwater captures measures which have been successfully tested for the urbanization. This research aims to improve urban water security in the Asia-pacific region by optimization of on-site stormwater infiltration and storage measures.	Dr. Binaya Kumar Mishra, United Nations University - Institute for Sustainability and Peace (UNU-ISP), Tokyo, Japan	mishra@unu.edu	2 Years	04-Apr-14	35,000 (Retained from 2014/2015 fund)	30,000 (Retained from 2014/2015 fund)	-	-	Project is ongoing.
ARCP2014-21NMY-Sharp	Integrated solid waste management system leading to zero waste for sustainable resource utilization in rapid urbanized areas in developing countries	The project will contribute to preparation of guidelines for integrated solid waste management based on the nature of waste and learning from the showcase examples in Thailand. The project will analyse existing waste management system in partner countries, find the success and failures in the current waste management practices. Once the gaps are identified, the appropriate integrated waste management system can be identified. It will also build scientific capacity of local authorities in terms of integrated solid waste management via national workshops and develop collaborative network in solid waste management in the region	Dr. Alice Sharp, Srinthorn International Institute of Technology (SIIT), Thammasat University, Pathumthani, THAILAND	alice@siit.tu.ac.th	2 Years	04-Apr-14	45,000 (Retained from 2014/2015 fund)	30,000 (Retained from 2014/2015 fund)	-	-	Project is ongoing.
ARCP2014-22NMY-Zhou	Assessment of Climate-Induced Long-term Water Availability in Ganges Basin and Impacts on Energy Security in South Asia	Ganges river has important role for India, Bangladesh and Nepal *through its tributary. However, it is very vulnerable towards water availability in the long run especially under climate variability which requires regionally coordinated water and energy and policies for water and energy security and sustainable development. The research aims to: project the water supply condition under different climate change scenarios based on hydrological modelling using satellite as well as survey data at the river basin level; ii) estimate the water use intensity of available power generation technologies based on firm-level survey data in three countries; and iii) assess long-term energy supply scenarios under projected water supply constraints at river-basin level using bottom-up energy optimization modelling	Dr. Xin Zhou, Institute for Global Environmental Strategies (IGES), Hayama, Kanagawa, JAPAN	zhou@iges.or.jp	2 Years	04-Apr-14	40,000 (Retained from 2014/2015 fund)	35,000 (Retained from 2014/2015 fund)	-	-	Project is ongoing.
ARCP2014-23NSG-Huang	Assessing the health effects of extreme temperatures and the development of adaptation strategies to climate change in the Asia Pacific region	This project will: (1) examine temperature-health relationships for major cities in Bangladesh, China and Vietnam, then (2) project future temperature-related health effects under different climate change scenarios, and (3) formulate adaptation strategies to deal with temperature-related health risks and reduce vulnerability. The project has the potential to make a significant contribution to protecting the health of present and future generations in the Asia Pacific region	Dr. Cunrui Huang, Griffith University, Brisbane, AUSTRALIA	chuang@griffith.edu.au	2 Years	04-Apr-14	12,000 (Retained from 2014/2015 fund)	-	-	-	Project is ongoing.
ARCP2014-24NSG-Lokupitiya	Identification of the best agricultural management practices with better greenhouse gas benefits in salinity affected areas of South Asia	The agriculture in low-lying South Asian countries has already been affected by salt water intrusion due to climate change, sea level rise and other anthropogenic activities. This study will focus on level of salinity intrusion and the agricultural management practices being used in the respective areas in the South Asian region. We will select the best management practices for the region considering their net greenhouse gas (GHG) emissions and other climate benefits. The outcome of the study will be used to raise awareness among the farmers for up-scaling those good practices and make recommendations for the climate change adaptation policy and strategy of respective countries	Dr. Lokupitiya Erandathie, Department of Zoology, Faculty of Science, University of Colombo, Colombo, SRILANKA	erandi@sci.cmb.ac.lk	2 Years	04-Apr-14	12,000 (Retained from 2014/2015 fund)	-	-	-	Project is ongoing.
							889,000.00	295,000.00	145,200.00	65,000.00	

Awarded funds for 2014 ARCP projects* from 2012/2013, 2013/2014 and 2014/2015 budget years	889,000.00
Committed funds for 2015 ARCP projects * From 2014/2015 budget year	295,000.00
Mortgage funds for 2015 ARCP Projects	145,200.00
Mortgage funds for 2016 ARCP projects	65,000.00

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CBA2014-01CMY-D'Arrigo	ACRE SE Asia – towards new weather and climate baselines for assessing weather and climate extremes, impacts and risks over SE Asia.	Our primary goal is to build capacity within SE Asian institutions, agencies and NMS to improve and extend historical instrumental, documentary and palaeo databases of SE Asian weather/climate, in order to contribute to the generation of high-quality, high-resolution historical weather reconstructions (reanalyses). These new baselines will allow scientists and policy makers across the region to address weather/climate extremes, impacts and risks in ways and over time spans not previously possible.	Prof. Roseanne D'Arrigo, Lamont-Doherty Earth Observatory, Columbia University, USA	rdd@ldeo.columbia.edu	2 years	(Year 2 of the two-year project)	4-Nov-14	8,000 (Retained from 2013/2014 fund)	28,000 (Retained from 2013/2014 fund)	8,000 (Retained from 2013/2014 fund)	-	36,000	Project is ongoing
CBA2014-02NMY-Singhruck	Strengthening the adaptive capacity of local agricultural communities through the development of seasonal climate prediction system	The main objective of this project is to build scientific capacity for seasonal climate prediction. Although seasonal climate prediction products have been available, their usefulness to agricultural sectors has not been fully realized. This is especially true for local farming communities in non-irrigated zones which rely solely on rain. Early or late monsoon onset, flash floods, prolonged droughts affect their livelihood directly. To enhance their capacity to make adaptive response to natural variability, climate information in the form which is accessible and relevant to them at local scale is most needed. This project aims to respond to this challenge.	Dr. Patama Singhruck, Center of Excellence for Climate Change Knowledge Management (CCKKM), Chulalongkorn University, Bangkok, THAILAND	patama@cckm.or.th , patama.s@chula.ac.th	2 Years	4-Apr-14	28-Apr-14	40,000 (Retained from 2013/2015 fund)	-	40,000 (Retained from 2014/2015 fund)	30,000 (Retained from 2014/2015 fund)	70,000	Project is ongoing
CBA2014-03NSY-Cruz	Collaborative Monitoring System for Enhanced Watershed Management Services in The Philippines	The project intends to develop best practices for developing the capacity for collaborative and participatory watershed monitoring that is anticipated to help promote science-based watershed management decision making. Largely capacity building will be done through a combination of lectures, demonstrations, field visits, online learning methods, and experiential learning. Capacity building will focus on technical personnel of local government units, local communities, teachers and students, NGOs and technical personnel of private corporations. Best practices for capability building for varied stakeholders and watershed contexts will be distilled for potential application nationwide. For each stakeholder group development of appropriate levels of competence for designing, planning, implementing, and maintaining monitoring systems will be targeted.	Dr. Rex Victor O. Cruz, University of the Philippines Los Baños, Laguna, PHILIPPINES	rexcruz@yahoo.com	1 year	4-Apr-14	28-Apr-14	45,000 (Retained from 2014/2015 fund)	-	45,000 (Retained from 2014/2015 fund)	-	45,000	Project is ongoing
CBA2014-04NSY-Divya Sharma	A comprehensive capacity building program on "Urban climate resilience in India	With the aim of introducing concepts and tools for initiating urban climate resilience planning at city level institutions, a customised capacity building package will be built with the help of key experts, academia and practitioners.	Dr. Divya Sharma, The Energy and Resources Institute (TERI), New Delhi, INDIA	divyas@teri.res.in	1 Year	4-Apr-14	28-Apr-14	35,000 (Retained from 2014/2015 fund)	-	35,000 (Retained from 2014/2015 fund)	-	35,000	Project is ongoing
CBA2014-05NSY-Gopal	Capacity Building for Conservation of Biodiversity and Ecosystem Services of Wetlands in Relation to Global Change	Wetlands, the 'hotspots' of biodiversity, are threatened by changes in land use/land cover, inappropriate water resources management and climate change. Despite increasing awareness of their ecosystem services, wetlands are not accounted into the development projects. This stems from the lack of capacity and the complexities in assessing the total biodiversity of wetlands and linking it to various ecosystem services. The project focuses on capacity building of policy makers and relevant stakeholders for rapid assessment of biodiversity of wetlands in the Freshwater Ecoregions of Ganga-Brahmaputra basin and monitoring the impacts of global change on it and the ecosystem services.	Prof. Brij Gopal, National Institute of Ecology, Delhi, INDIA	brij44@gmail.com , nieindia@gmail.com	1 Year	4-Apr-14	28-Apr-14	40,000 (Retained from 2014/2015 fund)	-	40,000 (Retained from 2014/2015 fund)	-	40000	Project is ongoing

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CBA2014-06NSY-Hien	Scientific Capacity Building in Climate Change Research Techniques for Non-Governmental Organisations (NGOs) in Vietnam	The project will build scientific capacity of NGOs in Vietnam in climate change research techniques. This will be achieved by conducting a short course in climate change research techniques for 25 relevant staff of NGOs in Vietnam, followed by implementation of the course methodologies by the attendees, in the form of a course project. A workshop will then be held where lessons learned by the participants will be shared via presentation of course project findings and facilitated discussions. Ten presentations will then be selected as the basis of a dissemination seminar for policy makers, decision makers and other stakeholders.	Ms. Than Thi Hien, Centre for MarineLife Conservation and Community Development (MCD), Hanoi, VIETNAM	thien@mcdvietnam.org	1 Year	4-Apr-14	28-Apr-14	35,000 (Retained from 2014/2015 fund)	-	35,000 (Retained from 2014/2015 fund)	-	35,000	Project is ongoing
CBA2014-07NSY-Jia	International training on regional ecosystem-climate interactions	This proposed training is very relevant to APN goal of scientific capacity development and Biodiversity and Ecosystem Services programme. The training on regional ecosystem-climate interactions will provide relevant researchers and practitioners from monsoon Asia countries with advanced knowledge and skills in this fast-moving field. It will also contribute to enhancing the environmental capacity building of young scientists in the region for the regional sustainable development. It addresses various scientific aspects of regional ecosystem and climate changes, including multi-platform observation, trends and impacts analysis, and ecosystem-climate modeling. The curriculum comprises lectures, seminars, along with site visits and excursions in research facilities and field stations. Participants are expected to systematically learn scientific principles and methods on regional climate change, ecosystem-climate interactions and sustainability.	Jia Gensuo, Director, 40 Huayanli, Beijing 100029, CHINA	jiong@tea.ac.cn	1 Year	4-Apr-14	28-Apr-14	45,000 (Retained from 2014/2015 fund)	-	45,000 (Retained from 2014/2015 fund)	-	45,000	Project is ongoing
CBA2014-08NSY-Koshy	WCRP-ICTP Summer School on Climate Extremes	This proposed summer school is the first of a series of capacity development activities focusing on WCRP Grand Science Challenges (http://www.wcrp-climate.org/index.php/grand-challenges). The proposed school is to train students in observing, understanding and predicting changes in extreme climate events. The duration of the school is two weeks and includes lectures mainly in the mornings and practical application of the material covered in the lectures in the afternoons. This will be accomplished both through the use of structured tutorials, and a set of research problems that will form the core of the school and serve to produce an important part of its long-term legacy.	Prof. Kanayathu Chacko Koshy, Centre for Global Sustainability Studies, Penang, MALAYSIA	kanayathu.koshy@gmail.com	1 Year	4-Apr-14	28-Apr-14	30,000 (Retained from 2014/2015 fund)	-	30,000 (Retained from 2014/2015 fund)	-	30,000	Project is ongoing
CBA2014-09NSY-Mathai	Training workshop and edited volume on "Green Growth: Political Ideology, Political Economy and Policy Alternatives"	At Rio+20, the green economy realized through green growth was announced as the foundation of the "future we want." This project will contribute to capacity building of young researchers in developing countries on this topic. It will invite them to a two-day training symposium discussing the ideological commitments that rationalize green growth, its political economy and related policy options from the vantage of realizing greater fairness on a shared and finite planet. The symposium invites senior experts in the field as resource persons to present their research. Selected contributions from the symposium will be included in an edited volume from a reputed international publisher for worldwide dissemination.	Dr. Manu V. Mathai, United Nations University Institute of Advanced Studies (UNU-IAS), JAPAN	mathai@unu.edu	1 Year	4-Apr-14	28-Apr-14	40,000 (Retained from 2014/2015 fund)	-	40,000 (Retained from 2014/2015 fund)	-	40,000	Project is ongoing

Project Reference Number	Title	Project Summary	Project Leader	Email	Project Duration	Award Announced	Award Letter Issued	19th IGM-Approved Budget	2013 Awarded	2014 Awarded	2015 Committed	Total Project Budget	Remarks
CBA2014-10NSY-Carandang (Vilayphone)	Capacity Development of Local Climate Change Communicators in Southeast Asia	The proposed regional collaboration intends to develop community assets who would serve as the communicators and "community links" in the area of climate change research and development programs.	Anoulom Vilayphone, Southeast Asian Network for Agroforestry Education (SEANAFE), CFNR-UPLB, PHILIPPINES	anoulomv@yahoo.com	1 Year	4-Apr-14	28-Apr-14	40,000 (Retained from 2014/2015 fund)	-	40,000 (Retained from 2014/2015 fund)	-	40,000	Project is ongoing
CBA2014-11NSY-Zhang	IMBER ClimEco4 Summer School - Delineating the Issues of Climate Change and Impacts to Marine Ecosystems: Bridging the Gap Between Research, Assessment, Policy and Management	ClimEco4 will focus on indices for evaluating marine ecosystems - what they are, how to construct them (for process/observation scientists), how to use them (modellers from natural and social sciences), and combining them to inform policy and decision-making. Lectures will include a climate change primer, general information on databases (acquiring and managing large data sets), data analysis methods for indicators (statistical methods), using indicators with models (ecosystem, socio-economic models), and criteria and use of indicators for informing marine management and policy. Daily "hands-on" sessions with example databases, indices, and models will provide applications of the concepts covered in the lectures.	Prof. Jing Zhang, East China Normal University, CHINA	jzhang@sklec.ecnu.edu.cn	1 Year	4-Apr-14	28-Apr-14	35,000 (Retained from 2014/2015 fund)	-	35,000 (Retained from 2014/2015 fund)	-	35,000	Project is ongoing
CBA2014-12NSY-Bora	Capacity Building for Mitigation of Climate Change by use of Precision Agriculture	The proposed project intends to organize workshop and training programs for senior and mid-level policy makers, scientists and progressive farmers in Thailand, India, Bangladesh and Vietnam on Precision Agriculture (PA) to mitigate climate change and reduce greenhouse gas (GHG) emission (APN-Goal 1). PA is a system approach to reduce the use of chemicals, fertilizer and water through variable rate technology with help of GPS, GIS and Remote Sensing; recognising the variable potential of the field. PA not only reduces the input cost but also reduces GHG. The project plans to transfer knowledge and technology, adapted in the developed countries to customise for developing countries by the scientists and policy makers of both developed and developing regions (APN-Goal 2 and 3)	Dr. Ganesh C. Bora, North Dakota State University, Fargo, USA	ganesh.bora@ndsu.edu	1 Year	4-Apr-14	28-Apr-14	35,000 (Retained from 2014/2015 fund)	-	35,000 (Retained from 2014/2015 fund)	-	35,000	Project is ongoing
CBA2014-13NSY (AOF)-PARR	PARR Fellowship Programme	The Pan-Asia Risk Reduction (PARR) Fellowship Program offers unique research, training and educational opportunities to Asian researchers, practitioners, and policy makers to enhance their capabilities for advancing and applying knowledge on critical issues of GEC and human-environment security in the Asia-Pacific. All PARR participants and their institutions are involved in periodic integrative activities that promote additional skill-building and the development a cohesive network of people capable of confronting the challenges of GEC and human-environment security through risk management. The PARR program will provide Fellowships for scientific capacity development on the topic of urban disaster risk and vulnerability under global environmental change.]			1 Year	N/A	N/A	30000 (from AOF funds)		30000 (from AOF funds)		30,000	Project is ongoing
								458,000	28,000	458,000	30,000	516,000	

Item 08-02: Science-Policy Engagement

The IGM is asked to review the activities undertaken; and discuss and consider, with a view to approving, activities for the ensuing year.

Budget requested for 2015/16 activities:

UNFCCC SBSTA40 and COP21; IPBES: US\$10,000

South Asia Science-Policy Dialogue: US\$45,000 (approved at 18th IGM Meeting)

Publications for Science-Policy Dialogue and Science-Policy Synthesis (US\$5,000)

Total Budget requested for Science-Policy Activities is US\$60,000

UNFCCC SBSTA and COP Meetings

UNFCCC SBSTA 38, Bonn Germany, 4-15 June 2014

In response to UNFCCC Secretariat, the APN has been attending the research dialogues organised at annual SBSTA meetings at Bonn, Germany. Dr. Andrew Matthews, invited expert to the SC, represented the APN at SBSTA38 and the research dialogue, which focused on recent developments in global climate information, and emerging scientific findings by the research community. The submission to SBSTA can be seen as [Appendix 1](#). The APN is expected to attend the dialogue again and it was agreed at the recent SC Meeting that Dr. Matthews will represent the APN in the SBSTA dialogue among parties and the International Research Community. **This will be held in June 2014.**

Intergovernmental Platform for Biodiversity and Ecosystems Services (IPBES)

The third session of the Plenary of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES-3) met from 12-17 January 2015 in Bonn, Germany. Over 300 participants attended the meeting, representing IPBES member and non-member governments, UN agencies and convention secretariats, intergovernmental organizations, nongovernmental organizations, and various stakeholder groups. Delegates adopted a number of decisions, including on: the work programme for 2014-2018; a stakeholder engagement strategy (SES); a communications and outreach strategy; the financial and budgetary arrangements; and rules of procedure for the Platform on, inter alia, the conflict of interest (COI) policy. Delegates did not reach agreement on procedures for the review of the Platform, and on policy and procedures for the admission of observers. IPBES-3 concluded with many feeling that solid progress had been made at the meeting. Members had addressed a number of issues under the platform, some of which took many hours of debate and collaboration, including on how to complete the work programme despite the limited resources available. This sets a good foundation for IPBES-4, where the first output of substance, the pollination and pollinators assessment, will be reviewed. The APN has been recognized in the IPBES Platform in a number of ways that include, but not limited to, the regional assessment in the Asia-Pacific (deliverable 2b) and capacity building. The fourth session of the Plenary of IPBES will take place in early 2016, with the dates and location to be determined.



Sub-Regional Science Policy Dialogues

Third Science-Policy Dialogue in South Asia

The next APN Sub-regional Science-Policy Dialogue is expected to be held in Temperate East Asia (TEA-SPD) and is the third APN science policy dialogue among the series planned in PAN Asia that will culminate in a synthesis. The TEA-SPD was proposed at the 18th IGM. AS for the South Asia SPD, this was successfully conducted in Thimpu, Bhutan in January 2015. Funds were also successfully secured from partners CDKN and LoCARNet for the SA-SPD dialogue and efforts to secure financial partnerships will be sought for future dialogues. See [Appendix 2](#) for some of the outcomes of the 2nd SA-SPD.



Continuation of the Science-Policy Dialogue Series

Also, it is proposed to conduct, as a Hyogo-based activity in 2016/17, a Synthesis Workshop of the three Sub-Regional Science-Policy Dialogues. Budgets for these activities will be requested in the next fiscal year.

SBSTA40 Research Dialogue: Submission from the Asia-Pacific Network for Global Change Research (APN), June 2014, Bonn Germany

Acknowledgment: The APN welcomes and appreciates the continuing opportunity to inform, and engage in a dialogue with SBSTA on issues of global change research, capacity development and science-policy interfacing mechanisms within the Asia-Pacific region that is relevant to the convention. The present brief¹ summarizes the current main activities undertaken by APN to address issues of relevance taking into account developments in research activities outlined in document **FCCC/SBSTA/2007/4, Paragraph 47 (a-f)**.

Contents

- 1. What is the APN**
- 2. Completed APN Activities complementary to the IPCC AR5**
 - a. *Published: Springer Book: Climate in Asia and the Pacific: Security, Society and Sustainability.*
- 3. New Opportunities for Developing Countries in the Asia-Pacific Region under the APN's Climate Adaptation Framework**
 - a. *Expert Workshop on Linking Climate Adaptation, Disaster Risk Reduction and Loss and Damage*
 - b. *Fourteen new Projects announced that link Climate Adaptation with Disaster Risk Reduction and Loss and Damage*
 - c. *Loss and Damage Forum*

1. What is the APN:

Established in 1996, the Asia-Pacific Network for Global Change Research (APN) is a network of twenty-two member governments in Asia and the Pacific whose vision is to enable countries in the region to successfully address global change (GC) challenges through science-based response strategies and measures, effective science and policy linkages, and scientific capacity development. As APN is an Inter-governmental network, a high priority goal is to produce sound scientific results that can be made available as a supportive tool for policy-making processes. Accordingly, the APN conducts regular synthesis and assessment activities of the projects its supports in order to identify important outcomes, research gaps and/or emerging issues that could be used to support policy development.

APN is financially sponsored by the Governments of Japan (Ministry of Environment [MOEJ]; Hyogo Prefectural Government), New Zealand (Ministry for the Environment), Republic of Korea (Ministry of Environment [MEV]) and the United States (National Science Foundation [NSF]; United States Global Change Research Program [USGCRP]).

At its recent 19th annual meeting in March 2014, the following topics were emphasised by its member governments to be of particular interest:

- Climate impacts on agriculture, livestock and forestry.
- Green economy and sustainable development.
- Coastal zone megacities and urban issues.

¹ Stevenson, L. A., Takemoto, A., Matthews, W. A. (2014). APN submission brief to the United Nations Framework Convention on Climate Change (UNFCCC) SBSTA 40 Research Dialogue. Asia-Pacific Network for Global Change Research (APN), Kobe, Japan.

In addition to the above work, APN is now implementing activities under 3 Frameworks of: (1) Low Carbon Initiatives; (2) Biodiversity & Ecosystems Services; and (3) Climate Adaptation.

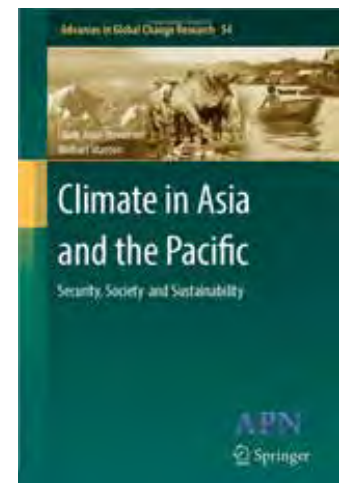
2. Completed APN Activities complementary to the IPCC AR5

a. **Climate in Asia and the Pacific: Security, Society and Sustainability**

- Published 2014: Available at: DOI 10.1007/978-94-007-7338-7_1
- Offers a broad perspective on the impacts of climate change on society in Asia and the Pacific
- Explores a many-layered mix of science, economics, politics and sociological concerns
- Provides a useful resource for scientists, policy makers and practitioners

Variations in climate in the Asia-Pacific region play a major role in the development of natural ecosystems and of human societies. Furthermore, human activities place additional stresses on natural and societal systems and climate change is now considered a significant factor in these increases. The book documents the climate of the region and interactions of the climate with both the environment and societies in the region. The book emphasizes the impacts of climate change as well as strategies to mitigate and adapt to those impacts. A number of aspects of climate in the region that capture interactions between climate and natural and human systems are considered and include climate variability and change, climate and urbanization, climate and security, climate and society, and climate and sustainability.

The book draws on published results in the scientific literature and the analysis presented highlights key climate-related issues for Asia and the Pacific. Subsequent chapters of the book include important issues such as: *Climate variability and change* – large-scale climate systems, trends in mean climate, trends in extreme climate events across Asia and the Pacific, challenges and opportunities for modeling the climate, current projections for future climate under climate change; *Society and urbanization* – trends in urbanization, interactions between urban areas and climate, climate hazards and vulnerabilities for urban areas, climate change mitigation and adaptation strategies for urban areas; *Food, water and energy security* – meeting future needs for rice and wheat across Asia, food from fisheries, water security, and balancing energy demands with reduced GHG emissions; *Governance and sustainability* – institutional arrangements to address the impacts of climate change, prospects for remote communities under climate change, effects of climate change on human health, low carbon development pathways, and ecosystem services to enhance the adaptive capacity of communities.



As J. Scott Hauger, of the Asia Pacific Center for Security Studies writes in his foreword, this book “represents an opportunity to share knowledge and to collaborate across . . . groups and perspectives to manage the complex problems of climate related global change, to ensure a secure and sustainable environment for our children and posterity.”

The book closes by noting some future directions for climate change research in the future. In particular it outlines that there are clear trends of increasing temperature in the Asia-Pacific region. There are observed trends in extreme climate events and evidence of changes in large-scale climate systems including the monsoon and the associated Hadley circulation. Modeling the climate of the region provides opportunities for improved understanding and prediction, but there remain challenges especially for mountainous terrain and small islands. Current projections for future climate indicate that existing stresses are likely to be exacerbated.

Urbanization is expected to continue and better understanding of the interactions between climate and urban areas is essential. Further work is needed to improve our understanding of adaptation and mitigation both in urban areas and in small communities. Significant challenges exacerbated by climate variability and change need to be overcome so that future needs for rice and wheat can be met. Management strategies need to be implemented globally so that fisheries will be able to provide necessary food for the region. Local management strategies are also needed to ensure water security.

Regional and international cooperation is providing initial support for integrated assessments that can investigate pathways towards low carbon development (LCD) across the region. Natural ecosystem services support substantial components of economies across the region and new strategies are being developed to enhance the resilience of natural ecosystems impacted by climate change. Natural ecosystems in Asia and the Pacific can contribute significantly to the mitigation of climate change.

Communities, particularly poor and remote communities, are vulnerable to climate change and there is a need for capacity building in research, policy development and implementation to reduce these vulnerabilities. International cooperation exists in the development of mechanisms to promote systematic observations of geophysical variables. Further cooperation is needed to ensure that consistent high-quality socio-economic data are collected, archived and accessible. Continuous monitoring of the geophysical environment and associated socio-economic variables, and developing and analyzing indicators of climate interactions with natural ecosystems and human societies is needed to fully interpret and respond to the complex socio-economic interactions with the Earth's climate.

3. New Opportunities for Developing Countries in the Asia-Pacific Region under its Climate Adaptation Framework

Under APN's new **Climate Adaptation Framework**, started in April 2013, a number of new and exciting opportunities were presented to scientists, decision-makers and practitioners aiming to address the gaps, status quo and future directions for bringing together "*Climate Change Adaptation (CCA)*", "*Disaster Risk Reduction (DRR)*" and "*Loss and Damage (L+D)*". These are outlined below:

a. **Expert Workshop on Climate Adaptation, Disaster Risk Reduction and Loss+Damage.**

A workshop on linking Climate change adaptation, disaster risk reduction and loss and damage (CCA-DRR-L+D) was conducted in Kobe from 21-23 August 2013 and focused on the **linkages, priorities and limitations** and the challenges and opportunities presented. Clear was the manifestation of extreme and slow onset events in the face disasters, and disaster risk management (DRM) and the climate adaptation practices being planned and/or incorporated or at local, national, sub-regional and regional levels in Asia and the Pacific. Some of the challenges presented at the recent workshop were so-called disaster amnesia; cultural practices and traditional knowledge; lack of financial capacity; lack of availability of information/data; lack of consultation in project designing (leading to maladaptation); and insufficient education to deal with adverse impacts of weather events, among others.

APN believes that it is important to learn from past risks by focusing on climate impacts, both weather and slow-onset events, and adopting strategies to cope with them. To do this, building on the knowledge, institutional structure and communities of practice developed by Disaster Risk Management strategies may be a good point of entry, rather than starting at a point zero. There is also a need to learn from smaller events (smaller-scale disasters such as annual flooding events, etc.) and not just larger extreme events (like large cyclones/ typhoon disasters). Addressing these might also help with making extreme events less extreme, which is especially important as they happen more frequently.

b. **Selected High Priority Themes for the Call for Focussed Activities on CCA-DRR-L+D and 14 new**

projects Awarded

Following the workshop, the APN launched a call for Focussed Activities under the theme: **Climate Adaptation, Disaster Risk Reduction and Loss + Damage**. This year we receive a record **85 expressions of interest of which 14 were selected on 30th April 2014 (9 research proposals and 5 capacity development proposals)**. Themes of particular interest, which were drawn from the expert workshop, are outlined below and are of high priority to the APN in this focused call for activities.

Regional-based multi-disciplinary research

- i. Integrated Modelling that reduces vulnerability and improves resilience to Loss & Damage by looking at a combination of:**
 - Climate vulnerability, impacts and adaptation
 - Economics
 - Social and human dimension
- ii. Regional Downscaling**
 - Downscaling knowledge for adaptation, risk and loss & damage that could be transferred to the local level (including remote communities, districts, cities, etc.)
 - Scientific community needs to downscale as much as possible to help impact assessment at the local level
 - Gap analysis (including best practices) in knowledge and understanding of loss and damage at the local level
- iii. Multi-trans disciplinary research and assessment of:**
 - Impacts of extreme weather events and slow onset events at regional, sub-regional and local levels (what are the gaps; what is the status quo?)
 - Reducing loss by revisiting current aspects of Disaster Risk Management strategies across local, national and regional (including transboundary) scales.
 - Non-economic/non-insurable losses due to climate - extreme and slow onset events (cultural, health, psychological, social, etc.)
 - Integrating the risks identified through Climate Change Adaptation, Disaster Risk Reduction and Loss & Damage into regional planning: What is the present scientific understanding on adaptation, disaster risk reduction, and loss & damage? Is more needed? Are there sufficient science-policy linkages?
 - Methodology, terminology and other concepts that might effectively link climate change adaptation, loss and damage, and disaster risk reduction (for example, developing methodologies for quantifying non-economic losses)

Capacity Building (including dissemination, awareness-raising)

- i. Enhancing capacity for assessment** to plan and implement Loss and Damage activities related to Disaster Risk Reduction and Climate Change Adaptation, both by government authorities and civil society that would also document successful practices of local, experiential and indigenous knowledge
- ii. Training, awareness-raising; strengthening partnerships** that will link CCA, DRR and L+D for:
 - local communities and local governments to enable bottom-up planning and mechanisms
 - Increasing the knowledge-base of CCA-DRR-L+D and how it might impact future generations
 - Strengthening linkages, effective coordination and building synergies across neighbouring countries to enhance cross-learning, especially at the sub-national/district level
- iii. Addressing gaps in multi/trans-disciplinary approaches:**

- Developing toolkits, mapping different institutions that are engaged in, for example, disaster risk management that can help address loss and damage
- Establishing entry points for science-policy interfaces at regional, national and local levels

iv. Retaining knowledge, maintaining data, sustaining disaster loss databases

- What is going on, where are the gaps, training initiatives on resilience
- Decision-support tools and training opportunities. Local language would be used at the local level and translations would be available
- Addressing the problems of existing data: insufficiency, inaccessibility and/or inconsistency

Projects funded from the Focussed Call for Proposals

The APN selected 14 proposals that will start their activities in early summer 2014. Nine of these are research projects and 5 are capacity development projects. The list can be viewed in Table 1. [Figure 1](#) outlines the response to the call from the Asia-Pacific community, indicating the need to address such issues under the framework of Climate Adaptation.

Asia-Pacific Network for Global Change Research: POLICY BRIEF



APN SOUTH ASIA SCIENCE-POLICY DIALOGUE

GLOBAL CLIMATE CHANGE: REDUCING RISK & INCREASING RESILIENCE

19-21 JANUARY 2015, BHUTAN

Photo: Dzong of Parakha, Bhutan by Marina & Enrique/Flickr (CC BY-NC-ND 2.0)

BACKGROUND

The need for climate change adaptation, and increased resilience to risk is becoming paramount in the Asia and Pacific Region in the face of climate change. In its second activity in a series of Science-Policy Dialogues on **Global Climate Change: Reducing Risk & Increasing Resilience**, our aim is to promote, through active engagement of participants, informed decision-making on action to reduce global

and climate change impacts, and to reduce risk and increase resilience to the adverse impacts of climate change, especially in developing countries in the region. It is with this background that a series of talks, carousel kiosks and “serious fun” gaming sessions took place over three highly interactive days. The Second in a series of three sub-regional dialogues, the ultimate objective is to talk about the

environmental issues we are facing and culminate the responses in a synthesis.

“The main benefit of a dialogue comes from human interaction. We did this through thematic kiosks, games, and interactive discussions - moving away from the conventional show and tell scenarios...”



WHAT TOOK PLACE IN BHUTAN CAN BE VIEWED ON THE OTHER SIDE OF THIS BRIEF THROUGH VISUALS AND KEY MESSAGES FROM THE PARTICIPANTS.





TAKE HOME MESSAGES

- ❑ **Gaps still exist in transferring scientific findings to policy planning.** Scientists need to learn to disseminate findings in an understandable way.
- ❑ More **evidence-based science and action-oriented research** are needed attract policy makers.
- ❑ Researchers need to **identify short-term and long-term actions** when delivering scientific outcome to policy makers.
- ❑ To motivate scientists to conduct policy related studies, we need to build mechanisms to monitor and **evaluate research that has been effective at the ground level in policy development and reward such incentives.**
- ❑ Climate change research needs to be considered together with **development issues, gender balance, and poverty.**
- ❑ There are **communication gaps between scientist and policy makers** and an intermediate agent(s) need to be brought into the equation to facilitate the communication process.
- ❑ **Knowledge gaps and communication gaps are interrelated.** These should be consider in combined approaches.
- ❑ **Involving media in science-policy dialogues** will help media explore the **human factor of key science issues.** To attract media to engage in scientific studies, modified approaches are needed.
- ❑ There are many opportunities to enhance communication between science and policy but **dissemination is lacking.** To increase policy maker interest, **involving science champions** in their respective countries in a particular field is recommended.

The APN would like to thank START and the Red Cross Climate Center in USA for their advice in organising this Science-policy Dialogue

Table 1: 14 new projects for CCA-DRR-L+D Denotes Research // Denotes Capacity Development

Title	Countries Engaged
Developing Climate Inclusive Potential Loss and Damage Assessment Methodology for Flood Hazards	Thailand , Nepal, Srilanka, Australia
Developing and promoting a people-centred approach to assess and address impacts of climate change induced loss and damage	Bangladesh , Cambodia, Myanmar, Nepal and Vietnam, UK, South Africa
Integrating CCA, DRR and L+D to address emerging challenges due to slow onset processes	Malaysia , Cambodia, The Philippines, Vietnam, Myanmar, Japan
An analysis of longer-term (5-10 years) recovery following major disasters in the Asia Pacific Region: Lessons for resilient development	Thailand , Myanmar, Cambodia, Indonesia
Assessing the linkages between climate change adaptation (CCA), disaster risk reduction (DRR), and Loss and Damage (L&D): Case studies in the floodplains of Cambodia, Indonesia, Philippines, Thailand and Vietnam	Philippines , Cambodia, Indonesia, Thailand, Vietnam
Integrated flood modelling and Pre-Disaster Loss Estimation in Asian countries	Thailand , Japan, China, Myanmar
Methods toolbox for assessing loss and damage at local level	India, Pakistan , Republic of Korea, Nepal, Germany,
Addressing non-economic losses and damages associated with climate change: Learning from the recent past extreme climatic events for future planning	Japan , Bangladesh, India, Philippines, Thailand
Climate change risk assessment and adaptation for loss and damage of urban transportation infrastructure (UTI) in Southeast Asia (SEA)	Vietnam , Thailand, Cambodia
Enhancing Capacity of policymakers and practitioners in India, Sri Lanka and Nepal on Loss and Damage related to slow onset events in the region	India , Sri Lanka, Nepal
Capacity Building for National, Provincial Stakeholders and Local Communities on Loss and Damage related to Disaster Risk Reduction and Climate Change Adaptation	Viet Nam
Building capacity for reducing loss and damage resulting from slow and rapid onset climatic extremes through risk reduction and proactive adaptation within the broader context of sustainable development	Malaysia , Vietnam, Cambodia
Can traditional livelihoods and mining co-exist in a changing climate: strengthening public-private partnerships in Mongolia to reduce risk and address Loss and Damage	Australia , Mongolia
Capacity Building for Resilience Planning in Fiji: Bridging the science-policy-practice interface in Climate Change Adaptation (CCA), Disaster Risk Reduction (DRR) and Loss and Damage (L+D)	Fiji , New Zealand

Item 8

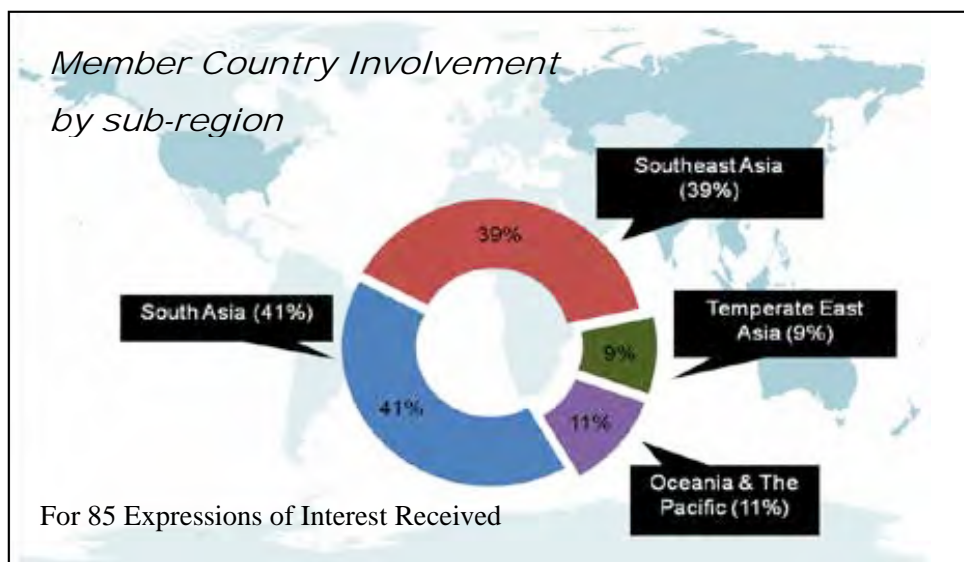


Figure 1: Distribution of Expressions of Interest Received

(c) Developing the Forum on Loss and Damage

The recently formed Loss and Damage Forum established at the Asia-Pacific Climate Change Adaptation Forum, in Incheon, Republic of Korea, March 2013, and highlighted that *“the Asia-Pacific region is the most vulnerable region to a range of natural disasters and climate change impacts, from those emanating from extreme events to those resulting from slow onset processes.”* At the recent meeting held in South Korea and attended by the international community including the APN, and supporting organisations, the following needs were emphasised:

- accessible, high quality data relevant for decision makers and communities;
- regional collaboration; and
- more emphasis on slow-onset events.

The Fifth Assessment of the Intergovernmental Panel on Climate Change (IPCC) has made an even stronger case for the need to address loss and damage in the region. Not only is the region prone to natural degradation, high population density, poverty and food insecurity, it is also highly susceptible to the negative impacts of climate change. Precipitated by an increase in the number of natural hazards, economic losses have also significantly increased. In addition to economic loss and damage such as loss of assets and income and damage to infrastructure, communities in the region are also at risk of non-economic losses. The best way of addressing loss and damage is to avoid it altogether through mitigation and adaptation efforts. However, historical emissions have locked-in a certain level of climate change, the impacts of which will be difficult to avoid through adaptation alone. In fact, countries throughout the Asia Pacific region are already facing mounting losses and damages, presenting a challenge for policy makers.

Currently, changes in climate patterns in the Asia Pacific are leading to significant losses and damages that range across countries, communities and from different climatic events. For countries with large deltas or large coastlines, sea level rise, soil erosion, salinity, flooding, and decreasing fresh water supplies are among the largest issues. While climate changes in climate have meant these events are becoming more variable and extreme, the impacts of this span much further than just economic costs. For instance, in countries such as the small island developing states, complete inundation is a possibility that governments will be forced to cope with in the near future. The effects attributed to this will include loss of heritage, damage to culture, and loss of identity for individuals forced to relocate as well as negative psychological and livelihood effects. As such, addressing loss and damage will require a spectrum of approaches within comprehensive risk management frameworks that include adaptation. In order to support decision making, more research is needed about the potential impacts of climate change countries in the Asia Pacific region are facing and what types of approaches will need to be implemented to reduce and address those losses and damage.

Item 08-03: APN Capacity Development Activities

1. PROPOSAL DEVELOPMENT TRAINING WORKSHOPS

A) Regional PDTW

APN conducted its first annual proposal development workshop at Lao PDR from 9 to 11 July 2014 focusing on theme of Green Economy as related to the Energy Sector. From 95 applications APN, supported to 24 young scientists from Southeast Asia region to participate to the training. The pre- and post workshop questionnaires analysis indicated that young researchers have enhanced their knowledge, skills and confidence level on proposal development from 1.7 to 4.3 through training workshop. Three proposals were received to 2014 APN annual call for proposal and passed stage one review step. Specially, young scientists appreciate the networking opportunity that given to them to enhance the regional collaboration.

B) 1-2 National Level proposal development workshop at Bhutan

National Environment Commission of Bhutan organized a two days of proposal development training workshop involving 20 national young scientists.

C) Proposed 2015/2016 activities

Based on SRC chairs suggestions at the 19th IGM, 2015 annual PDTW is expected to be held in Temperate East Asia or South Asia. The next PDTW will improve by adding followings to the training workshop.

- Increase the time allocation for group activities
- Introduce interactive activities where every participant can communicate with each other (games)
- Allow participants to identify their own groups
- Use successful and unsuccessful research proposals as sample and provide better understanding on APN review process
- Introduce more attractive learning method and group exercises
- Invite more project leaders to share the experience with earlier career scientists

Budget requested under 2015/2016 budget: US\$22,000

Note: The third meeting of the Task Group on the Future Work of the IPCC which was held on Copenhagen, Denmark, 26 October 2014 noted the importance of producing a balanced assessment. It was identified that providing support and training of young scientists¹ will be one option to reach this goal. Further in the co-chairs report, APN was identified as a regional network that has been engaging in capacity development of young scientists in the Asia.

2. APN-CAMBODIA CO-FINANCE PDTW FOR SOUTHEAST ASIA

Under a new partnership initiative with MOU between Cambodia and the APN, Cambodia proposes to host a sub-regional PDTW in Cambodia. This will be introduced by Mr. Sundara Sem and the proposal is attached as Appendix 1 to this document. The co-financing proposed is as follows:

APN: US\$18,000; Cambodia: US\$16,455 = US\$34,455

3. IPBES Capacity Building Seminar (tentative)

¹ <http://www.ipcc.ch/apps/eventmanager/documents/19/301020141032-Doc.%2013,%20Add.1%20-%20Future%20work%20of%20the%20IPCC%20-%20%20Further%20refined%20Options%20Paper.pdf>

As outlined in the [IPBES Plenary 3 report](#) (page 47 onwards), there will be a **Scoping for a regional assessment of biodiversity and ecosystem services for Asia and the Pacific (deliverable 2 (b))** and the modalities for such exercise are outlined in the report. Asia-Pacific Network for Global Change Research is also highlighted here as a network that would benefit from this exercise. In addition, the bid of the Government of Japan to host a Technical Support Unit for the regional assessment has been successful, and the first Author's Meeting will be held in August 2015. It is the hope of the Biodiversity Conservation Bureau that the APN can be engaged in a Capacity Building Seminar back to back with this meeting. More details will follow.

Budget: none required.

CONCEPT PAPER TEMPLATE FOR MEMBERS

COLUMN 1

Title of proposed activity:

Proposal Development Training and Scoping Workshop (PDTW) to Enhance the Capacity of Cambodian and neighbouring Southeast Scientists to Develop Regional Research Proposal(s) for Submission to the APN for funding under its Competitive Call for Regional Research Proposals.

COLUMN 2

Member’s Name and Title: Dr. SEM Sundara

Name of Organisation: Ministry of Environment (MoE)

Postal Address: #48, Preah Sihanouk Blvd, Chamkarmon, Phnom Penh, Cambodia

Telephone/Fax: 855-23 213 462 /855-12 801 177

Email/Website URL: semsundara@yahoo.com

COLUMN 3

Duration of Proposed Activity: (in months): 12 months (1 week for training & 1 year for trainee support)

APN funding requested for 2015/16: US\$18,000

MoE funding requested: US\$16,455

Total amount of funding: US\$34,455

COLUMN 4

Briefly describe the proposed activity and its relevance to the APN Goals & Science Agenda, Scientific Capacity Development and Sustainable Development.

One of APN’s 4 goals is *improving the scientific and technical capabilities of nations in the region*. It is vital that countries in the Asia-Pacific region have the capacity to conduct high quality research that provides underpinning scientific support for policy-makers and policy-making processes. The APN believes that research must involve local scientists and that they must be given the capacity to continue their research, and analyse and utilize their research outcomes.

Under its capacity development programme, CAPaBLE, which was launched in 2003, early career scientists are provided with opportunities to develop their knowledge and capabilities in global change research. Since 2008, the APN has been conducting Proposal Development Training Workshops in various parts off the region. Most recently, these were held in APN’s countries members as back-to-back events with APN sub regional cooperation meetings that brought together international participants.

Findings of scientific studies and fields observations indicate that young scientists and researchers in Cambodia are lack of capacity for conducting and leading research concerning the climate change and environmental issues which are undergoing degradation in the pursuit of economic development. This has threatened undermining the prospect of sustainable development. Cognizant of the problem, the Ministry of Environment of the Kingdom of Cambodia had signed the MOU on Partnership for Co-financing Regional Research and Capacity Building Activities on Global Change Research with APN to promote the regional research and scientific capacity development activities on global change and to raise scientific capacity through a co-financing Partnership between the parties for projects under APN core programme and frameworks.

COLUMN 5

Provide a summary of the proposed activity in 200 words: Realizing the need for strengthening the capability of young scientist and researchers, the Ministry of Environment of the Royal Government of Cambodia has proposed to develop a PDTW with technical assistance and resource persons from APN as a partner. The curriculum and human resources will be planned with the technical assistance of APN. Such assistance is consistent with the national policy of seeking external technical and financial assistance for strengthening institutional capacity. The Cambodia MoE will share some financial support for training course preparation such as venue, local transportation, training materials snacks and meals during the training course and also for local participants including accommodation, travelling, and DSA. The proposed training course will be conducted on an experimental basis for 21 Young Scientists and Researchers from Cambodia (Universities, Government Institutions), and 7 participants from Indonesia, Laos, Viet Nam, Malaysia, Philippines, Thailand and Myanmar. The Course modules will be revised and improved as per feedback from the participants and then the course will be organized for remaining local scientist and researchers. Other

Item 8

organisers that anticipated to run the days' events will be an additional 7 – total amounting to approximately 40 persons (28 trainees; 4 international experts and an additional local expert team of 8 persons). The Cambodia MoE and the APN Secretariat will design the training's curriculum and materials for conducting to the young scientists and researchers based on the APN's criteria and guideline.

COLUMN 6

Is the project a local, national or regional activity? What is the extent of collaboration?

The project will focus on regional-level capacity building for young scientists and researchers at both the national and sub-regional level in Southeast Asia. The main activities will bring the researchers together in a 4-day workshop. The national-level component is that the Cambodian Government will cover the costs of 21 young researchers to participate. APN is asked to match those costs by covering the international (sub-regional) based participants to join the workshop for more mutual sub-regional consideration and understanding of regional-based proposal writing based on common themes.

COLUMN 7

List the member & approved countries involved with a brief description of their role(s). If only one country is involved, list the institutions involved in the activity.

The PDTW will offer to the young scientists and researchers in Cambodia, Lao PDR, Indonesia, Malaysia, Vietnam, Thailand, Philippines as APN member countries and Myanmar as an observer country of APN as agreed by IGM during the 19th IGM/SPG Meeting in March 2014 in Cambodia.

1. Cambodia: Offer Logistical support and organisation and call for young scientists
2. APN Members: Will provide expertise during the workshops
3. APN Secretariat: Will offer advice and assist the proponent (Cambodia government) in material development for the workshop. One person from the APN Secretariat will attend the workshop for technical expertise.

COLUMN 8

Main Objectives:

The objectives of the PDTW are to:

- Raise awareness about the APN among young/early scientists and practitioners in Cambodia;
- Increase the capacity of young scientists, researchers and practitioners to submit proposals to the APN and complete effectively in its competitive Annual Calls for Proposals (for research and capacity development) in key scientific areas for sustainable development in the Southeast Asia and Asia-Pacific region as well.
- Create opportunity for young/early career scientists and practitioners to network and build lasting professional relationships with their peers across national boundaries who are working in the arena of global environmental change for their future careers.
- Empower Cambodia young scientists as APN's members to:
 - i). Provide their knowledge on the APN proposal submission process; and
 - ii). Learn about the APN proposal process so that they might to go back their respective institution and impart their knowledge;

COLUMN 9

Expected Outcomes:

- Develop a proposal manual that will benefit environmental officials, young scientists and researchers of Cambodia, Laos, Indonesia, Malaysia, Vietnam, Thailand, Philippine, and Myanmar as an observer country in Southeast Asia and in Asia-Pacific as well in building the capacity on proposal development skills and knowledge;
- All participants from the Southeast Asia will be young scientists and researchers;
- All participants will have a good understanding of APN's project proposal format and annual call's for proposal process and address the criteria for submission in order to submit competitive proposals to the APN;
- All participants will be able to develop research proposal for APN;
- All participants will be able to join the APN family via its Alumni network and ensure long lasting professional relationships in the area of global change research.

COLUMN 10

Proposed methodologies and operations of persons involved:

1. The project will conduct a four-day proposal development workshop in Cambodia. The workshop will focus on the following themes. Expert knowledge and experience will be gathered through SEA sub regional committee members of APN and the APN secretariat. An overview will be given of the APN's

Annual Calls for proposals process and criteria for submission as well as issues relevant to the 4th Strategic Phase of the APN.

2. Environmental policy and climate change issues in Southeast Asia will be discussed through brainstorming exercises on problems typical for countries in which the course participants present;
3. Environmental problems, climate change issues, socio-economic and institutional data needs assessment for detail problem analysis, and for program and project researches;
4. Data collection: sources and methods. A sample proposal and grading exercise in group with one day field visit will be organized to expose the participants to methods and techniques of primary information collection;
5. Use of Logical framework analysis for project development;
6. Institutional and funding arrangements for participatory project implementation;
7. Monitoring and evaluation criteria and schedules.

Regarding the Operation of the persons involved:

The project proponent (Dr. SEM Sundara) will lead the project and head a local organizing committee on arranging the workshop and fulfilling the reporting requirements of the APN. The main project collaborators as nFP or SPG from selected Countries (Indonesia, Laos, Viet Nam, Malaysia, Philippines, Thailand and Myanmar) will assist the proponent to carry out the project, particularly in communication with concerned institutions and Universities to nominate participants if necessary, otherwise, the APN Secretariat will assist to open call to get real interested participants to the PDTW in Cambodia. H.E. Sok Keang, Adviser to the Ministry of Environment, and the Chairman of Environmental Scientific Working of the Ministry of Environment of the Kingdom of Cambodia will also advise the project.

Part Two: Activity Duration and Funding Requirements (3 columns: 1 page)

Column 1: Timeline

Provide a concise timeline for the activities:

01 April 2015 to 31 March 2016

1. Regulation communication with APN’s secretariat about the project related activities and process and based on APN’s guideline; (April to mid of May)
2. Data analysis, assessment and selection of participation based on APN’s criteria; (mid of May to mid of July)
3. In order to submit a proposal to annual call the training workshop must held before mid of August;
4. Project report and recommendation. (Prepare financial report September to November) Final report submission end of December

Column 2: Budget

Provide a concise budget for the activities:

Title of the Project: Proposal Development Training Workshop (PDTW)				Total US \$
A. Resource persons from APN’s Secretariat and SPG from APN’s member countries for conducting the PDTW (4 Persons: 1 from the Secretariat and 3 from the APN member countries)				
(I). Travel	No. of Participants	Airfare	Sub Total	
International Travel	4	1,000	4,000	
Domestic Travel – Airport- Hotel	4	25	100	
Total Travel A(I)			4,100	
(II). Per Diem	No. of Participants	Number of nights	Rate	Sub Total
Accommodation	4	5	70	1,400
DSA	4	5	20	400
Total Per Diem A(II)			1,800	
Total A(I) + A(II)				(A) 5,900
B. Participants from Southeast Asia as APN member countries (7 Persons)				
(I). Travel	No. of Participants	Airfare	Sub Total	
International Travel	7	600	4200	
Domestic Travel- Airport-Hotel	7	25	175	
Total Travel B(I)			4,375	

Item 8

(II). Per Diem	No. of Participants	Number of Night	Rate	Sub Total	
Accommodation	7	5	70	2,450	
DSA	7	5	20	700	
Total Per Diem B(II)				3,150	
Total B(I) + B(II)					(B) 7,525
C. Local Participation in Cambodia and Organizers (28 Persons) (21 trainees and 7 organising committee – 7 organising will stay locally and not at hotel)					
(I). Travel	No. of Participants		Rate	Sub Total	
Domestic Travel	28		30	840	
Total Travel C(I)				840	
(II). Per Diem	No. of Participants	Number of Night	Rate	Sub Total	
Accommodation	21	5	70	7,350	
DSA	28	5	20	2,800	
Total Per Diem C(II)				10,150	
Total C = C(I) + C(II)					(C) 10,990
D. Training Workshop Preparation					
Workshop Facilities	No. of Participants	Number of Night	Rate	Sub Total	
Meeting Room (Incl Lunch & Snacks)	40	4	25	4,000	
Field Visit & Working Reception	40	1	50	2,000	
	3 Vans	1	80	240	
Office Materials and Work related to the project				1300	
Total D				7,540	
Total D					(D) 7,540
E. Miscellaneous					
Miscellaneous (venue, computers, photocopiers, banners, reports and others)				2,500	
Total E					(E) 2,500
Total A+ B+ C + D + E					34,455
ESTIMATED TOTAL COSTS FOR PROJECT					34,455

Column 3: Leverage of support being sought

Provide details of the support being sought from other collaborating countries and institutions and details of the contributions from the project leader's institution (please include both monetary and in-kind contributions):

1. Contribution from leading institution: The Ministry of Environment of the Kingdom of Cambodia shall contribution and in-kind support to ensure for conducting and training course preparation such as venue (snacks & lunch), local transportation, training materials, and reception/field visit during the training course.
2. Monetary contribution from MoE to cover the cost of accommodation, travelling, and DSA for local participants plus organizers and other workshop facilities.
3. Contribution from collaborator's organization: shall be assist in facilitation for nomination of participation to the APN Secretariat for final selection. And may provide qualified expert or resources person for conducting the training course.

Item 08-04: Hyogo and Other Activities

1. Hyogo Activities

Hyogo Prefectural Government hosts the APN Secretariat and has strongly been supporting APN's activities since 1999. Specific activities that are beneficial for APN member countries funded by Hyogo Prefecture are called Hyogo Activities. Results of specific activities organised in FY 2014/2015 are outlined in [*IGM20-08-04-Appendix:Hyogo Activities in FY 2014/15*](#)

In FY 2015/2016 following new Hyogo Activities are proposed:

(a) Workshop on Satoyama and Sustainable Development

Since FY 2011, APN and Hyogo Prefectural Government have jointly conducted a series of workshops and symposia to explore Satoyama as an example of harmonious co-existence between human and nature, and ways and means of enhancing resilience of communities to climate and ecosystems changes.

Building on the outcomes of the "International Symposium on Hokusetu Satoyama", held in November 2014, it is proposed to hold a workshop on specific themes relevant to Satoyama, such as:

- Involvement of private sector and general public; and
- Utilisation of Satoyama for education of children and students.

In the workshop these themes will be discussed from various perspectives of researchers, practitioners, educators and governmental officers.

Budget Requested: US\$ 20,000

(additional US\$ 24,000 will be pledged by Hyogo Prefecture Hanshin-Kita Regional Office)

(b) International Seminar on Restoration of the Rich Natural Environment

The APN and Hyogo Prefectural Government are planning to co-organise and co-fund an international seminar on the following possible topics:

- severe damages to agriculture and forestry caused by wild animals, or
- air pollution control in urban areas

Budget Requested: US\$ 20,000

2. 3R-related Activity with Contracted Funds from MoEJ

The APN is considering to join in a project with contracted funds from MoEJ and organise a seminar or workshop that is tailored to bring together scientists, policy makers and private sector. This event is to be considered a follow-up activity of the APN 3R Scoping Meeting, held in Kobe, Japan, in June 2014. This meeting identified application of new technology as one of the thematic areas of high priority in the Asia-Pacific region.

Date:	February 2016 (Tentative)
Venue:	South-East Asian country
Available Budget from MoEJ:	To be announced

Hyogo Activities in Fiscal Year 2014/15

Results of Hyogo activities conducted in Fiscal Year 2014/2015 are outlined below:

(a) International Expert Meeting on Air Pollution Control in Urban Asia-Pacific

The “International Expert Meeting on Air Pollution Control in Urban Asia-Pacific”, jointly organised by APN, Hyogo Prefectural Government and Beijing Normal University Zhuhai (BNUZ), was held from 27 to 29 October 2014 at the BNUZ Campus, China. The meeting was attended by eighteen experts from eight Asia-Pacific countries; about 120 persons, including BNUZ students, participated in the public forum.

Amid increasing public concern in Asia-Pacific countries over the adverse natural and social-economic impacts of atmospheric pollution, the issue of urban air pollution was investigated from various perspectives including environmental science, economics, transportation and public health, by scientists, as well as practitioners and officials from government agencies at global, national and local levels.

The meeting also provided a forum for information exchange between the sister states Hyogo Prefecture and Guangdong Province at which local experts had engaging discussions on the current status of urban air pollution and countermeasures being undertaken.

It is expected that the findings of the meeting, which includes a summary of the gaps and needs for further regional collaboration on urban air pollution research, will guide the development of a future work plan that will help to achieve APN’s goal of enabling member countries to address various global change issues in the region.

(b) International Symposium on Hokusetsu SATOYAMA

Satoyama, a Japanese term describing a mosaic rural landscape of different ecosystem types, provides an example of harmonious co-existence between human and nature. Hyogo Prefecture Hanshin-kita Regional Office has been promoting diverse Satoyama-related activities on the sustainable use of natural resources. In order to showcase good practices of these activities internationally, APN and Hyogo Prefectural Government jointly organised the “International Symposium on Hokusetsu SATOYAMA”. It was held on 30 November 2014 in Takarazuka, Hyogo Prefecture. The symposium, attended by more than 200 citizens, featured three lecture presentations on Satoyama and three international and local case studies of traditional use and management of landscapes and natural resources. The symposium was designed to raise awareness on the importance of Satoyama, particularly the Satoyama of the Hokusetsu Area, Hanshin-kita region, Hyogo Prefecture.

The symposium concluded with the *Hokusetsu Satoyama Declaration* that emphasizes the will of the participants of the symposium in making Hokusetsu Satoyama a perfect example of the “lifestyle of harmonious co-existence with nature” and passing on this heritage to the next generation.

In the understanding of the benefits and values of Satoyama, the participants agreed to support the ideas of the International Partnership for the Satoyama Initiative (IPSI)/United Nations University (UNU) and decided to further investigate options of joint activities.

Item 08-05(a): Co-Organised Parallel Sessions to Celebrate 20 years of APN

Background:

A lot of effort has been in place to identify impacts of climate change as well as possible means of adaptation and mitigation through low carbon initiatives and climate adaptation activities. APN has been part of this global effort in addressing global environmental change by enabling countries, particularly developing countries, to successfully address the challenges of global change through science-based adaptation and mitigation strategies, effective science and policy linkages and capacity development. In realising this vision, APN has been continuously supporting regional cooperative research and capacity development activities within the Asia-Pacific region. APN also carries the important mission on linking science and policy. Results gathered from APN-supported research and capacity building activities are communicated through Science-Policy Dialogues, held in each sub-region, and through other main events.

Objectives:

As part of the 20 years anniversary celebration, the APN proposes co-organising parallel sessions at major conferences being held during the 20th Anniversary of the APN from 2015 to 2016:

1. To encourage partnerships and networking with other institutions based in the region
2. To highlight the work of the Climate Adaptation Framework, specifically provide a synthesis of the first round of CAF projects and the work completed to date
3. To highlight the work of the Low Carbon Initiatives Framework, specifically providing capacity building results of some of the LCI projects
4. To encourage, through the CAF, best practices for Loss and Damage at the Grass Roots Level in the Asia-Pacific region.
5. To network and partner with LoCARNet.

The expected outcome is wider dissemination of APN and its strong history of conducting effective capacity building under the CAPaBLE programme and other initiatives such as the focussed activities; the lessons learned from the projects' sites; raised APN awareness and visibility; and effectively networking through co-organising events with partners in the region. Partners identified to date include project leaders of the present CAF projects as well as organisations LoCARNet, ICCCAD, PROVIA, among others.

Activities Envisioned:

1. Climate Change Conference 4-10 July 2014: See Appendix 1 (preparations are already underway)
 - **Budget: US\$9,000**
2. PROVIA: Adaptation Futures – Parallel Session on Synthesis of CCA/DRR/L&D – Appendix 2
 - **Budget: US\$8,000**
3. CBA10 – Parallel Session on Capacity Building for Loss and Damage – Appendix 3
 - **Budget: US\$6,500**

Climate Change Conference 4-10 July 2014: See Appendix 1 (preparations are already underway)

Budget: US\$9,000

**Our Common Future under Climate Change
International Scientific Conference 7-10 JULY 2015 Paris, France**

The Conference has four overarching objectives:

1 - Provide state-of-the-art scientific knowledge on climate change, one year after the release of IPCC AR5: physical basis of climate change, impacts, adaptation and vulnerability, mitigation, storylines and scenarios. Special emphasis will be placed on explaining, translating and disseminating the key results of IPCC AR5 and major developments thereafter. This Conference offers the opportunity to progress in our understanding of the multiple interactions between climate change, the geosphere, the biosphere and human societies, at a range of spatial and temporal scales. Special attention will be given to trans-disciplinary research and to emerging concepts.

3 - Assess the potential for evidence-based solutions to climate change challenges. Scientific evidence will be assessed to explore a large array of potential technological, social and institutional solutions to some of the challenges created by climate change. Potential solutions will be discussed in connection with the broader challenges of sustainable development, environmental conservation, equity, and cultural diversity.

2 - Explore a wide range of pathways combining climate change mitigation and adaptation, and sustainable development. Building on forecasts, storylines and scenarios, the Conference will discuss uncertainties; identify areas of consensus, and map controversies while taking stock of the multiple connections to development and environmental challenges within a large diversity of local, national and regional contexts.

4 - Contribute to a science-society dialogue. En route to COP21, the Conference will offer all interested parties (negotiators, policy-makers, businesses, NGOs, public at large) an up-to-date panorama of the insights that science can provide on climate change and how to tackle it. With the post-2015 agenda in sight, the Conference also offers a venue for scientists, policy-makers, businesses and NGOs to debate the research agenda for the coming years (both via the conference itself and side events organized by stakeholders).

Session 3342: Responding to Climate Change by Building Capacity in Asia-Pacific

Title: Developing Capacity through Low Carbon Initiatives, Climate Adaptation and Increased Resilience to Climate Impacts in the Asia-Pacific Region.

1. Names and contact information of lead convener(s) and co-convener(s)

Lead convener

- Dr. Linda Anne Stevenson
Head, Communication & Scientific Affairs Division
Asia-Pacific Network for Global Change Research (APN)
4F, East Building, 1-5-2, WakinohamaKaiganDori, Chuo-ku, Kobe 651-0073, JAPAN
Email: l Stevenson@apn-gcr.org; Tel: +81 (0) 78-230-8017

Co-convener(s)

- Ms. Taniya Koswatta
Coordinator, Asia-Pacific Network for Global Change Research (APN)
4F, East Building, 1-5-2, WakinohamaKaiganDori, Chuo-ku, Kobe 651-0073, JAPAN

Email: tkoswatta@apn-gcr.org; Tel: +81 (0) 78-230-8017

– Ms. Tomoko Ishikawa

Task Manager, LCS-RNet and LoCARNet, Programme Management Office, Institute for Global Environmental Strategies (IGES)

2108-11 Kamiyamaguchi, Hayama, Kanagawa, 240-0115, JAPAN

Email: t-ishikawa@iges.or.jp; Tel: +81-46-855-3866 / Fax: +81-46-855-3809 /

2. Brief summary of your Parallel Session (max. 200 words) for the purpose of providing a short description of your session on the Conference website

Co-organised by Asia-Pacific Network for Global change Research (APN) and Low Carbon Asia Research Network (LoCARNet) the session addresses capacity development activities, identifies common gaps and formulates future pathways for effective capacity development to respond to climate change. As a network of 22 countries supporting regional research and capacity development, APN under its capacity development programme, CAPaBLE, has conducted 128 since 2003. CAPaBLE enhances scientific capacity in developing countries to improve decision-making from grass roots to regional levels. APN will share outcomes of its climate-related CAPaBLE activities and initiatives to address capacity development, particularly scientific gaps and needs. APN places high emphasis on local/grassroots through to regional-level needs for capacity development to scientifically capacitate early-career scientists, civil society, and decision-making and local communities. Specific emphasis in the session is placed on adaptation and low carbon initiatives. LoCARNet will share capacity development activities that will be conducted in Cambodia, Lao PDR, Myanmar and Bangladesh for science-based policy-making. The session will have six speakers, four of whom will highlight specific activities. All speakers and participants will engage through active discussion and, time permitted, gaming sessions that will identify and address capacity development gaps in the region for climate change.

3. Full abstract of your Parallel Session

Climate change adaptation and low carbon development are receiving increasing attention among developing countries in the Asia-Pacific region. Under a number of initiatives linked with UNFCCC processes, approaches to address adaptation and mitigation associated with extreme and slow-onset events, particularly for countries most vulnerable to climate change, are underway in the Asia-Pacific Network for Global Change Research (APN). Under its Climate Adaptation Framework and Low Carbon Initiatives Framework, APN is addressing capacity building options for adaptation and mitigation in the region from local/grassroots levels to regional levels and responding to climate change challenges through capacity development initiatives under its CAPaBLE programme.

Co-organised by APN and Low Carbon Asia Research Network (LoCARNet) the session will address capacity development, identify important gaps and formulate future pathways for effective capacity development to respond to climate change. As a network of 22 countries APN, under its capacity development programme CAPaBLE, has conducted over 128 projects since 2003. CAPaBLE enhances scientific capacity in developing countries to improve decision-making from grass roots to regional levels. APN will share outcomes of its climate-related CAPaBLE activities and initiatives to address capacity development, particularly scientific gaps and needs. APN places high emphasis on local/grassroots through to regional-level needs for capacity development to scientifically capacitate early-career scientists, civil society, and decision-making and local communities. Specific emphasis in the session is placed on adaptation and low carbon initiatives. LoCARNet will share capacity development knowledge from case studies in four countries of Cambodia, Lao PDR, Myanmar and Bangladesh for science-based policy-making. The session will have six speakers, four of whom will highlight specific activities.

More specifically, a series of projects are underway that are addressing such issues as the risk of slow onset events, climate change impacts, approaches to slow onset and extreme weather events, and integrating slow onset and extreme events into climate resilient development processes. Capacity development in these areas will be addressed by van der Geest, Huq and Kanayathu through respective discussions on Methods Toolbox for Adaptation at the Local Level in Pakistan, India and Nepal; linking Climate Change Adaptation with Disaster Risk Reduction in Asia and the Pacific; and Risk Reduction and Proactive Adaptation: Building Capacity for slow and

rapid onset climatic extremes. Shom will provide information on a case study that built local government capacity to account for GHG emissions in Phitanulok, Thailand. Finally, the speakers will engage with the audience to discuss best practices in adaptation, mitigation and resilience to impacts as a result of climate change and attempt to offer solutions on how best to approach these challenges both for extreme and slow onset events. Before the session ends, and time permitting, there will be an interactive gaming session adapted from the Red Crescent Red Cross Center's games on resilience to climate change.

4. Names and contact information of keynote speakers

Presenter 01

Title: APN strategies to enhance capacity of scientists and policy makers in Asia and the Pacific

Speaker: Dr. Linda Anne Stevenson, Head, Communication & Scientific Affairs Division

E-mail: l Stevenson@apn-gcr.org

Presenter 02

Proactive Adaptation and Risk Reduction: Building Capacity for Slow and Rapid Onset Climatic Eextremes

Dr. Kanayathu Koshy, Center for Global Sustainability Studies, University Sains Malaysia, MALAYSIA

E-mail: kkoshy@gmail.com

Presenter 03

Building Local Government Capacity to Account for GHG Emissions in Phitanulok, Thailand.

Speaker: Ms. Shom TEOH, Programme Manager, Sustainable Cities, Institute for Global Environmental Strategies (IGES), THAILAND

E-mail: teoh@iges.or.jp

Presenter 04

Linking Climate Change Adaptation with Disaster Risk Reduction in Asia and the Pacific

Dr. Saleemul Huq, Executive Director, International Centre for Climate Change and Development

E-mail: saleemul.huq@iied.org

Presenter 05

Developing a Methods Toolbox for Adaptation at the Local Level in Pakistan, India and Nepal

Dr. Kees van der Geest: United Nations University Institute for Environment and Human Security (UNU-EHS);

Germany; E-mail: kgeest@gmail.com

Presenter 06

Title: capacity development activities of Low Carbon Asia Research Network (LoCARNet)

Speaker: Dr. Shuzo NISHIOKA Secretary General, LCS-RNet / LoCARNet Senior Research Advisor, IGES Japan or (nominated speaker by LoCARNet)

E-mail: nishioka@iges.or.jp

PROVIA: Adaptation Futures – Parallel Session on Synthesis of CCA/DRR/L&D – Appendix 2– **Budget: US\$8,000**

ADAPTATION FUTURES 2016



PROVIA is one of the strategic partners and conveners of a biennial International Adaptation Conference that brings together research scientists, policy makers and practitioners from developed and developing countries to share knowledge about adaptation challenges and opportunities. The Fourth International Climate Change Adaptation Conference will take place in Rotterdam, the Netherlands, 10 -13 May 2016.

The focus will be adaptation practices and solutions focusing all sectors globally with aims to strengthen cooperation between science and practice, engage communities of practice and build new partnership to link adaptation action to current development, investment and planning decisions. Co-hosted and convened by the European Commission, the Government of the Netherlands and the Global Programme of Research on Climate Change Vulnerability, Impacts and adaptation (PROVIA).

Adaptation Futures 2016

- ... is a conference and market-place for practices and solutions
- ... strengthens ties between science and practice
- ... engages communities of practice and builds new partnerships
- ... links adaptation action to current development, investment and planning decisions

The programme of the conference will offer a variety of plenary and parallel sessions, round tables, excursions, exhibition, side events and back to back meetings.

For more information, please visit [the conference website](#)

CBA10 – Parallel Session on Capacity Building for Loss and Damage – Appendix 3– **Budget: US\$6,500**

Community-based adaptation to climate change 10 (in Bangladesh; April 2016)

Climate change

Poor and vulnerable people are particularly affected by climate change impacts, such as floods, droughts and other extreme weather events. For decades, IIED (ICCCAD) has worked to help share knowledge developed by local communities, academics and project managers so that communities can better cope with climate change.



A human chain is formed to build a new and stronger flood barrier after cyclone Aila hit Bangladesh.
Photo by Espen Rasmussen/PANOS.

IIED's work in this area can broadly be broken down into two (often overlapping) areas:

- empowering communities to adapt to climate change, including through action research and the annual Community Based Adaptation (CBA) conferences; and
- advocacy, training and capacity building work to learn and share lessons on effective ways to adapt to climate change in the global south.

Item 08-05(b): APN Websites

As online communication/knowledge dissemination has become increasingly important, efforts have been made to expand APN's online presence and engage people through these online platforms. This paper presents new developments in APN websites and a plan for future activities as APN moves into its 4th Strategic Phase, for IGM consideration and discussion.

Alignment with 4SP goals

As outlined in the "Communication and Outreach Agenda" section of the draft Four Strategic Plan, online communication is expected to see a major shift from building platforms to generating contents, i.e. more focus will be given to producing the most appropriate content for different groups of stakeholders. This could be achieved by making use (and encouraging the use) of the new and improved online platforms and working in close collaboration with project researchers and knowledge holders.



(From left: Screen captures of the Main website, Alumni and E-Lib)

(1) Redesign of APN Websites and Improvement of Online Presence

To mark the 20th Anniversary and start of a new Strategic Phase, a new website will be launched with a new interface, improved navigation. Key figures in the community, including scientists and policy makers, will be invited to contribute guest articles to the new website. In terms of social media, the APN Facebook page has aggregated nearly 1000 likes, with certain information reaching thousands more people in extended networks. Twitter and LinkedIn pages were also established and will be strengthened in the future.

(2) Launch of APN Alumni with Photo Contest

The APN Alumni platform has been developed (<http://alumni.apn-gcr.org>) and includes three interactive components, i.e. researcher profile, discussion forums and personal blogging. In addition to organising article contests and young scientist discussion, the Alumni could be officially launched with a photo contest, which might be able to attract more active participation.

The photo contest could be held monthly, each with a theme that is in line with major upcoming international events (such as World Wetland Day, World Environment Day, etc). The photos submitted through the Alumni will be open for public voting. The winning photos will be displayed at the following IGM, where participants are invited to vote for the best photo. An award will be given to this photo in memory of the late Mr. Louis Brown, one of the key figures in shaping the APN.

The IGM is invited to provide input and feedback on the suggested activities described above.

Item 08-05(c): Media Engagement Activity

Background

A lot of effort has been in placed to identify impacts of climate change as well as possible means of adaptation and mitigation. APN has been part of this global effort in addressing global environmental change by enabling countries, particularly developing countries, to successfully address the challenges of global change through science-based adaptation strategies, effective science and policy linkages and capacity development. In realising this vision, APN has been continuously supporting regional cooperative research and capacity development activities within the Asia Pacific region. APN also carries the important mission on linking science and policy. Results gathered from APN-supported research and capacity building activities are communicated through a Science-Policy Dialogue, held in each sub-region.

During the first Science-Policy Dialogue held in Bangkok, Thailand, it was found that scientists faces difficulties conveying information to ministers and policy makers because of **communication gaps** —scientific information is not easily understood by the policy community. There was also a recommendation that knowledge production needs to be broadened, going beyond scientists and policy makers to include other actors who matter, which includes private sector, local communities, non-governmental organizations, and civil society organizations. In order to do this, more effective advocacy and awareness raising efforts need to be conducted.

Considering the recommendation from the first Science Policy Dialogue, the APN involved media community in the second APN Science-Policy Dialogue held in Bhutan in January 2015. A discussion arose about how climate change issues have been perceived as not being “newsworthy” by the media recently. A recommendation was given at that time that providing on-the-ground situations that clearly show how the “human factor” is impacted is considered the best way to sell a story to the public at large.

Taking into consideration this recommendation and the need to promote efforts that have been done to address global change issues in the region, a new activity to engage media is proposed.

Objective

As part of the 20 years anniversary celebration, the APN propose media engagement activity with the following objectives.

1. Increase media awareness of efforts that have been done to address global change issue, especially from the grassroots level;
2. Gathering lessons learned from the field.
3. Provide opportunity for APN project leader to transfer scientific information to the public through media.

The expected outcome of this activity is wider dissemination of the lessons learned taken from the project sites and raise APN visibility. The media is expected to be able to convey the message to the public, includes policy makers and implementing agencies, in a more understandable manner.

Proposed activity and budget proposed

1. Media visit

The proposed activity will involve engaging local media and available media in the sub-region to visit APN funded projects' sites. The media visit will be organised in line with sub-regional activity. The proposed media

visit will be conducted in two sub-regions in the fiscal year 2015/2016: South Asia and Southeast Asia. Project sites to be visited will be selected by the APN Sub-Regional Committee and APN Scientific Planning Group.

A group of media representatives will participate in a press tour, visiting APN-led project sites. The press will be given background of each project and go on a field visit to witness how the project impacted the communities in the project site. The media representative will be allowed time for discussion with the APN members, project leaders and communities. A field demonstration will also be conducted, if necessary.

2. *Writing competition*

The proposed activity will involve public as well as early-career journalists to write articles about APN-funded projects as part of celebrating APN's 20 years of achievement. The APN Secretariat will provide information on the projects as well as contact persons and announce the competition through the website. Published articles will be submitted to the APN for the competition. A panel of judges will assess the best article that conveys the message on global change research effectively. Winner of the competition will be awarded.

For the two activities mentioned above, the budget is proposed at approximately **US\$38,000**.

Item 8-6: Co-Finance with the University of Tokyo

Ms. Yuko Hoshino (nFP Alternate for Japan) introduced the concept of a proposal on establishing a co-finance system between the APN and the University of Tokyo (UT) to promote and support research conducted by project teams that include members from the university. A letter in this regard (attached below) addressed to the nFP for Japan from Prof. Keisuke Hanaki, Alliance for Global Sustainability Promotion Office, the University of Tokyo was presented to the 20th IGM for its consideration and approval.

###

March 11, 2015

Dear Akio Takemoto
NFP of Japan to APN

Dear Dr. Takemoto:

This mail is to propose developing a new research framework jointly sponsored by APN and the University of Tokyo. We have been organized an alliance called Alliance for Global Sustainability, AGS, since 1995 in order to promote global change research. AGS is looking for partners to work together in order to promote global and regional sustainability, especially, in Asia.

I would like to propose to provide research project opportunity for our faculty members to work with APN member countries, especially developing countries in Asia. We are able to share sponsorship of such projects that meets requirement of AGS and APN. Detailed requirements, selection process and funding level should be discussed further, however, I appreciate your careful consideration to start discussion between APN and AGS. I requested Dr. Kensuke Fukushi, AGS promotion office member, to communicate with you in order to explain this proposal in detail.

Sincerely yours,



Keisuke Hanaki
AGS promotion office

CC: Kazuhiko Takeuchi, Director, IR3S, TODIAS, The University of Tokyo

KH/kf

Exchange Rate for FY 2015: ¹⁾
 US\$ 1 = JPYen 126
 US\$ 1 = NZ\$ 1.35

Resources Available: ²⁾

Japan	Ministry of the Environment		2,187,000
	Hyogo Prefectural Government		167,200
ROK	Ministry of Environment		50,000
New Zealand	Ministry for the Environment		22,200
USGCRP/NSF			-
Projected Resources, Committed and Uncommitted, carried over from FY 2014		1,992,390	
Total		1,992,390	2,426,400
			4,418,790

Use of Resources: ³⁾

				Committed Resources ⁴⁾	Uncommitted Resources for new Allocation ⁵⁾	Resources Allocation of Direct Financial Contributions ⁶⁾	Total
				A	B	C	D=A+B+C
Ongoing Projects from Past Fiscal Years							
	ARCP 2012 - 2014			555,280			555,280
	CAPaBLE 2013 - 2014			68,440			68,440
	CAF 2014			141,760			141,760
	AOF 2012			6,000			6,000
	LCI 2012 - 2013			76,460			76,460
	RUSD 2012			5,980			5,980
	Possible Refund to NSF			8,990			8,990
	Sub Total			862,910			862,910
Projects and other Activities in FY2015							
	CRR 2015			295,000	0	145,200	440,200
	CAPaBLE 2015			30,000	0	377,500	407,500
	Climate Adaptation Framework			650,360	19,500	750,040	1,419,900
	Low Carbon Initiative Framework (LoCARNet Networking)			0	33,110	0	33,110
	One Annual Sub-Regional PDTW			0	0	25,000	25,000
	Science-Policy Linkages (including SBSTA, COP21, IPBES, SPD-TEA, and SPD Publications & Synthesis)			0	12,000	48,000	60,000
	Hyogo Activities			0	0	40,000	40,000
	Co-Financing Partnership with Cambodia (PDTW) ⁷⁾			0	13,000	5,000	18,000
	SRC South Asia			0	15,000	0	15,000
	SRC Southeast Asia			0	15,000	0	15,000
	SRC Temperate East Asia			0	15,000	0	15,000
	20th Anniversary Activities in 2016			0	16,510	38,490	55,000
	4th Strategic Plan and 3rd Strategic Phase Report Publications			0	5,000	0	5,000
	Annual Reports, Science Bulletin and Other Publications			0	10,000	10,000	20,000
	Secretariat Travel to APN Meetings and ad-hoc Science Meetings			0	0	55,000	55,000
	21st IGM/SPG, incl. SC			0	0	130,000	130,000
	Personnel Cost			0	0	495,000	495,000
	General Maintenance and Operational Cost			0	0	70,000	70,000
	Contingency (5% from Projected Direct Financial Contributions in FY 2015) ⁸⁾			0	0	121,170	121,170
	Deficit Compensation ⁹⁾			0	0	50,000	50,000
	IGES Administrative Overhead (3% of MOEJ Contribution)			0	0	66,000	66,000
	Sub Total			975,360	154,120	2,426,400	3,555,880
	Total				1,992,390	2,426,400	4,418,790

Explanatory Notes to DRAFT Work Programme and Budget Plan of FY 2015

1. Taking into account the current exchange rates, as well as applying the strategies put forward in Item Paper *IGM-SPG/20/02-02c Deficit Strategy* APN Secretariat proposes the following exchange rates as the basis of its financial management in FY 2015:

US\$ 1 = JPYen 126

US\$ 1 = NZ\$ 1.35

Resources Available

2. The resources available in FY 2015 are shown in two columns: the first one indicates the projected committed and uncommitted resources that are carried over from FY 2014, amounting US\$ 1,992,390. The second column shows the projected total amount of US\$ 2,426,400 that will be made available through the direct financial contributions. The total dimension of the resources available is US\$ 4,418,790.

Use of Resources

3. APN Secretariat's proposal of how to allocate the resources of FY 2015 is shown under 'Use of Resources'. The upper part indicates those projects that were approved for funding in previous fiscal years. The lower part shows new activities and other cost items APN proposes to invest in FY 2015.
4. The column A 'Committed Resources' indicates the amounts of funds that will be invested in projects that are approved in previous fiscal years but not finalized yet, totalling US\$ 862,910. In the lower part of the same column A committed funds are shown that are brought forward for continuing projects in their second and third years, i.e. US\$ 975,360.
5. Shown in column B, some of the funds that were brought forward are uncommitted and therefore can be allocated to new activities and cost items in FY 2015: US\$ 154,120. The total amount of columns A and B sums up US\$ 1,992,390.
6. The column C shows the distribution of the projected direct financial contributions in FY 2015, summing up US\$ 2,426,400.
7. Based on the MoU of a co-financing partnership that was agreed upon between Ministry of Environment of Cambodia (MOE Cambodia) and APN in June 2014, MOE Cambodia and APN Secretariat propose to hold a Proposal Writing Training Workshop (PDTW) in Cambodia and request an allocation of US\$ 18,000. Please note that MOE Cambodia is ready to co-finance this proposal, if approved, with US\$ 16,455.
8. Notably, applying the steps as suggested in Item Paper *IGM-SPG/20/02-02c Deficit Strategy* it is suggested to allocate a portion of 5% of the projected direct financial contributions as contingency. This strategy is a precaution for any unforeseen cases, such as significant exchange rate fluctuations, etc. Any unspent contingency funds could be fed into the contingency of the following fiscal year.
9. Similarly, following the step put forward in Item Paper *IGM-SPG/20/02-02c Deficit Strategy* APN Secretariat proposes to allocate US\$ 50,000 to be used to reduce the deficit.

Item 10: SPG Co-Chairs Report on Scientific Affairs and Capacity Building

Presently, there is no paper for this Item. The item paper and a PowerPoint Presentation will be delivered to the IGM in the meeting held on Friday, 27 March 2015

Item 11: New Climate Adaptation Framework (CAF) and CAPaBLE; and Continuing ARCP and CAPaBLE Recommendations for Funding

Presently, there is no paper for this Item. The item paper will be delivered to the IGM in the meeting held on Friday, 27 March 2015

APN Secretariat's Note:

Please refer to Appendices 3 and 4 of the Chairpersons' Summary for the list of new and continuing projects recommended by the 20th IGM.

Item 12: Steering Committee Elections

As the two-year term of elected national Focal Points to the Steering Committee will end at the 20th IGM/SPG Meeting, an election will be held under **Item 12** in the morning of Day 3, 27 March 2015. In accordance with the Framework Document, five national Focal Points shall be elected to serve the SC for a two year term starting from immediately after the election. To facilitate the nomination process, on 4 February 2015, the Secretariat Director invited all national Focal Points to submit nomination of appropriate candidates.

Nominations Received

As of 12 March 2015, the following national Focal Points have been nominated:

Country	Current nFP	Sub-region	Nominated by	Date
Bhutan	Ms. Peldon Tshering	SA	Nepal	26 February 2015
China	Dr. Chengyong Sun	TEA	Self	4 March 2015
Indonesia	Mr. Sabar Ginting	SEA	Cambodia	18 February 2015
Pakistan	Mr. Sajjad Ahmad	SA	Self	12 March 2015
Sri Lanka	Mr. Nihal Rupasinghe	SA	Self	4 March 2015

Current SC Membership

The current SC consists of the following members:

- **Elected members:**
 - Ms. Peldon TSHERING (Bhutan , interim Chair)
 - Dr. Chengyong SUN (China)
 - Mr. Sabar GINTING (Indonesia)
 - Mr. Mahendra Kumar THAPA (Nepal, Observer, host of 20th IGM)
 - Mr. Nihal RUPASINGHE (Sri Lanka, Observer)
- **Ex Officio Members**
 - Dr. Luis M. TUPAS (SPG Member for USA)
 - Dr. Jariya BOONJAWAT (SPG Member for Thailand)
- **Donor Country Representatives**
 - Dr. Akio TAKEMOTO(Japan)
 - Ms. Ho YU (Republic of Korea)
 - Dr. Maria UHLE (USA)
- **Co-Opted Members**
 - Prof. Roland John FUCHS
 - Dr. W. Andrew MATTHEWS
 - Dr. Kazuhiko TAKEMOTO

Appendix: Rules and procedures for Steering Committee; excerpt from APN Framework Document

B. The Steering Committee (SC)

1. Mandate

The Steering Committee (SC):

- i. acts on behalf of the IGM during the period between the IGMs, implementing IGM decisions; and
- ii. facilitates administrative and management arrangements necessary to implement the programme of activities of the APN, especially through thorough consideration of the APN budget.

In particular, the SC guides the Secretariat in:

- iii. developing funding for the APN and its programmes and activities by encouraging member countries to contribute funds or in-kind support;
- iv. exploring potential funding from other sources, e.g., international agencies and the private sector;
- v. liaising with international global change research and research-related organisations and encouraging their involvement in and support for APN activities and programmes; and
- vi. considering the potential attendance of observers as referred to in section 6.A.2.iv and 6.A.2.v.

2. Membership

- i. The SC includes:
 - a. five national Focal Points elected by the IGM, each to serve for a two-year term, taking into account the need to assure representation from the various sub-regions and the need to assure the rotation of membership;
 - b. the national Focal Point from the country to host the next IGM, to serve for a one-year term;
 - c. the two SPG Co-Chairs ex officio;
 - d. another Focal Point if an SPG Co-Chair is also a Focal Point;
 - e. experts co-opted by the SC, each to participate in SC activities for a one-year term (renewable); and
- ii. National Focal Points from donor countries may participate in SC activities.

3. Procedures

- i. The SC selects from among its elected national Focal Points a Chair, First Vice-Chair, and Second Vice-Chair. Should the position of Chair become vacant, the First Vice-Chair shall become Interim Chair until the next IGM. This procedure shall be followed until the SC can hold a normal election for this post. Similarly, should the position of First Vice-Chair become vacant, the Second Vice-Chair shall become Interim First Vice-Chair. This procedure shall be followed until the SC can hold a normal election for this post; and
- ii. The Chair is responsible, with the assistance of the Secretariat, for managing SC activities.
- iii. If an nFP serving on the SC no longer serves as his/her country's nFP, then the newly appointed nFP for that country is expected to take his/her place on the SC in the capacity of an observer, until the next IGM at which a new SC Member will be selected.

APN Framework Document

CONTENTS

Rationale..... 2

1. Vision..... 2

2. Mission..... 2

3. Goals..... 2

4. Core Strategies..... 3

5. Membership..... 3

6. Organs and Sub-Organs 3

A. The Inter-Governmental Meeting (IGM) 5

B. The Steering Committee (SC) 6

C. The Scientific Planning Group (SPG) 7

D. The Capacity Development Committee (CDC) 9

E. Sub-Regional Committees (SRCs)..... 9

F. The Secretariat 10

7. Financial Arrangements..... 11

8. Additional Arrangements..... 12

9. Language and Records..... 12

10. Date and Effect of Amendments..... 12

Appendix 1 13

Appendix 2 14

Appendix 3 15

Appendix 4 16

Framework of the Asia-Pacific Network for Global Change Research

Rationale

Countries within the Asia-Pacific region support more than half of the world's population, and changes in the Earth's bio-geophysical system are clearly impacting the societies and economies of these countries.

Recent research and supporting observations have provided new insights into some of these changes and their impacts but have, at the same time, opened a number of new and challenging scientific issues and questions. APN seeks to identify these scientific issues to promote, as well as encourage, regional cooperative global change research.

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. APN strives to enable the developing countries of the region to participate increasingly in, and to benefit fully from, cooperative research in the region and its sub-regions. APN assures that the research results contribute to the development of sound science-based response strategies and measures, policy- and decision-making processes, and scientific capacity development to address these important issues.

Finally, recognising the interactive role of regional processes in the overall Earth system, the APN also aims to link the initiatives it sponsors with related projects conducted in other regions and under the aegis of global-scale programmes.

1. Vision

Enable countries in the Asia-Pacific region to successfully address global change challenges through science-based response strategies and measures, effective science and policy linkages, and scientific capacity development.

2. Mission

The mission of the Asia-Pacific Network for Global Change Research (APN) is to enable investigation of change in the Earth's life support systems as it occurs in the Asia-Pacific region. The APN, therefore, supports investigations that will:

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

3. Goals

In order to achieve its mission, the APN has identified four goals:

- Goal 1. Supporting regional cooperation in global change research on issues particularly relevant to the region
- Goal 2. Strengthening appropriate interactions among scientists and policy makers, and providing scientific input to policy decision-making and scientific knowledge to the public

- Goal 3. Improving the scientific and technical capabilities of nations in the region, including the transfer of know-how and technology
- Goal 4. Cooperating with other global change networks and organisations

4. Core Strategies

The core strategies of the APN are to:

- i. Promote and encourage research that can improve understanding of global change and its implications for the region, and contribute to sound scientific basis for policy formulation and decision-making;
- ii. Promote and encourage activities that will develop scientific capacity and improve the level of awareness on global change issues specific to the region and; and
- iii. Identify and help address, in consultation with policy makers and other end-users, present and future needs and emerging challenges.

5. Membership

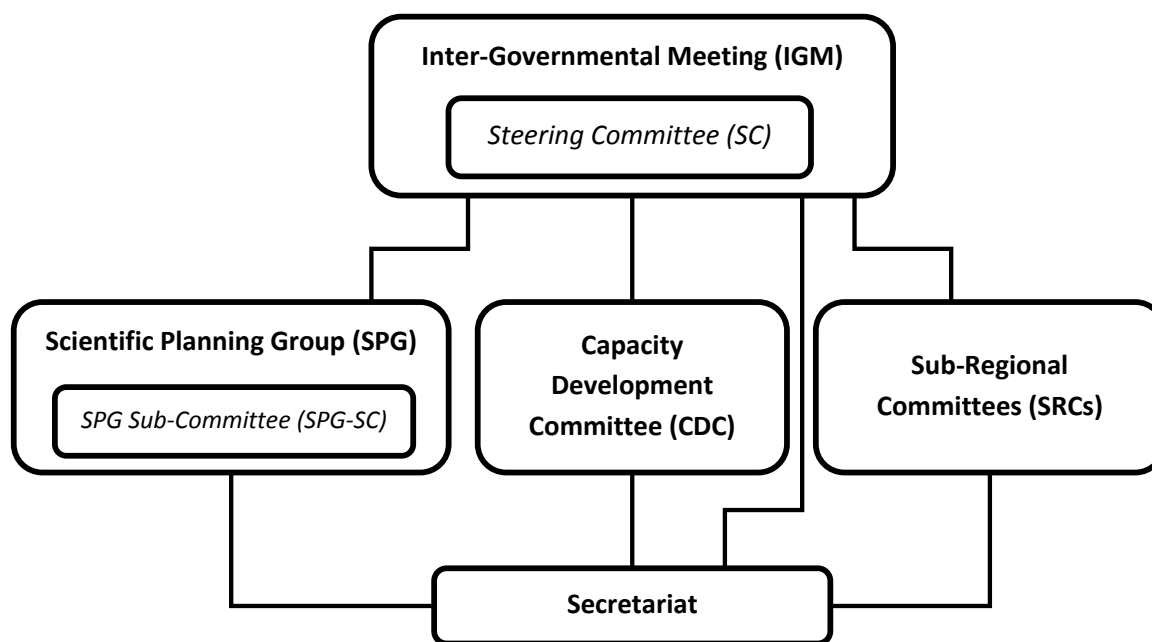
- i. Membership is open to all countries in the Asia-Pacific region. The current APN member countries are listed in Appendix 1 (page 13).
- ii. Each Member Country appoints:
 - a. a national Focal Point who is responsible for coordinating national activities and participating in the annual Inter-Governmental Meeting (IGM); and
 - b. a global change research expert who is the scientific contact in the respective country and participates in the annual Scientific Planning Group (SPG) Meeting.
- iii. A country in the region may become a member subject to IGM approval of an official governmental request from that country. A Member Country may withdraw from the membership of the APN at any time by submitting written notice to the Secretariat.

6. Organs and Sub-Organs

The APN's Organs and Sub-Organs are:

- i. Inter-Governmental Meeting (IGM);
 - Steering Committee (SC);
- ii. Scientific Planning Group (SPG);
 - SPG Sub-Committee (SPG-SC);
- iii. Capacity Development Committee (CDC);
- iv. Sub-Regional Committees (SRCs);
- v. Secretariat.

The organisational chart below illustrates the relationships between the organs.



Organisational Arrangements and Procedures

A. The Inter-Governmental Meeting (IGM)

1. Mandate

The Inter-Governmental Meeting (IGM) is the APN's general policy and decision-making body. The IGM:

- i. sets policy for the programmes, finances and other activities of the APN, etc.;
- ii. adopts rules and procedures for the APN;
- iii. oversees the development and production of the APN's annual operating plan;
- iv. reviews and approves the annual financial report, budget, and long-term financial management plan for the APN;
- v. considers the APN's needs for resources to support its programmes and activities; identifies possible sources of such funding and considers and approves arrangements for securing such funding;
- vi. reviews and approves projects to be undertaken or supported by the APN, based on recommendations made by the SPG and CDC;
- vii. reviews and approves other activities to be undertaken or supported by the APN, based on recommendations made by SPG, the SC, the CDC, SRCs and the Secretariat;
- viii. provides guidance to the SC, SPG, CDC, SRCs and the Secretariat;
- ix. conducts regular reviews of, evaluates and approves the APN's long-term plans, especially its Strategic Plan, and the implementation of these plans;
- x. establishes SRCs when appropriate; and
- xi. performs other functions, as necessary, to achieve the mission and goals of the APN.

2. Participation at IGM Annual Meetings

- i. National Focal Points of each Member Country may participate; a member country may designate an alternate national Focal Point to participate in an IGM if the national Focal Point is unable to attend;
- ii. SPG members may participate.
- iii. APN-approved countries may be invited to participate as appropriate;
- iv. Any non-APN member country that wishes to attend must indicate its interest to and receive an invitation from the Secretariat following consultation with the IGM, if it is in session, or, if it is not, by the SC;
- v. International global change research and research-related organisations, and national and international funding organisations engaged in supporting global change research may be invited to send observers. Invitations will be made in consultation with the IGM, if it is in session, or, if it is not, by the SC.

3. Meeting Procedures

- i. The IGM convenes annually;
- ii. The IGM elects a Chair, usually from the host country, and one Vice-Chair from among the national Focal Points in attendance;
- iii. The Chair facilitates all sessions of the IGM. He/she may delegate this role to the Vice-Chair;
- iv. The Chair ensures orderly and timely conduct of the IGM and that issues are decided by consensus;
- v. All participants may take part in discussions at the IGM; however only national Focal Points may participate in the adoption of APN policies and programmes;
- vi. The Secretariat maintains a record of the IGM; and
- vii. The Chair, with the assistance of the Secretariat, will prepare for IGM review and adoption a List of Actions taken by the IGM and a Chairperson's Summary of the Meeting.

B. The Steering Committee (SC)

1. Mandate

The Steering Committee (SC):

- i. acts on behalf of the IGM during the period between the IGMs, implementing IGM decisions; and
- ii. facilitates administrative and management arrangements necessary to implement the programme of activities of the APN, especially through thorough consideration of the APN budget and long-term financial management plan. In particular, the SC guides the Secretariat to:
 - a. develop, with member countries, funding and in-kind financial support for the APN and its programmes and activities by inviting and encouraging contributions, and developing co-funding partnerships; and to
 - b. explore potential funding from other sources, e.g., international organisations, funding agencies, development banks, private foundations, and other stakeholders of the private sector;
- iii. liaises with international global change research and research-related organisations and encourages their involvement in and support for APN activities and programmes; and
- iv. considers the potential attendance of observers as referred to in section 6.A.2.iv and 6.A.2.v.

2. Membership

- i. The SC includes:
 - a. five national Focal Points elected by the IGM, each to serve for a two-year term, taking into account the need to assure representation from the various sub-regions and the need to assure the rotation of membership;

- b. the national Focal Point from the country to host the next IGM, to serve for a one-year term;
 - c. the two SPG Co-Chairs ex officio;
 - d. another Focal Point if an SPG Co-Chair is also a Focal Point;
 - e. experts co-opted by the SC, each to participate in SC activities for a one-year term (renewable); and
- ii. National Focal Points from donor countries may participate in SC activities.

3. Procedures

- i. The SC selects from among its elected national Focal Points a Chair, First Vice-Chair, and Second Vice-Chair. Should the position of Chair become vacant, the First Vice-Chair shall become Interim Chair until the next IGM. This procedure shall be followed until the SC can hold a normal election for this post. Similarly, should the position of First Vice-Chair become vacant, the Second Vice-Chair shall become Interim First Vice-Chair. This procedure shall be followed until the SC can hold a normal election for this post; and
- ii. The Chair is responsible, with the assistance of the Secretariat, for managing SC activities.
- iii. If an nFP serving on the SC no longer serves as his/her country's nFP, then the newly appointed nFP for that country is expected to take his/her place on the SC in the capacity of an observer, until the next IGM at which a new SC Member will be selected.

C. The Scientific Planning Group (SPG)

1. Mandate

The Scientific Planning Group (SPG):

- i. reviews research proposals received by the APN for funding, especially those in response to the APN calls for proposals, and on the basis of this review, recommends research proposals to the IGM for its approval;
- ii. recommends themes to be included in the Science Agenda;
- iii. works with the Steering Committee and the Secretariat in arranging other scientific activities;
- iv. interacts on the APN's behalf with other international global research and research-related organisations; and
- v. responds to scientific requests from the IGM or the Steering Committee.

2. Membership

- i. Each Member Country of the APN may appoint one member to the SPG;
- ii. Members should be selected for their ability to contribute to development and implementation of APN scientific activities through:
 - a. relevant knowledge of APN scientific themes;

- b. participation in research or programmes directly related to APN activities;
 - c. capacity to initiate and strengthen science-policy linkages; and
 - d. willingness and availability to participate in the SPG's activities, especially proposal review processes and annual SPG-related meetings.
- iii. A Member Country may appoint an alternate to participate in SPG activities, including meetings, when the regular SPG Member is unavoidably unavailable;
 - iv. International organisations and research institutions involved in global change research activities, may be invited to attend the SPG Meeting as observers and to participate in SPG activities.

3. Meeting Procedures

- i. The SPG convenes annually in conjunction with the IGM;
- ii. The SPG elects two Co-Chairs from among its members. The election is held at the end of the SPG Meeting. It is usual for one Co-Chair to be elected from a developing Member Country and the other Co-Chair to be elected from a developed Member Country;
- iii. The Co-Chairs are elected for a term of two years; the terms are offset to provide continuity. A Co-Chair whose term is ending remains in office until the end of the IGM Meeting at which his/her successor is elected;
- iv. A Co-Chair may be re-elected at the expiry of his/her term.
- v. A Co-Chair participates in all SPG-relevant meetings, as agreed upon between the two Co-Chairs. If both are absent or otherwise unavailable, another SPG Member participates, at the request of the two Co-Chairs, or with the agreement of the SPG;
- vi. The Co-Chairs are responsible, with assistance from the Secretariat, for the orderly and timely conduct of meetings. The Co-Chairs ensure that SPG decisions are made by consensus;
- vii. The SPG agrees on the processes for the conduct of its activities, including meetings;
- viii. The SPG may invite additional experts to participate in its meetings and other activities, as appropriate; and
- ix. The SPG prepares and submits reports of its meetings and activities to the IGM.

4. The SPG Sub-Committee (SPG-SC)

- i. Convenes prior to the SPG Meeting;
- ii. Reviews and prioritises ARCP proposals received for APN funding, for consideration by the SPG;
- iii. the SPG Sub-Committee Members are:
 - a. two SPG Co-Chairs (ex officio) and
 - b. three other SPG Members elected by the SPG at its meeting in the previous year.
- iv. the SPG Sub-Committee may invite additional experts to attend its meeting as observers.

D. The Capacity Development Committee (CDC)

1. Mandate

The Capacity Development Committee (CDC) is responsible to the IGM, while reporting to the SC during the intersessional periods between IGMs. The CDC:

- i. oversees the processes related to the operation of the CAPaBLE Programme;
- ii. develops strategies for the development and future of the CAPaBLE Programme; and
- iii. reviews and prioritises CAPaBLE proposals received for APN funding, for consideration by the IGM.

2. Membership

- i. the membership of the CDC consists of:
 - a. the Steering Committee Chair (ex officio);
 - b. the two SPG Co-Chairs (ex officio); and
 - c. one donor representative, invited by the IGM.
- ii. the CDC may co-opt up to four experts as members to participate in CDC activities for a term of one-year (renewable) among members with strong links to organisations and programmes that are involved in capacity development.
- iii. additional representatives may attend, upon invitation, CDC meetings as observers.

3. Procedures

- i. convenes prior to the SPG Meeting and reports on the results of its work to the SPG;
- ii. this report will include its review and prioritisation of CAPaBLE proposals.
- iii. the CDC elects one of its members to act as its Chair;
- iv. the Chair is responsible, with the assistance of the Secretariat, for managing the CDC activities and coordinating communication among its members.

E. Sub-Regional Committees (SRCs)

The IGM may establish a Sub-Regional Committee (SRC) when requested by APN Member Countries from a sub-region.

1. Mandate

Each SRC will provide a forum for:

- i. identifying and discussing scientific research, capacity development and other related needs that are common to the sub-region;
- ii. recommending to the IGM actions that the IGM could take to address these needs in the sub-region;

- iii. working with the other organs of the APN to assure effective implementation of APN programmes and related activities in the sub-region;
- iv. maintaining and strengthening communication and interaction among the members of the SRC and between the SRC and the other organs of the APN; and
- v. strengthening interactions among scientists and policy makers in the sub-region.

2. Membership

- i. When the IGM establishes an SRC, the Director of the Secretariat will invite all APN Member countries in the sub-region to join the SRC;
- ii. Each such Member Country that wishes to participate in the SRC will notify the Secretariat of its interest and willingness to participate in the SRC and of its member(s) on the SRC;
- iii. Members will normally be the Member Country's nFP, its SPG Member, or both; an SRC Member may designate an alternate to participate in SRC meetings if he/she is unable to attend;
- iv. The Secretariat will assure that all APN Members are kept informed of the membership of SRCs.

3. Procedures

- i. Each SRC will normally meet annually during the IGM but may also meet separately during the intersessional period if the need arises and funding is available;
- ii. Each SRC will elect a Chair and Vice-Chair at the beginning of its annual meeting at the IGM;
- iii. The Chair and Vice-Chair will be elected for a one-year term and may be re-elected for a second year;
- iv. When an SRC meets during an intersessional period and the IGM accepts an offer from an SRC Member to host the meeting, the host Country will appoint one of its members on the SRC to act as Second Vice-Chair. The Second Vice-Chair will remain in office until the end of the next SRC meeting at the IGM; and
- v. Each SRC will prepare and submit reports of its meetings and activities to the IGM and keep the SC and the Secretariat informed of its work during the intersessional period.

F. The Secretariat

1. Mandate

The Secretariat provides operational support for the APN and, in particular, for the IGM, the SC, the SPG, the CDC, the SRCs, and other APN organs. The Secretariat:

- i. Assists these organs to assure effective implementation of the general policies of the APN;
- ii. Works with the IGM and SC to assure effective implementation of their decisions, especially with respect to the Strategic and Operational Plans, the scientific activities and the finances. In this regard, the Secretariat:
 - a. Supports drafting and development of the APN's Strategic Plan, which is prepared together with a Status Report of the previous five-year Strategic Phase;

- b. Manages the APN's calls for proposals processes, and assists the SPG and CDC in the effective review and evaluation of the proposals received and the submission of their recommendations to the IGM for approval;
 - c. Works closely with the IGM and the SC to obtain the financial resources needed, especially by identifying and engaging potential donors, which include member and non-member countries, international and regional organisations, and private foundations;
 - d. Prepares an annual report on the finances of the APN; a draft annual budget; and a long-term financial management plan for consideration and approval by the IGM and distributes these documents to nFP's well in advance of the IGM;
 - e. Prepares an interim status report on the budget for the SC for review and comment at its intersessional meeting;
 - f. Manages other aspects of the APN finances in a transparent and cost-effective manner;
- iii. Supports the work of SRCs to assure effective implementation of APN programmes and related activities in the sub-regions and assist the SRCs in providing input on sub-regional needs and priorities to the IGM;
 - iv. Plans, organises and supports the conduct of APN meetings.
 - v. Communicates closely with all organs and members, the international global change community, and other stakeholders; and
 - vi. Facilitates other day-to-day operations of the APN.

2. Operations

- i. Resources and support for the Secretariat are provided by the host country, including the Central and Local Governments and may be augmented by other donors. In addition, the host country provides the services of a senior expert in global change issues, seconded as the Director of the Secretariat.
- ii. The Secretariat operates under the administrative arrangements of an institution based in the host country. For further information, refer to Appendix 3 (page 15).

7. Financial Arrangements

- i. The APN maintains a special funding/financial account within an institution based in the host country (refer to Appendix 3). The purpose of this account is to independently administer contributions pledged by member countries and other sources.
- ii. The APN special account is subjected annually to external audit.
- iii. As described in the Secretariat section, 6.F.2.i., resources and support for the Secretariat are provided by the host country. However, this does not exclude other member countries from providing support to the Secretariat.
- iv. Member countries are strongly encouraged to contribute to the budget on a regular and/or project basis.

- v. In-kind support from governments and/or institutions of the member countries is also encouraged. This includes providing human resources, supporting workshops and meetings, particularly the IGM, SC, SPG, CDC and SRC meetings, and providing equipment.
- vi. APN funds are administered in a transparent and cost-effective manner.
- vii. The Secretariat manages the APN account and presents annual financial reports to the IGM.
- viii. The fiscal year is from April 1 to March 31, the following year.

8. Additional Arrangements

- i. The IGM, SC, SPG, CDC and SRCs may establish small ad hoc groups for specific tasks, such as planning or provision of specialised advice. Such groups will normally conduct their work during the sessions of their parent bodies and/or intersessionally via electronic correspondence. Establishment of any such group that requires financial resources requires the approval of the IGM
- ii. Expected roles of the nFPs, SC Members, SPG Members, CDC Members, SRC Members and the Secretariat are specifically elaborated in Appendix 4 (pages 16–21) as guidance.

9. Language and Records

- i. English is the official and working language for all IGM, SC, SPG, CDC and SRC meetings, documents, and communications.
- ii. Members, observers or invited experts may speak at a meeting in a language other than English; however he/she is responsible for providing interpretation in English.
- iii. The Secretariat is responsible for keeping APN records and official papers, and for distributing them to members and interested parties, as appropriate.

10. Date and Effect of Amendments

- i. Amendments to the Framework Document must be proposed by a Member Country or the SC and approved by the IGM.
- ii. Proposed amendments and supporting documentation must be distributed to member countries no later than two months prior to the IGM, for consideration.
- iii. Each approved amendment will take effect on the day following the IGM, unless the IGM decides on another date.

Appendix 1

Current APN member countries are:

Australia
Bangladesh
Bhutan
Cambodia
China
Fiji
India
Indonesia
Japan
Lao People's Democratic Republic
Malaysia
Mongolia
Nepal
New Zealand
Pakistan
Philippines
Republic of Korea
Russian Federation
Sri Lanka
Thailand
United States of America
Viet Nam

Note: APN Approved Countries:

Individuals and organisations in the following countries may participate in all APN programme activities and are considered to be from an APN Approved Country under the programme membership participation criterion:

Maldives
Myanmar
Pacific Island Countries
Singapore

Appendix 2

The APN presently (March, 2014) has three Sub-Regional Committees as listed below, with the membership of each:

South Asia Sub-Regional Committee (SA-SRC)

Bangladesh
Bhutan
India
Nepal
Pakistan
Sri Lanka

Southeast Asia Sub-Regional Committee (SEA-SRC)

Cambodia
Indonesia
Lao PDR
Malaysia
Philippines
Thailand
Viet Nam

Temperate East Asia Sub-Regional Committee (TEA-SRC)

China
Japan
Mongolia
Republic of Korea
Russian Federation

Note: Approved countries within a sub-region where an SRC exists may participate as observers.

Appendix 3

As of 1 April, 2004, the APN transferred from its former administrative body and now operates under the administrative arrangement of the Institute for Global Environmental Strategies (IGES).

IGES is an independent, non-profit research institute, established in Kanagawa, Japan, in 1998 under the support of the Japanese government. It aims to conduct research on practical ways to protect the earth's environment and to realise greater sustainability and equity in the global community.

The APN's decision-making is independent from IGES. The APN maintains, and separately manages, a special account within the IGES administration. The purpose of this APN special account is to independently administer contributions pledged by member countries and other sources.

The APN's financial report is submitted for external audit by an independent body with an international reputation. Thus, the APN's status will become more robust with the aforementioned financial, legal and administrative arrangements.

Appendix 4

Guidance for APN national Focal Points (nFPs)

National Focal Points (nFPs) are responsible for representing their countries in the activities of the APN, especially their countries' programs and interests in global change research and related activities, e.g., observing systems, data policy and management, and science-driven capacity building. These APN activities include especially the annual Inter-Governmental Meeting (IGM) and meetings of the Sub-Regional Committee of which the nFP's country is a member.

NFPs are responsible to prepare effectively for and to participate actively in these meetings/activities and their follow-up. Each nFP is expected to arrange for an annual update on his/her country's APN-relevant global change research and related programs to be presented at the annual IGM.

NFPs are called upon to participate in IGM efforts to identify important issues, evaluate these, consider options for resolving them, and assist the IGM to take decisions to implement them. Such issues could, but are not limited to, setting policy for APN programmes and finances; approval of APN rules and procedures; development and production of the APN's annual operating plan; review and approval of the APN's annual financial report and budget; review and approval of projects and activities to be undertaken or supported by the APN, based on recommendations made by the Scientific Planning Group; providing guidance to the Scientific Planning Group, the Steering Committee, the Capacity Development Committee, the Sub-Regional Committees and the Secretariat; implementation of long-term plans, including the APN's Strategic Plan, and regular evaluation and review of these. NFPs are the only IGM participants authorised to formally approve or otherwise vote on actions to be taken and are expected to do so.

Each nFP is expected to work closely with his/her country's Scientific Planning Group (SPG) Member to assure consistent participation in meetings of the IGM, SPG, and SRCs.

NFPs are expected to bring to APN activities their experience as scientists, science managers, and government officials. They are expected to maintain close communications with their national scientific communities, scientific institutions, and interested government agencies and to bring the benefits of these communications to the APN meetings/activities in which they participate.

NFPs should be prepared, when called upon, to represent the APN at meetings, workshops and other APN-relevant events and activities.

NFPs are expected to respond to queries and requests from the APN Secretariat on a timely basis.

If an nFP is not able to participate in an APN meeting/activity in which the nFP is representing his/her country, the nFP is expected to designate an appropriate alternate and to do so on a timely basis.

If an nFP is no longer able to serve in such a capacity on a long-term basis, he/she should notify his/her appropriate national authorities and arrange for a successor to be designated and should so notify the APN Secretariat.

An nFP may offer or may be asked to arrange for his/her country to host either the annual IGM/SPG Meetings or other APN activities/meetings.

The nFP from the country that hosts an IGM is normally expected to offer to Chair the IGM. NFPs from other APN member countries may be asked to serve as Vice-Chairs for IGMs and are encouraged to accept such responsibilities when offered.

The Chair is expected to manage the IGM on an effective and timely basis, keeping in mind the need to do so on a fair and open-minded basis; to seek an appropriate balance among the wide variety of interests among the nFPs, SPG Members, and other IGM participants; and, when appropriate, set aside his/her personal scientific, managerial, and/or national official interests. The Chair is strongly encouraged to seek solutions to issues based on consensus.

The Chair, with the assistance of the Secretariat, will prepare a List of Actions taken by the IGM for its review and adoption before the end of an IGM Meeting. A Chairperson's Summary of the Meeting will be made available to the IGM within three months after the end of that meeting.

If the Chair finds it necessary to be absent or is otherwise unavailable (e.g., because of a conflict of interest), a Vice-Chair may be asked to serve as a Co-Chair on an interim basis and, in doing so, to act in accordance with the above guidance.

NFPs from developed countries are expected to seek and to obtain funding from their programs, institutions and/or governments to participate in IGMs and other APN meetings/activities. Other nFPs are encouraged to similarly seek such national funding, but may receive reimbursement for travel, accommodation and daily subsistence, as appropriate, for their participation in IGMs and other APN meetings/activities. However, honoraria are not provided to nFPs for their service in IGM's and other APN meetings/activities.

When representing the APN in a meeting/activity, nFPs are expected to submit a mission report to the APN Secretariat, normally within a few weeks of the completion of the activity.

Guidance for Steering Committee (SC) Members

Steering Committee (SC) Members, after being selected by the Inter-Governmental Meeting (IGM), are expected to work very closely together and in close interaction with the APN Secretariat to guide the APN in the intersessional period between the IGMs, especially to promote and encourage effective implementation of IGM decisions. SC members are expected to be very proactive and to initiate action to improve the APN programme, planning and operations, especially via electronic communications.

SC members may be called upon to participate in SC efforts to identify important issues, evaluate these, consider options for resolving them, and take decisions to implement them. Such issues could include, but are not limited to: administrative and financial management arrangements to implement the APN programme; development of funding for the APN and its programmes from member countries, international agencies and the private sector, either on a cash or in-kind basis; interacting with the international global change research programmes and international intergovernmental and non-governmental organisations; preparation, in cooperation with the APN Secretariat, of an annual operating plan; keeping under review the roles, responsibilities, performance and achievements of the APN using appropriate metrics; and reporting to the IGM and keeping the APN Secretariat informed regarding SC activities.

NFPs are encouraged to serve on the SC when called upon to do so (Note: the two SPG Co-chairs are automatically SC Members). An SC Member who is not able to fulfil his/her responsibilities for any reason should step down so that a new member may be appointed. If an nFP serving on the SC no longer serves as his/her country's nFP, then the newly appointed nFP for that country is expected to take his/her place on the SC in the capacity of an observer, until the next IGM at which a new SC Member will be selected.

The SC Chair, who is elected by the SC from among its national Focal Points, is expected to manage the IGM on an effective and timely basis, keeping in mind the need to do so on a fair and open-minded basis and to seek appropriate balance among the APN's scientific, scientific management, administrative and financial management interests and, when appropriate, set aside his/her personal scientific, managerial,

and/or national official interests. The Chair is strongly encouraged to seek solutions to issues based on consensus.

The SC Chair and other SC Members as well are expected to work closely with the APN Secretariat to represent the APN in a wide range of international meetings and related activities, carrying to these audiences information regarding the APN programme, planning and operations; inviting input to the APN programme, planning and operations within and from these fora; and encouraging, when appropriate, improved interaction with the APN.

If the Chair finds it necessary to be absent or is otherwise unavailable during a meeting (e.g., because of a conflict of interest), the highest level Vice-Chair present shall serve as Acting Chair for the duration of the Chair's absence/unavailability. If no Vice-Chair is present, another SC Member may be asked to serve as Acting Chair on an interim basis. The Acting Chair shall, while serving in this capacity, act in accordance with the above guidance.

SC Members from developed countries are expected to seek and obtain funding from their programmes, institutions and/or governments to participate in SC meetings and related activities. Travel support may be provided for SC Members from developing countries

Guidance for Members of the APN Scientific Planning Group (SPG)

SPG Members are expected to participate actively in the annual meetings and other activities of the SPG and, if designated by his/her country, in meetings of an SRC of which the country is a member. SPG Members should bear in mind that, in this participation, they are expected to bring to bear their personal scientific and scientific management, irrespective of how they were nominated for SPG membership. SPG Members are, of course, welcome and encouraged to share with the SPG information regarding national and/or international science programmes and issues that may be relevant to the work of the SPG, but should not advocate in the SPG and its deliberations official positions of the member's programme, institution, country, and/or international organisations. Each SPG member is expected to work closely with the national Focal Point (nFP) from his/her country and, in particular, to make sure that the nFP is kept up-to-date on activities and views of the SPG.

SPG activities in which members are expected to participate include, but are not limited to:

- review and evaluation of research proposals received by the APN and the preparation of recommendations to the APN Inter-Governmental Meeting (IGM) for APN funding of appropriate proposals; this could involve serving on various small ad hoc groups that support these activities;
- evaluation and review of the APN Strategic Plan and of themes that the APN may consider appropriate and may select for emphasis in the implementation of this Plan;
- consideration and identification of research-driven capacity building of value to the APN; and
- when called upon, to represent the SPG in other APN activities or with national and/or international programmes and organisations with which the APN interacts, e.g., in meetings, workshops and other APN-relevant events.

If an SPG Member is not able to participate in an SPG meeting, he/she should so notify the APN Secretariat as soon as possible. If an SPG Member is not able to fulfil his/her responsibilities on a long-term basis, for any reason, then he/she should step down and so notify the APN Secretariat immediately so that a new member may be proposed.

The SPG calls upon two of its members to serve as Co-Chairs of the SPG for two-year periods. SPG Members are encouraged to serve in this capacity if asked.

The Co-Chairs are expected to manage the meetings of the SPG on an effective and timely basis, keeping in mind the need to do so on a fair and open-minded basis and to seek an appropriate balance among the wide variety of interests among SPG Members and, when appropriate, set aside their personal scientific interests.

If both Co-Chairs are absent or otherwise unavailable, another SPG Member may be asked to serve as a Co-Chair on an interim basis and, in doing so, to act in accordance with the above guidance.

SPG Members from developed countries are expected to seek funding from their programmes, institutions and/or governments for their participation in SPG meetings and other SPG activities. Other SPG Members may receive reimbursement for travel, accommodation and daily subsistence, as appropriate, but honoraria are not provided to SPG Members for their service on the SPG.

When representing the APN in an activity, SPG Members are expected to submit a mission report to the APN Secretariat, normally within a few weeks of the completion of the activity.

Guidance for Capacity Development Committee (CDC) Members

Designated and accountable to the IGM, the CDC will:

- i. Ensure that CAPaBLE operates and develops in accordance with the Objectives of the APN vis-à-vis 1) fostering global change research, 2) promoting developing-country scientists' participation, 3) science-policy interfacing, 4) specific objectives of CAPaBLE, and 5) directives of the Intergovernmental meeting and/or the APN Steering Committee.
- ii. Ensure that CDC deliberations and actions are transparent and communicated widely, especially to the APN Steering Committee and the Inter-Governmental Meeting.
- iii. Establish and review the procedures of the CAPaBLE Programme related to:
 - call(s) for proposals for funding through the Programme;
 - the selection of proposals for funding including the disciplinary areas of research and regional focus that reflect the priorities established by the IGM;
 - the review of overall performance of the projects;
 - ensuring the dissemination of materials generated; and
 - developing guidelines to focus activities around current and developing themes in global change.
- iv. Identify contact point persons who will 1) act as a link between a specific CAPaBLE project and the CDC providing feedback to the CDC, 2) assist APN recipients of CAPaBLE support to achieve their objectives, and 3) provide advice and mentoring to the project.
- v. Establish effective mechanisms for the communication of activities and outcomes of the CAPaBLE Programme to all members and stakeholders.
- vi. Assist with the development of strategies for the growth of investment in APN's capacity building activities.

This will include developing a strategy to provide the basis for an evolving agenda for APN capacity building that can, in turn, lead to developing a strategy for building the financial support, diversity, continuity and reporting for the programme, including:

- more inclusive financial participation from across the members nations
 - higher profile of CAPaBLE within members nations (government) and appreciation of the value of capacity development
 - engagement with alternative funding sources
- vii. Through its membership, the CDC will use its networks to create linkages into the activities of a range of international agencies and programmes involved in global change research and capacity building activities so that the APN's work aligns and complements the works of the other agencies but also provides for the continued development and integration of those individuals and groups supported by APN.
- viii. Develop a conceptual framework of the Science-Policy Interface, explicitly identifying the role of APN and CAPaBLE and develop methodologies for enhancing the process and promoting the incorporation these methodologies into research activities.

Guidance for Members of Sub-Regional Committees (SRCs)

A Sub-Regional Committee (SRC) is established upon approval of the IGM.

An SRC is expected to plan and implement activities that promote the APN in the sub-region and beyond. Such activities shall be approved by the IGM prior to implementation.

An SRC provides a forum for identifying and discussing scientific research, capacity development and other related needs that are common in the sub-region; recommends to the IGM actions that the IGM could take to address these needs in the sub-region.

An SRC works with the other organs of the APN to assure effective implementation of APN programmes and related activities in the sub-region; maintains and strengthens communication and interaction among the members of the SRC and between the SRC and the other organs of the APN; and strengthens interactions among scientists and policy makers in the sub-region.

An SRC is also expected to:

- communicate with project leaders and their collaborators, and organisations and networks in the sub-region
- encourage involvement of scientists in the region in research and capacity development activities
- identify and attract potential donors for the sub-region

When the IGM establishes an SRC, the Director of the Secretariat will invite all APN Member countries in that sub-region to join the SRC. Each Member Country that wishes to participate in the SRC will notify the Secretariat of its interest and willingness to participate in the SRC and of its member(s) on the SRC. Members will normally be the Member Country's nFP, its SPG Member, or both. An SRC member can designate an alternate to participate in SRC meetings if he/she is unable to attend. The SRC informs the Secretariat of any changes in the Membership. The Secretariat will then assure that all APN Members are kept informed of the membership of SRCs.

An SRC normally meets annually during the IGM. During the intersessional period, it is expected that the work of the SRC will be carried out electronically. If the need arises and funding is available, an SRC may also meet during the intersessional period. Administrative support for such a meeting is expected to be largely provided by the country hosting that meeting.

An SRC elects a Chair and Vice-Chair at the beginning of its annual meeting at the IGM. The Chair and Vice-Chair is elected for a one-year term and may be re-elected for a second year. When an SRC meets during an intersessional period and the IGM accepts an offer from an SRC Member to host the meeting, the host Country will appoint its nFP to act as Second Vice-Chair. The Second Vice-Chair will remain in office until the end of the next SRC meeting at the IGM.

An SRC is expected to submit reports of its meetings and activities to the IGM and keep the SC and the Secretariat informed of its work during the intersessional period.

Guidance for the Secretariat

The Secretariat performs the daily operations of the APN and, in particular, assists the IGM, the SC, the SPG, the CDC and the SRCs in implementation of the APN's Strategic and Operational Plans; programme; budget; and other activities, as appropriate.

In managing the APN finances, the Secretariat prepares and distributes annual financial reports; draft annual budgets and financial management plans for consideration and approval by the IGM. In addition, the Secretariat prepares and presents an interim status report on the budget to the SC at its intersessional meetings, for review and comment.

The Secretariat is expected to manage as a very high priority the calls for proposal processes for regional research and capacity building.

The Secretariat is expected to support APN Meetings, including the IGM, SC, SPG and CDC Meetings. This support includes planning, organising, and arranging logistics for the meetings; preparing and assuring timely distribution of meeting documentation; assisting in the conduct of the meetings at the guidance of the respective Chairpersons; and documenting the meetings, especially by keeping records and preparing draft reports as needed.

The Secretariat is called upon to assure timely and effective APN communications and to work closely with all of its organs, with its members; with other regional institutions and networks; with the international global change research programmes; with policy makers; with donors and stakeholders; and with the scientific community and the general public (e.g., through brochures, the APN website, publications, etc.).

When travelling on behalf of the APN, Secretariat staff will receive reimbursement for travel, accommodation and daily subsistence, as appropriate. Secretariat staff is expected to submit a mission report, normally within a few weeks of the completion of the activity, to the SC

Revised: 10 April 2015

Item 14: Hosts of 21st and future IGMs

Discussions are expected to take place under the present item, and announcements may be made. A list of past IGMs and associated meetings are provided below for information.

Locations of past IGMs and associated meetings

Year	Location	Sub-Region	Meetings
2015	<i>Kathmandu, Nepal</i>	SA	20 th IGM/SPG, 25-27 March
2014	<i>Siem Reap, Cambodia</i>	SEA	19 th IGM/SPG, 17-21 March
2013	<i>Kobe, Japan</i>	TEA	18 th IGM/SPG, 8-12 April
2012	<i>Jakarta, Indonesia</i>	SEA	17 th IGM/SPG, 12-16 April
2011	<i>Colombo, Sri Lanka</i>	SA	16 th IGM/SPG, 4-8 April
2010	<i>Busan, Republic of Korea</i>	TEA	15 th IGM/SPG, 15-19 March
2009	<i>Kuala Lumpur, Malaysia</i>	SEA	14 th IGM/SPG, 16-20 March
2008	<i>Kobe, Japan</i>	TEA	13 th IGM/SPG, 16-20 March
2007	<i>Honolulu, USA</i>	<i>Pacific</i>	12 th IGM/SPG, 19-23 March
2006	<i>Bangkok, Thailand</i>	SEA	11 th IGM/SPG, 20-24 March
2005	<i>Kobe, Japan</i>	TEA	10 th IGM/SPG, 10-14 April
2004	<i>Canberra, Australia</i>	<i>Oceania</i>	9 th IGM/SPG, 21-24 March
2003	<i>Hanoi, Viet Nam</i>	SEA	8 th SPG and 8 th IGM, 9-14 March
2002	<i>Manila, Philippines</i>	SEA	7 th SPG and 7 th IGM, 10-14 March
2001	<i>Jeju Island, Republic of Korea</i>	TEA	6 th SPG and 6 th IGM, 18-24 March
2000	<i>Islamabad, Pakistan</i>	SA	5 th SPG and 5 th IGM, 26-30 March
1999	<i>Kobe, Japan</i>	TEA	4 th IGM, 18-20 March
1998	<i>Beijing, China</i>	TEA	3 rd IGM, 11-13 March
1997	<i>Tokyo, Japan</i>	TEA	2 nd SPG and 2 nd IGM, 24-28 March
1996	<i>Chiangmai, Thailand</i>	SEA	1 st IGM, 25-26 March

Locations of other APN Meetings

- 6th SA Sub-Regional Committee Meeting — Thimpu, Bhutan (22 January 2015)
- 7th SEA Sub-Regional Committee Meeting — Vientiane, Lao PDR (8 July 2014)
- 6th SEA Sub-Regional Committee Meeting — Kuala Lumpur, Malaysia (25-29 Nov 2013)
- 5th SA Sub-Regional Committee Meeting — Wattala, Sri Lanka (1-5 Oct 2013)
- 25th SC Meeting — Wattala, Sri Lanka (30 September – 1 Oct 2013)
- 4th SA Sub-Regional Committee Meeting – Kathmandu, Nepal (14-18 Jan 2013)
- 22nd SC Meeting – Kobe, Japan (31 October-1 Nov 2012)
- 5th SEA Sub-Regional Committee Meeting – Siem Reap, Cambodia (22-26 Oct 2012)
- 3rd SA Sub-Regional Committee Meeting – Paro, Bhutan (16-19 Jan 2012)
- 19th SC Meeting – Phnom Penh, Cambodia (6-7 Oct 2011)
- 4th SEA Sub-Regional Committee Meeting – Hanoi, Viet Nam (25-29 Jul 2011)
- 3rd SEA Sub-Regional Committee Meeting – Manila, Philippines (9-10 Nov 2010)
- 2nd SA Sub-Regional Committee Meeting – Pune, India (2 Nov 2010)
- 16th SC Meeting – Kobe, Japan (30-31 Aug 2010)
- 13th SC Meeting, Augmented SC Meeting and Writing Workshop–Kobe, Japan (24-27 Aug 2009)
- 2nd SEA Sub-Regional Committee Meeting – Bangkok, Thailand (19-20 Aug 2009)
- 1st SA Sub-Regional Cooperation Meeting – Colombo, Sri Lanka (27-28 Jul 2009)
- 10th SC Meeting – Manila, Philippines (6-7 October 2008)
- 7th SC and 6th CDC Meeting – Kobe, Japan (4-5 Oct 2007)
- 1st SEA Sub-Regional Committee Meeting – Jakarta, Indonesia (20-21 Aug 2007)
- 4th SC Meeting and Workshop on the New Liaison Model – Jakarta, Indonesia (24-26 Aug 2006)
- 3rd CAPaBLE Standing Committee Meeting – Tokyo, Japan (18-19 Nov 2005)
- 2nd SC Meeting – Tokyo, Japan (19-20 Nov 2005)
- 8th SC Meeting – Wellington, New Zealand (11-12 Dec 2003)
- 6th SC Meeting – Kuala Lumpur, Malaysia (9-10 Dec 2002)
- 4th SC Meeting – Manila, Philippines (16-17 Dec 2001)
- 1st SC Meeting – Honolulu, USA (3-4 Dec 2000)
- 4th SPG Meeting – Jakarta, Indonesia (2-4 Feb 1999)
- 3rd SPG Meeting – Canberra, Australia (19-21 Jan 1998)
- 1st SPG Meeting – Kuala Lumpur, Malaysia (29-30 Aug 1996)
- 1st SPC Meeting – Tokyo, Japan (25-26 Jan 1996)

Sub-regions*SA – South Asia**SEA – Southeast Asia**TEA – Temperate East Asia**Oceania***APN Groups/Committees***IGM—Inter-Governmental Meeting**CDC – Capacity Development Committee**SC – Steering Committee**SPG – Scientific Planning Group**SPG-SC – Scientific Planning Group Sub-Committee*

Item 15: Chairperson's Summary and Action Points of the 20th IGM/SPG Meeting

The IGM is asked to consider and approve a list of Action Points of the present Meeting.

- It was agreed at the 24th Steering Committee Meeting held in Japan, April 2013, that during the IGM/SPG Meeting, the Secretariat need only provide a list of recommended action points for IGM/SPG approval.
- A draft Chairperson's summary will be provided within one month following the closing of the 20th IGM/SPG Meeting for Members' feedback. A final Chairperson's Summary, together with the list of action points will be available in the Proceedings of the Meeting.
- The action points will be split into two parts: (I) budget confirmation; and (II) others.

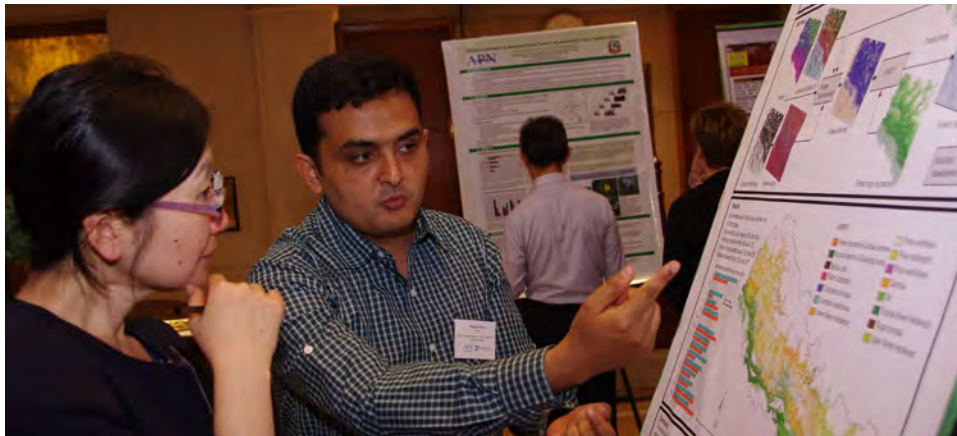
Item 16: Any Other Business, Final Remarks and Closing

Participants may raise items of AOB and Offer Final Remarks. The Chair will formally close the Meeting.

NO ADDITIONAL INFORMATION IS AVAILABLE AT THIS TIME

Section 4

Mitra Award Winning Poster and Presentation





Integration of object-based image analysis with machine learning algorithm for forest type classification in Nepal.



Shiva Khanal

Asst. Research Officer, Department of Forest Research and Survey, Kathmandu, Nepal

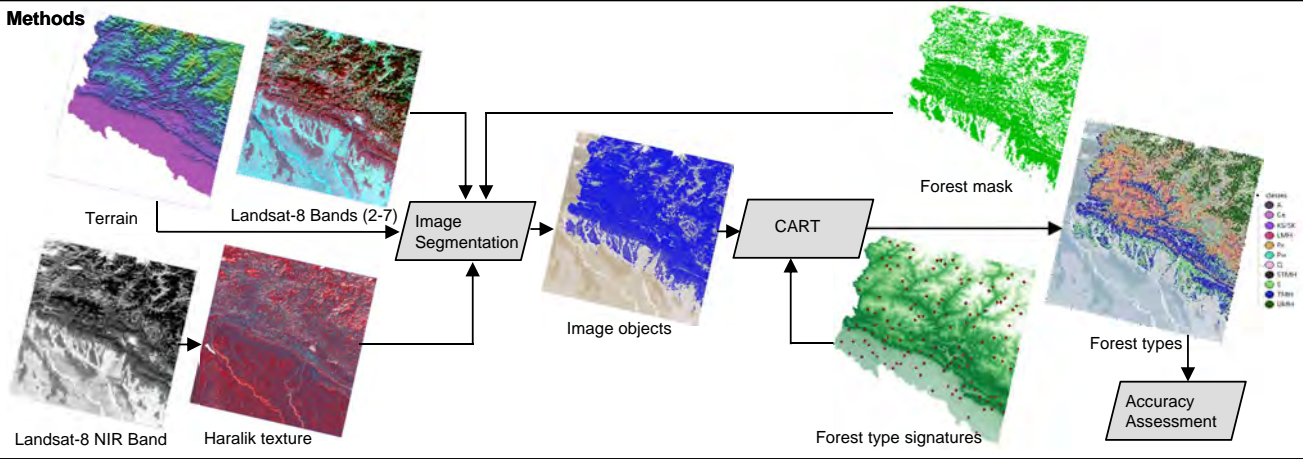
Email: skhanal@dfrs.gov.np

Introduction

Forest resources in Nepal are significant because of their contribution to people's livelihood, biodiversity conservation and other ecosystem services. Forests are also important carbon sink and forest conservation has been the focus of international efforts in global climate change mitigation. A key requirement for initiative on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (REDD) is a credible Measurement, Reporting and Verification (MRV) framework. Though timely MRV of deforestation and forest degradation is

crucial, the mechanism is not yet well established. Thus, sound and replicable method is required for monitoring forest condition such as forest area change by forest types and carbon stock up to (sub)national scale. Different machine learning algorithms have been proposed for land cover (DeFries and Chan 2000), forest carbon mapping (Mascaro et al. 2014) as well as type classification (Li et al. 2013). This poster presents a method to classify forest type by integrating Landsat 8 images (year 2013/14) segmentation and classification and regression tree (CART) method.

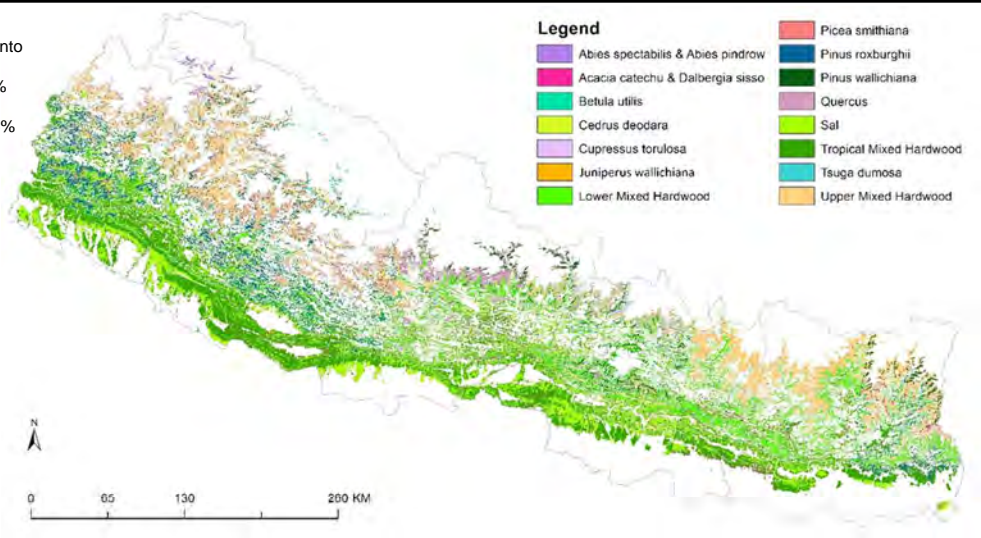
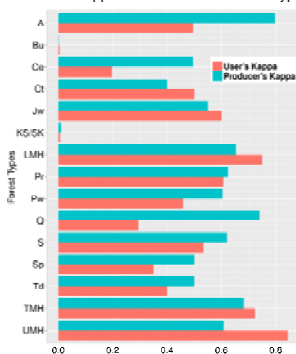
Methods



Results

The forested area of Nepal was classified into 15 forest types. The overall accuracy was 69.85% with 95% Confidence Interval limits 0.66 and 0.73. Similarly, kappa statistics was 0.63 with 95% Confidence Interval limits 0.58 and 0.67.

Table: Kappa statistics for each forest types



Conclusion

The results suggest that approach can be applied for forest type classification with reasonable accuracy. The most important strengths of the approach include efficient handling of large data as well as being reproducible whereby any user with same set of data and algorithm can obtain same result. This is quite remarkable advantage as

compared to several other approaches requiring human interpretation which often leads to bias. Further, the results indicate that this method can be readily applied to other study areas, upscaled to even geographical extent and also estimate other ecosystem variables such as forest carbon.

Literature Cited

DeFries, R.S., & Chan, J.C.-W. (2000). Multiple Criteria for Evaluating Machine Learning Algorithms for Land Cover Classification from Satellite Data. *Remote Sensing of Environment*, 74, 503-515

Li, M., Im, J., & Beier, C. (2013). Machine learning approaches for forest classification and change analysis using multi-temporal Landsat TM images over Huntington Wildlife Forest. *GIScience & Remote Sensing*, 50, 361-384

Mascaro, J., Asner, G.P., Knapp, D.E., Kennedy-Bowdoin, T., Martin, R.E., Anderson, C., Higgins, M., & Chadwick, K.D. (2014). A Tale of Two "Forests": Random Forest Machine Learning Aids Tropical Forest Carbon Mapping. *Plos One*, 9, e85993

Acknowledgements

I am thankful to the Department of Forest Research and Survey (DFRS)/Forest Resource Assessment Project for providing access to high capacity computer, field data and eCognition software. NASA/USGS for access to Landsat 8 images.

I would like to mention names of Director General of DFRS, Mr. Prakash Mathema and FRA Nepal Remote Sensing Technical Advisor Mr. Anish Joshi for the kind feedback on this work.

Winning Poster & Presentation

Integration of object-based image analysis with machine learning algorithm for forest type classification in Nepal

Shiva Khanal

Research Officer, Department of Forest Research and Survey, Kathmandu, Nepal

Email: skhanal@dfrs.gov.np

APN 20th Inter-Governmental Meeting (IGM), 27 Mar 2015, Kathmandu, Nepal

Introduction

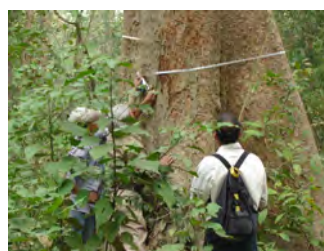
- Forests : people’s livelihood, biodiversity and ecosystem services.
- Important carbon sink & conservation a focus of international efforts in global climate change mitigation.
- A key requirement for initiative on REDD: a credible Measurement, Reporting and Verification (MRV) framework.
- Challenges – timely MRV of deforestation & forest degradation
- sound and replicable method for monitoring up to (sub)national scale.



Fodder collection



Resin tapping



Trying to measure diameter!



firewood

Field data collection

- Demanding terrain
- Access
- Weather
- Costly



Photos: Shiva Khanal

Remote Sensing Data

- Offers a feasible approach for observation and periodic monitoring of forests. Often repeatedly and over wider spatial coverage; field data for calibration

However,

- Gap exist on robust methods that can handle large amount of data and produce periodic information on forest attributes such as forest types.
- Reproducible: human interpretation often leads to bias, data driven automatic approach
- A method is proposed: that integrates two advanced analyses a) object based analysis and b) machine learning classification.

Object Based Analysis

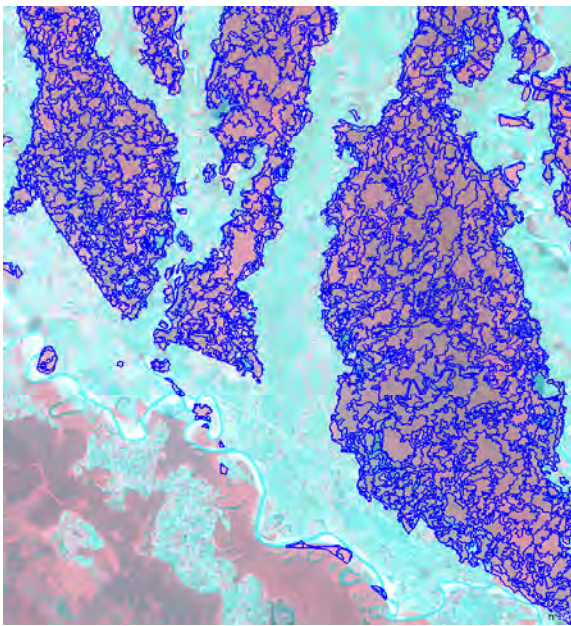
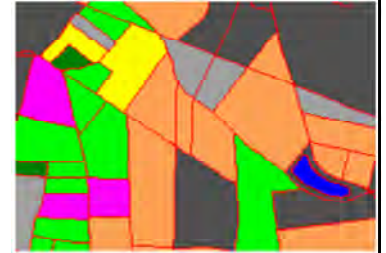


Image objects



Pixel based classification



Object based classification

(Aplin & Smith 2008)

“..partition remote sensing imagery into meaningful image-objects, and assessing their characteristics through spatial, spectral and temporal scales” (Hay & Castilla, 2008)

Advantages

Faster data processing, scale of segment can be customized, classification algorithm can use other object characteristics not just spectral information, no “salt-and-pepper” effect

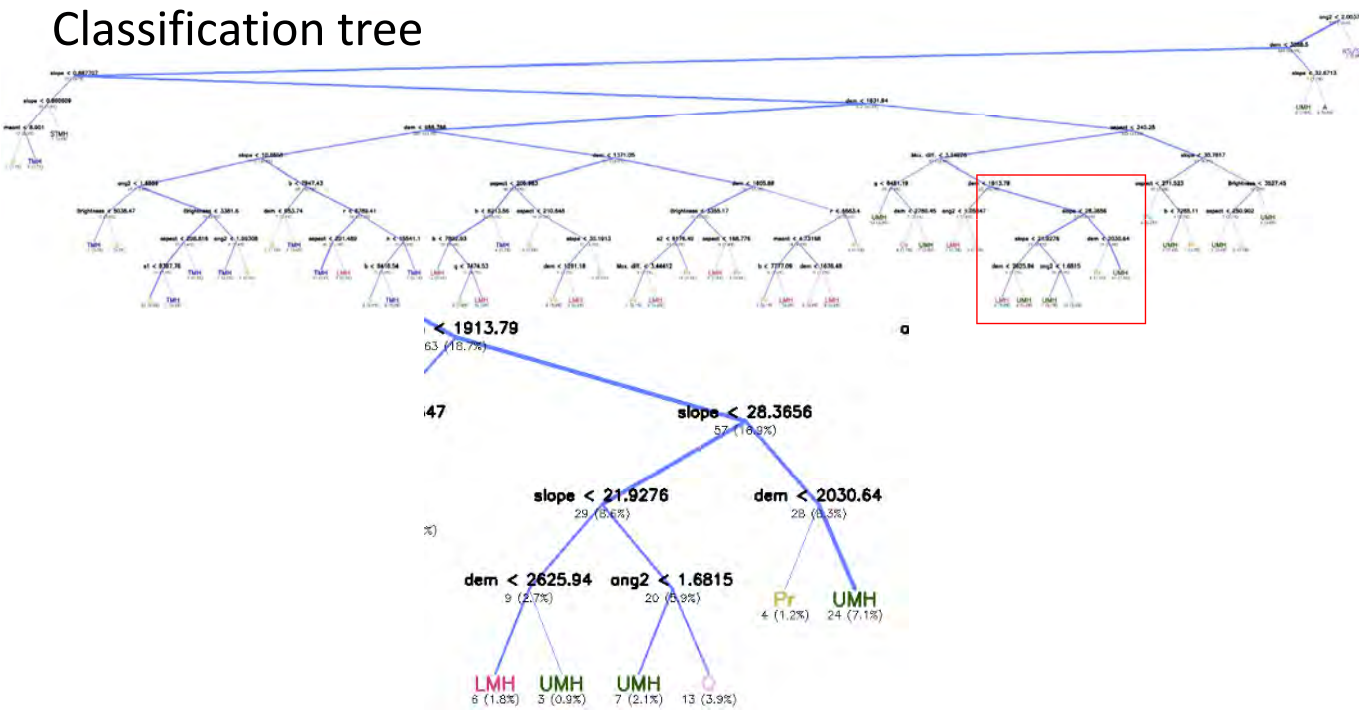
Machine Learning

- a sub-field of artificial intelligence ; the design and development of algorithms that allow computers to learn the behavior of data sets **empirically**.
 - focus: produce (induce) empirical models from data **automatically**.
- CART (Classification and regression tree)
- predict class membership by recursively partitioning a data set into more homogenous subsets

Advantages over traditional classification algorithms (Hansen et al 1996).

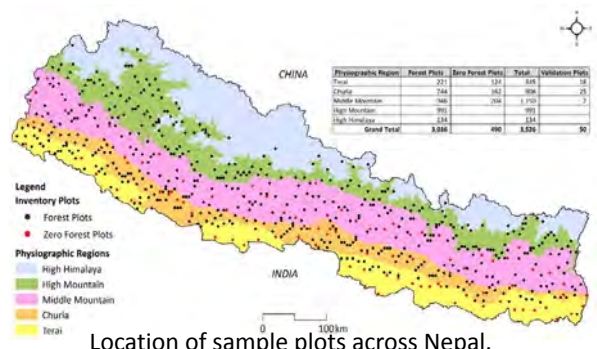
- not based on any assumptions of normality within training statistics
- yields a set of rules which are easy to interpret and suitable for deriving a physical understanding of the classification process.

Classification tree

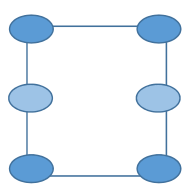


Winning Poster & Presentation

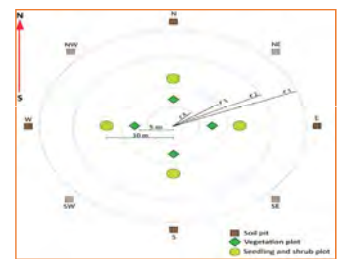
Field data collection



Location of sample plots across Nepal.

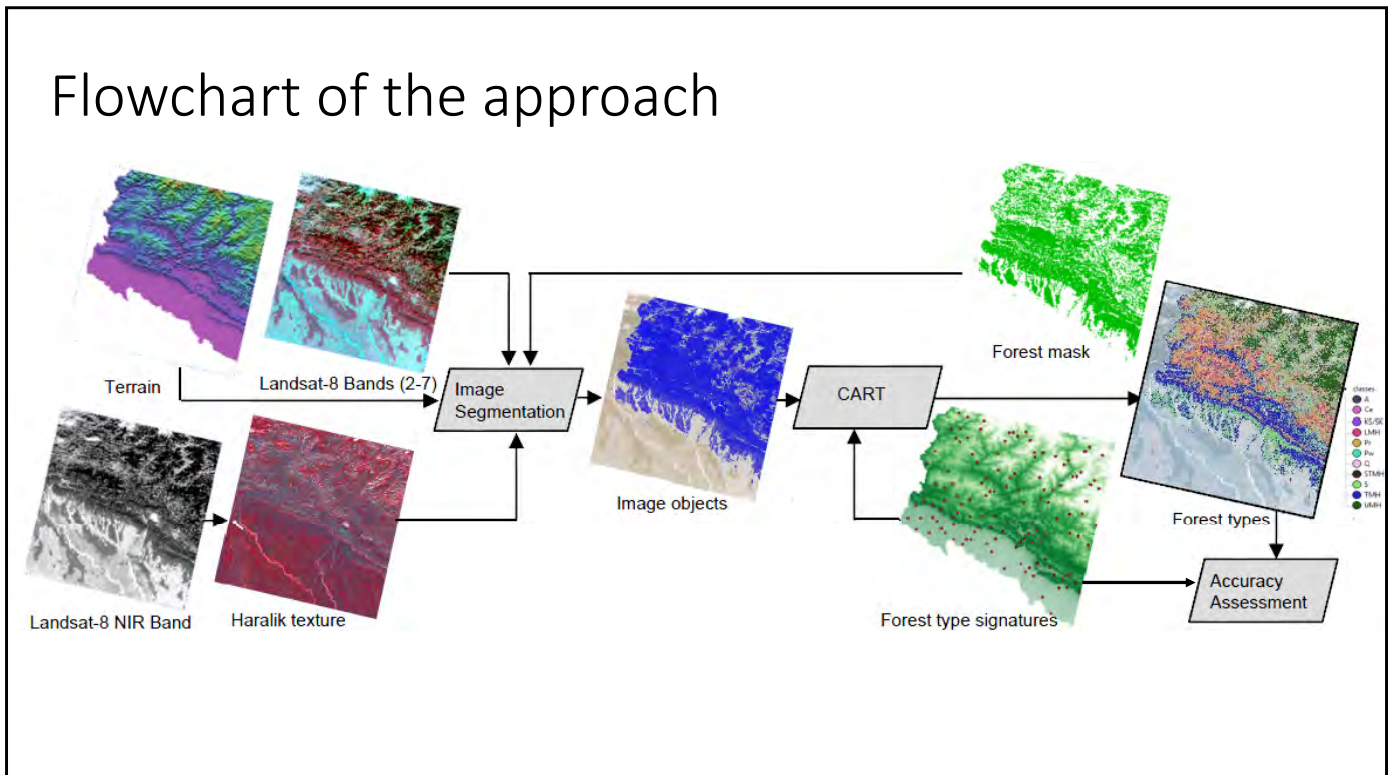
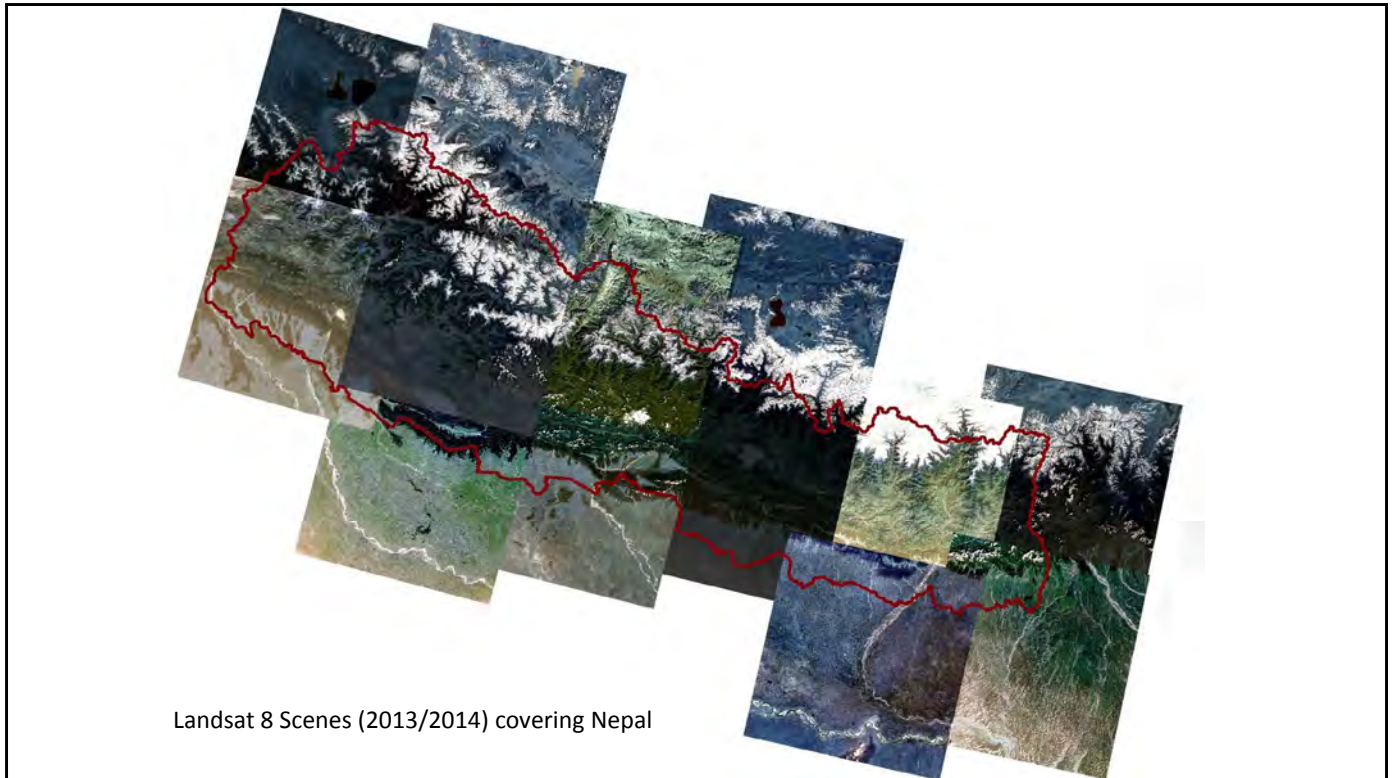


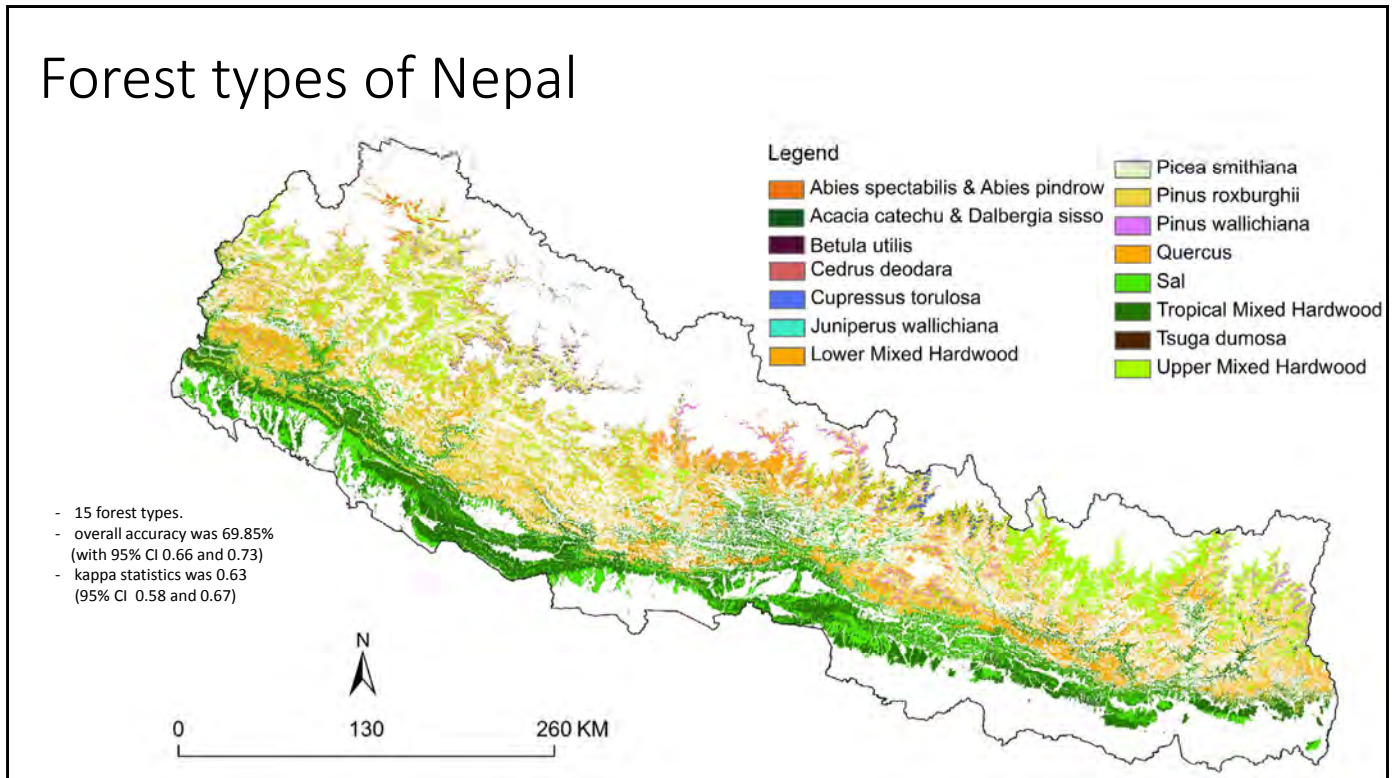
Sample plot layout



Navigation and plot measurement







Conclusion

- Forest type classification with reasonable accuracy.
- Efficient handling of large data
- Reproducible
- Potential : other study areas, upscaled to wider geographical extent and estimate other ecosystem variables such as forest carbon.

Next steps!

- Make this work flow freely available by integrating with open source tools.



<https://www.orfeo-toolbox.org/>

- Apply on different satellite data sources both optical and radar e.g. JAXA (Prism, PALSAR, AVNIR), ESA(Sentinel) and others.
- Incorporate additional predictors – Ex. Climatic
- Optimize tree species distribution model, project potential future shifts under global change

Literature Cited

- DeFries, R.S., & Chan, J.C.-W. (2000). Multiple Criteria for Evaluating Machine Learning Algorithms for Land Cover Classification from Satellite Data. *Remote Sensing of Environment*, 74, 503-515
- Hansen, M., Dubayah, R., & DeFries, R. (1996). Classification trees: an alternative to traditional land cover classifiers. *International journal of remote sensing*, 17(5), 1075-1081.
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- Li, M., Im, J., & Beier, C. (2013). Machine learning approaches for forest classification and change analysis using multi-temporal Landsat TM images over Huntington Wildlife Forest. *GIScience & Remote Sensing*, 50, 361-384
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- APN and MOSTE, Government of Nepal for providing the unique opportunity ("**Youth Engagement in the APN**") to present this work.



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