

Asia-Pacific Network for Global Change Research

Twenty Years of Collaborative Research/Capacity
Building on LC/LUC and GHG Emissions

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International Workshop on Land Use/Cover Changes and Air Pollution in Asia
Bogor 4-7 August 2015



Bridging Science & Policy
for a Sustainable Asia-Pacific

Presentation Outline

- APN Overview
- 20 Years of Achievements
- Research Pathways: Land use, Remote Sensing, Air Quality
- Way Forward

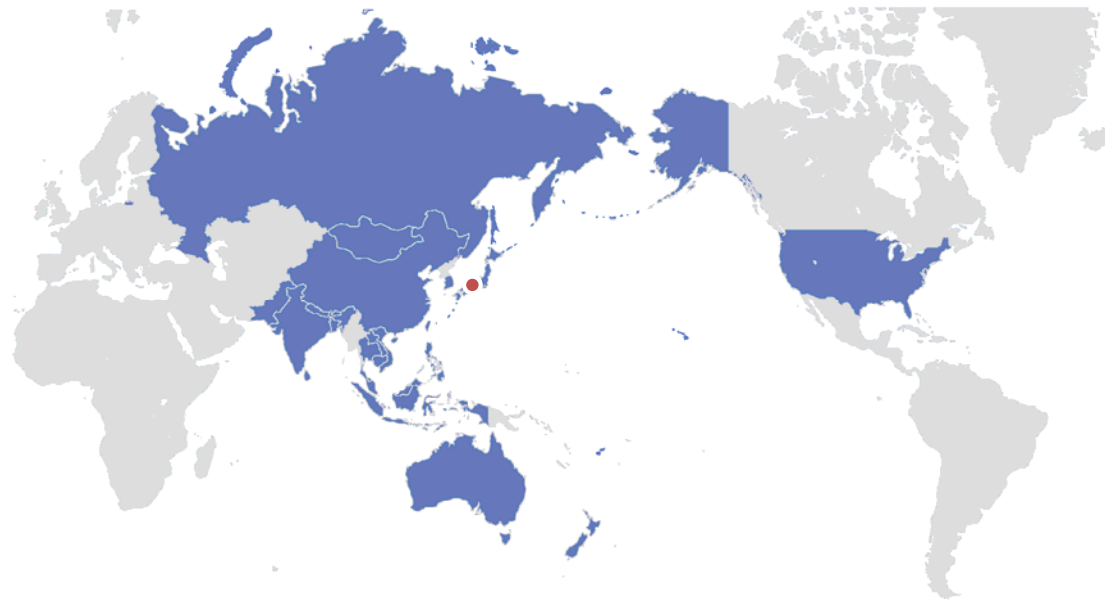


Part 1

APN OVERVIEW

What is APN

An inter-governmental network of 22 countries in the Asia-Pacific fostering Global Change and Sustainability Research



- Established **1996 as a US-Japan Initiative** based on the *1992 US-Japan Global Partnership Agreement*
- Secretariat in **Kobe**, Japan since 1999
- Financial contribution from: **Japan, Republic of Korea and New Zealand**
- Financial Resources: **US\$ 4.4 Million** (2014/15)

** Pacific Island Countries, Singapore, Myanmar and Maldives are approved countries whose scientists are eligible to receive funding under APN awards.*

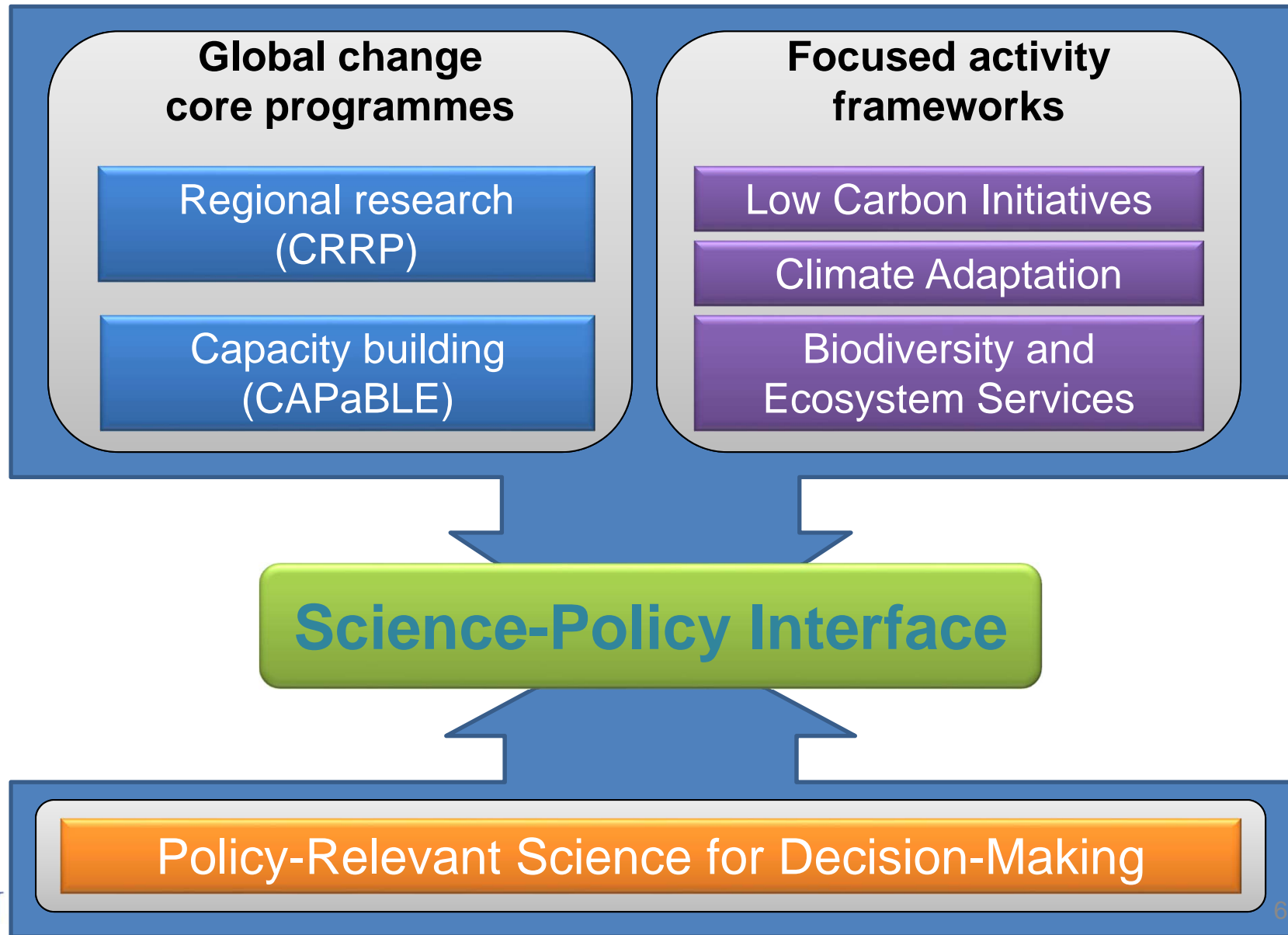
APN Goals

1. **Supporting regional cooperation** in global change research on issues particularly relevant to the region;
2. **Enhancing capabilities** to participate in global change and sustainability research and support science-based decision-making;
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;
4. **Cooperating** with other global change and sustainability networks and organisations.

Participants of the 20th IGM/SPG Meeting, 25-27 March 2015, Kathmandu, Nepal



Key Activities



Global Change Core Programmes

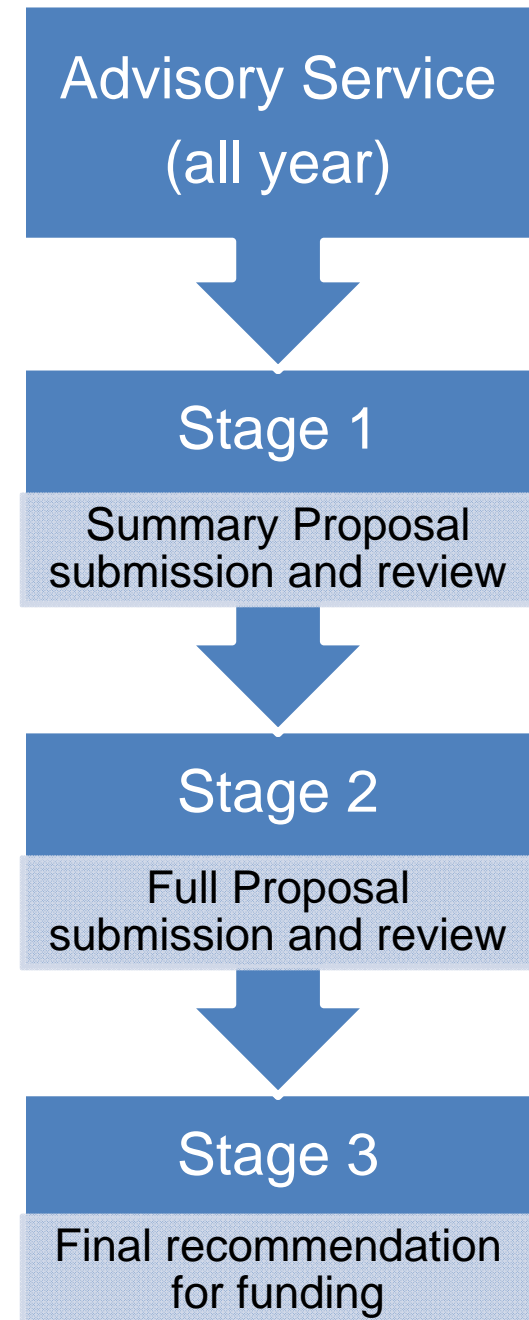
APN selects Collaborative Research and Capacity Building activities through its **Calls for Proposals** (normally open in June every year)

Collaborative Regional Research Programme (CRRP):

- **Gaps, Analysis, Synthesis** and **Assessment** work.
- Research that develops **Pathways** and **Mechanisms** to sustainable development and adaptation strategies.
- **Place-based Integrative Research.**
- **Collaborative research** that contributes to the evolving global change arena

Capacity Development Programme (CAPaBLE):

- **Scientific Capacity Development**
- **Awareness raising and dissemination**
- **Science-Policy** interfacing.
- **Capacity Building Partnership Activities**

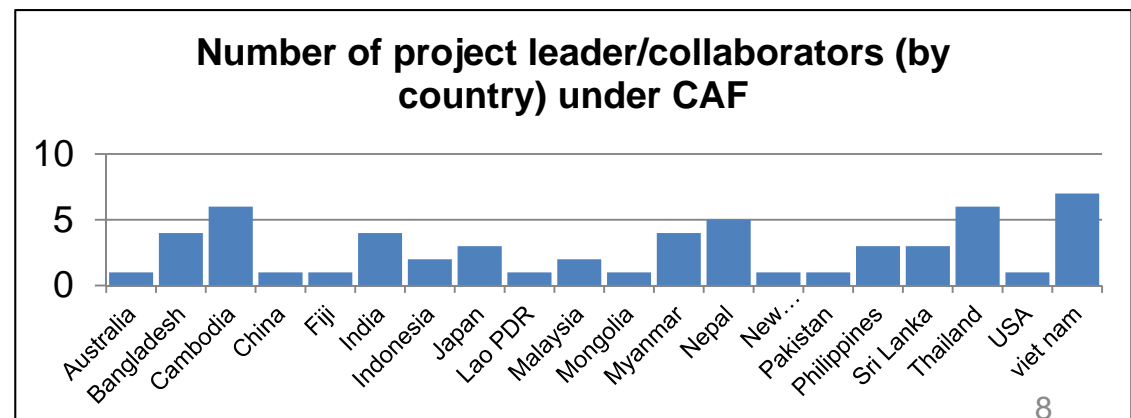


Climate Adaptation Framework (CAF)

- Developed at a scoping workshop in Kobe, Japan, 2012
- Activities of high priority:
 - High-resolution **observational, model and downscaled datasets**
 - Sharing of **needs-oriented data**
 - **Calibration and validation** of RCMs; and **analysis** of projections and **assessment** of uncertainties
 - Development and utilisation of **impact, vulnerability, risk and economic assessments**
 - Improvement of **communication skills** of scientists and practitioners
 - **Utilisation** of available information in applications for adaptation



New publication: Linking Disaster Risk Reduction, Climate Change Adaptation and Loss & Damage—Activities under the APN Climate Adaptation Framework

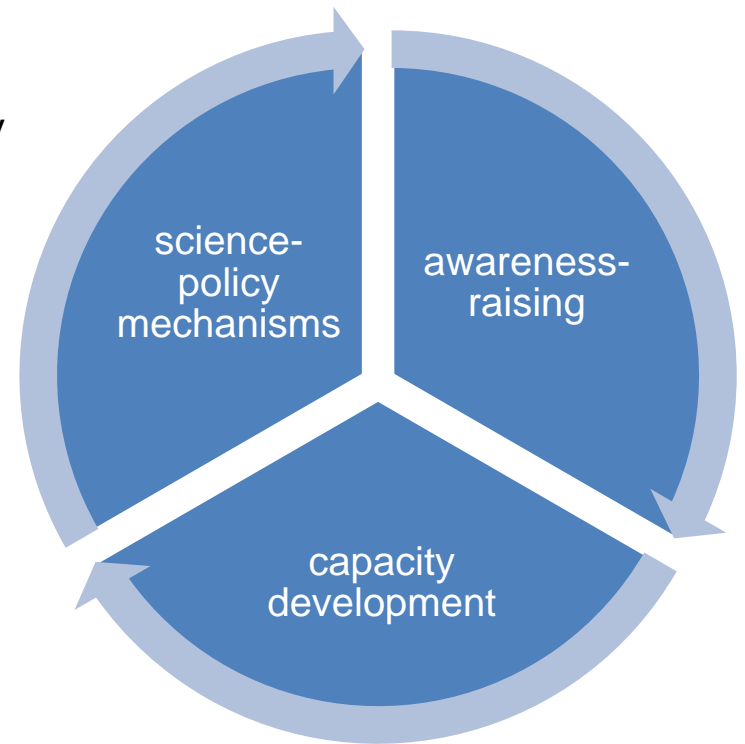


Low Carbon Initiatives Framework (LCI)

- Established in 2012 with financial support from the Ministry of Environment, Japan
- Goal: Strengthening capacity of developing countries scientists and practitioners to implement national strategies for low carbon and green growth
- Distributed USD 500,000 for 7 Projects (2 capacity development activities and 5 regional research activities)
- Involved 7 Project leaders and 40 collaborators from 12 APN member countries
- Ongoing and Future Activities
 - A Policy brief summarising outcomes of the projects (Sep 2015)
 - A synthesis report of APN funded low carbon studies
 - Networking activities with LoCARNet to promote regional collaboration

Biodiversity and Ecosystem Services Framework (BES)

- **Invites stakeholders to propose and engage in collaborative activities with the APN in key thematic areas under its framework for biodiversity and ecosystem services**
 - Identification of **drivers and pressures** for biodiversity change that influence ecosystem services
 - Assessment of the **impacts** of biodiversity loss and **vulnerability** to the shrinking of ecosystem services
 - Prediction of changes in biodiversity and ecosystem services through **model-based scenarios**
 - **Adaptation, response and mitigation** of the depletion of biodiversity and ecosystem Services



3R (Reduce, Reuse, Recycle)

- **3R Scoping Meeting, 10–11 June 2014**
 - Contribute to the realisation of resource-efficient and sound material-cycle society within the Asia-Pacific region.
 - Progressively bring “3R Science” into its science and policy agendas.
 - Enhance partnerships with 3R-related organisations/institutions.

High priority topics identified at the Scoping Meeting:

- Marine and coastal litter management;
- Baseline data and GIS-based information systems;
- Quantification of benefits of 3R implementation
- Development of regional cooperative framework for enhancing 3R capacities
- Assessment or development of institutional mechanisms to facilitate 3R infrastructure
- Impact assessment of waste management measures and technologies
- Localisation of existing low carbon technologies



Engaging Young/Early Career Scientists

- **Participation as project assistant/fellow or as a trainee**
 - CRRP: some project leaders provide graduate assistantship and fellowship to young scientists
 - CAPaBLE: Most project leaders organise training courses and workshops targeting young scientists;
- **Proposal Development Training Workshop (PDTW)**
 - Trained 230 young scientists in the region
- **Mitra Award for Global Change Research**
 - Young scientist poster session at APN's Intergovernmental meetings
 - So far, 78 young scientists were given the opportunity to showcase their research

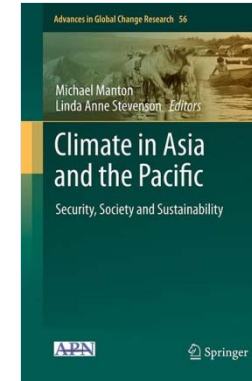
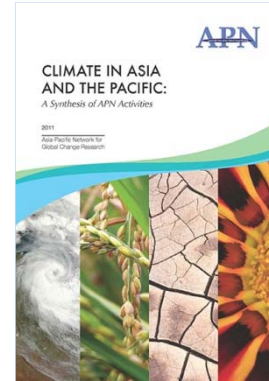
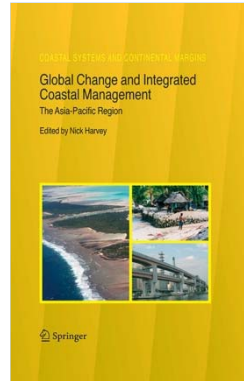
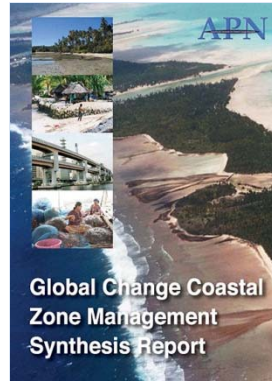




Part 2

20 YEARS OF ACHIEVEMENTS

1998
**1st Regional
 Research Project
 launched**



1996
Founded

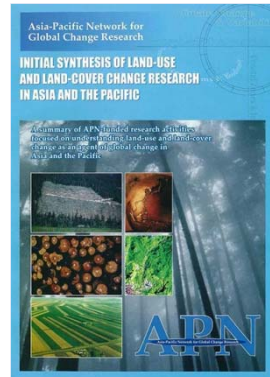
2003
**1st CAPaBLE
 Project
 launched**

2007
\$10m
 disbursed

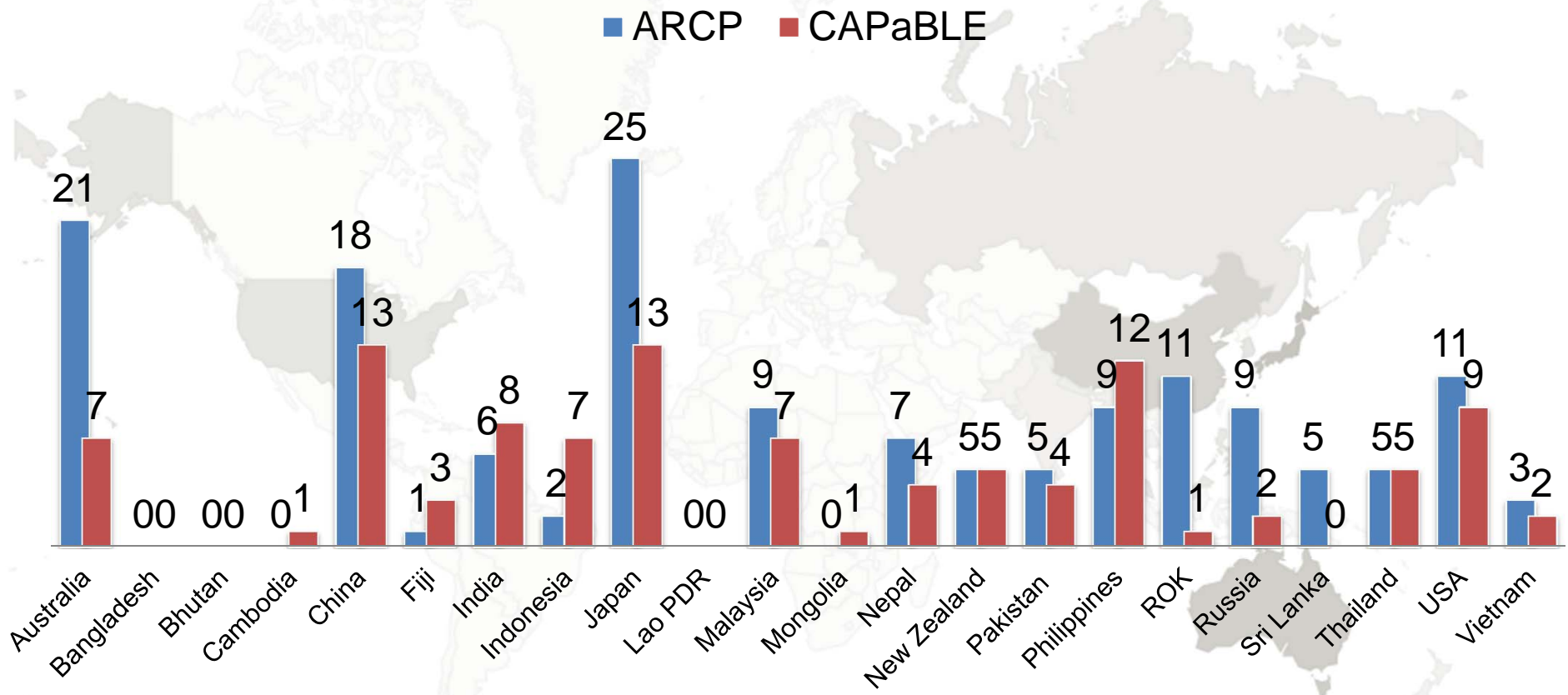
2010
22
 members
 in total

2015
\$25m
 disbursed

401
 projects funded
 as of May 2015



2008-2014 APN Projects: Project Leaders by country



- Developing country involvement has increased over the years;
- However, some countries do not yet have any project leaders;
- Need to further increase developing country involvement;
- Co-finance partnerships are a potential way forward that could help achieve this objective.

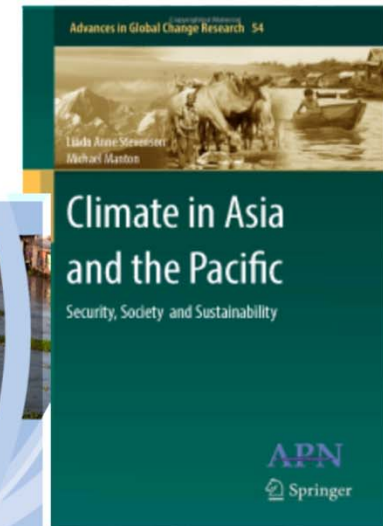
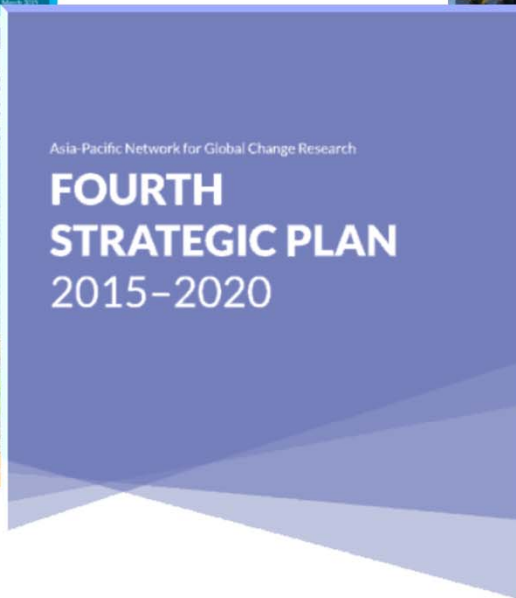
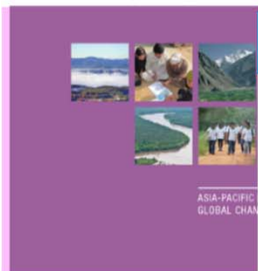
Third Strategic Phase (2010-2015): Achievements

Regional Research	Capacity Development
<p>47 Projects completed in the Third Strategic Phase (2010-2015)</p> <ul style="list-style-type: none">• 47 Regional research projects completed• 218 Collaborators engaged in 47 research projects• 182 Peer-reviewed publications• 641 Project outputs (reports, proceedings, papers, toolkits, etc.)• 2,627 People engaged (scientists, policy makers, and practitioners)• 81% of projects engaged in capacity building• 66% of projects engaged policy makers at various levels and/or produced policy-relevant outputs• 47% of projects directly engaged in networking, partnerships and other activities with the Global Change Research Programmes (IHDP, IGBP, DIVERSITAS, WCRP)• 64% of projects sustained their activities through partnerships, networking and financial awards	<p>60 Projects completed in the Third Strategic Phase (2010-2015)</p> <ul style="list-style-type: none">• 175 Collaborators• 44 Peer-reviewed papers• 161 Publications; Workshops/ Conference proceedings, policy briefs, toolkits and manuals, synthesis reports• 4,117 People Engaged: Scientists, decision makers and general public• 83% of projects produced publications in addition to APN Technical Reports• 223 Events Conducted• 72% of projects were policy-relevant and/or engaged policy makers via various approaches• 90% of projects provided monetary co-financing

Recent Publications

Over 2000 chapter downloads
as of year-end 2014

APN
Annual Report
2013–2014



APN ASIA-PACIFIC NETWORK FOR
GLOBAL CHANGE RESEARCH

www.apn-gcr.org/resources



Part 3

RESEARCH PATHWAYS: LAND USE, REMOTE SENSING, AIR QUALITY

Land Use and Remote Sensing

- 14 Regional Research
- 5 Capacity Building

GHG and GHG Emission

- 1 Regional Research
- 4 Capacity Building

Aerosols, Atmosphere and Air Quality

- 6 Regional Research
- 2 Capacity Building

More information on APN E-Library:

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

APN's Support on Research Pathway "Land Use, Remote Sensing and Air Quality"

2010-2013

Focussed Activity under the theme Ecosystem, Biodiversity and Land Use

**3 Regional Research
1 Capacity Building**

HIGHLIGHTS 1: Greenhouse Gas (GHG) and Aerosol Emissions Under Different Vegetation Land Use in the Mekong River Basin Sub-region

Activity:

- Measurement and evaluation of Greenhouse Gas and aerosols emissions from biogenic and biomass burning activities in forests and paddy fields in the Mekong River Basin Sub-Region (MRBSR)
- Transfer of methodologies and procedures developed in Thailand to the counterparts in Cambodia
- Capacity building to scientists of the MRBSR on emission inventory of GHG and aerosol from biogenic and biomass burning activities associated to different vegetation land use

Outputs:

- Biomass Burning Data and Emission Maps
- Biogenic Emission Maps
- 37 scientists were trained in emission inventory
- Hands-on training for Cambodian government officer on field experimental measurement procedures

More information and final report: <http://www.apn-gcr.org/resources/items/show/1627>

HIGHLIGHTS 2: Capacity Building of ALOS satellite data to support Mapping and Monitoring Deforestation and Degradation in Indonesia

Outputs:

- 36 participants were trained on ALOS-PALSAR Data Processing and Analysis
- Training curriculum and tools were developed
- 3 papers as output of the projects were presented at international conference

Activity:

- Workshop, sharing information on research and capacity building activities on forest monitoring by remote sensing in Indonesia as well as political and administrative needs from Indonesian government.
- Two-week training course on Forest Monitoring in Indonesia by ALOS/PALSAR Data Processing and Analysis

More information and final report: <http://www.apn-gcr.org/resources/items/show/1709>

HIGHLIGHTS 3: Human Impact on Land-cover Changes in the Heart of Asia

Outputs:

- Land-cover change maps and socio-economical analysis result for Russia and Mongolian sites
- Recommendations in nature management policy-making activities for regional decision-makers and local authorities.

More information and final report:
<http://www.apn-gcr.org/resources/items/show/1553>

Study Sites: 2 in West Siberia and 2 in Mongolia

Activity:

- Training session on satellite images processing techniques
- Test sites selection, satellite images selection, processing and analysis
- Development of land cover change maps and socio-economical analysis
- Joint workshop for dissemination in Tomsk, Russia

HIGHLIGHTS 4: Assessing the Mitigation and Adaptation Options for Tropical Peatlands to Reduce GHG Emissions and Increase Resilience to Climate Change

Activity:

- Support the preparation of the global assessment on peatlands biodiversity and climate change
- Oral and poster presentation at the Convention on Biodiversity (CBD) SBSTTA 12 meeting in July 2007, and at the UNFCCC COP13 in December 2007 in Bali
- Review and update datasets on the extent and carbon content of peatlands particularly from Papua New Guinea, Indonesia and Malaysia
- Workshop “Minimising Impact from Oil Palm and Biofuel production in SE Asia on Peatlands, Biodiversity and Climate Change”
- Re-establish and improve the Peat-Portal, a web base resource

Outputs:

- The Global Assessment on Peatland, Biodiversity and Climate Change
- Recommendations and expert findings on mitigation measures to minimise impact from palm oil developments on peat
- Project outputs and findings disseminated through the Peat Portal website (<http://www.peat-portal.net>)

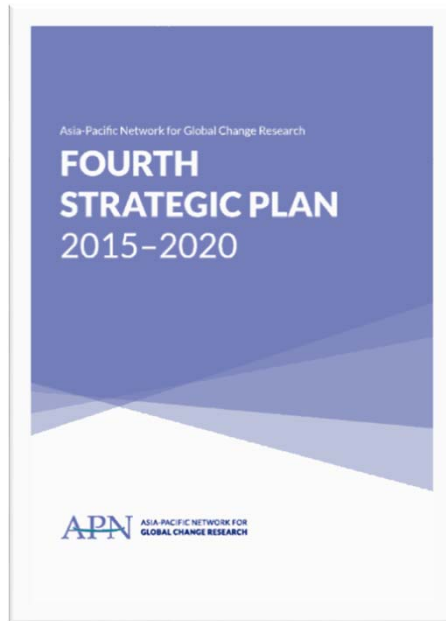
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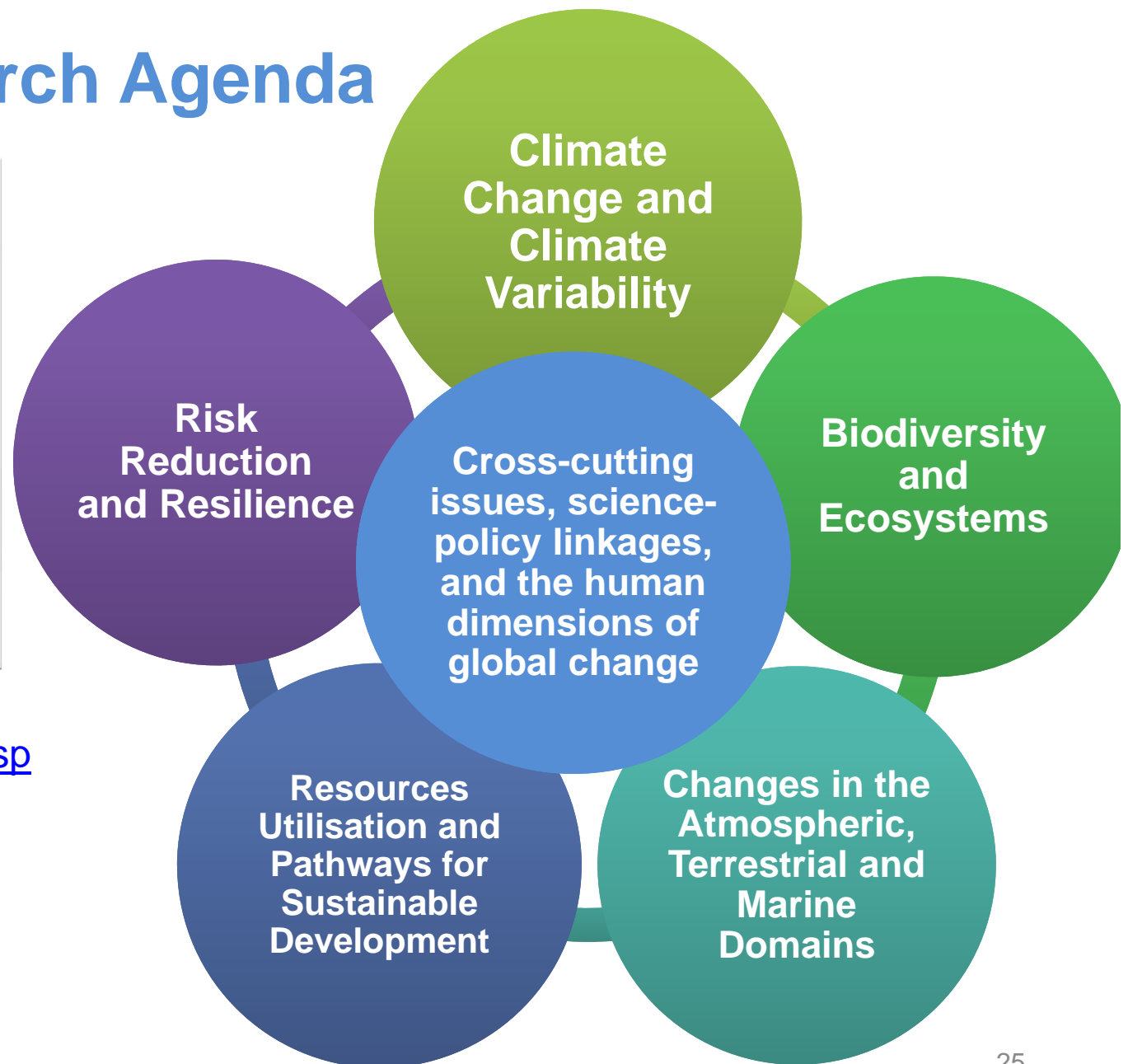
Part 3

WAY FORWARD

4SP Research Agenda



<http://apn-gcr.org/r/4sp>



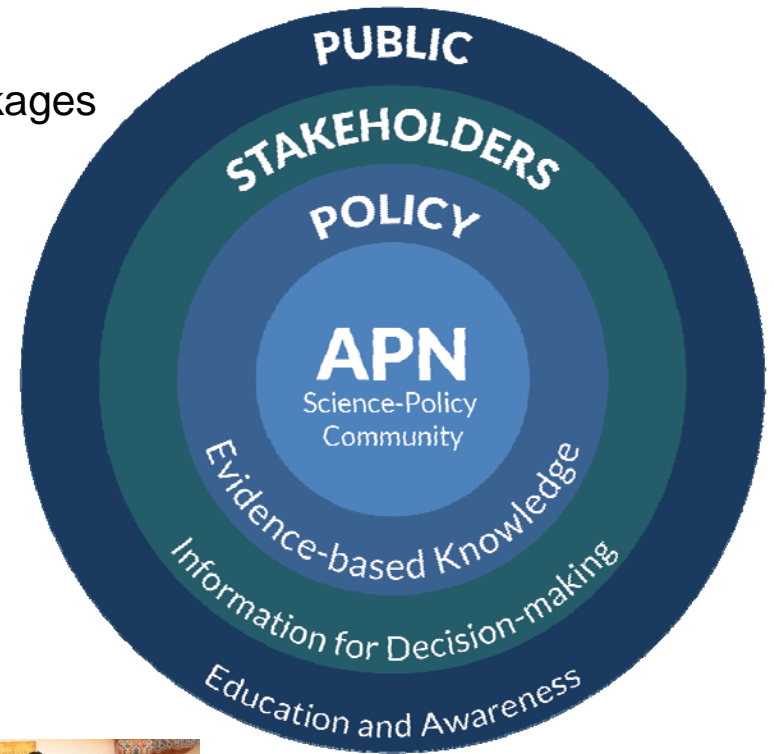
Capacity Development Agenda

1. Supporting capacity development of **early career researchers** in global change and sustainable development
2. Supporting capacity development of **policy makers, community leaders, resource managers**
3. Cooperating with **other international capacity development programmes**
4. Pursuing existing or creating **new fora for discussion and interaction** between scientists and policy makers
5. Supporting **training workshops** for scientists to develop skills and techniques in providing science-based tools to support policy development
6. Encouraging **stakeholder involvement** in all phases of projects that APN undertakes
7. Conducting regular **synthesis and assessment** activities of projects to identify important outcomes, research gaps, and emerging issues that could be used to support policy development



Science-Policy Agenda

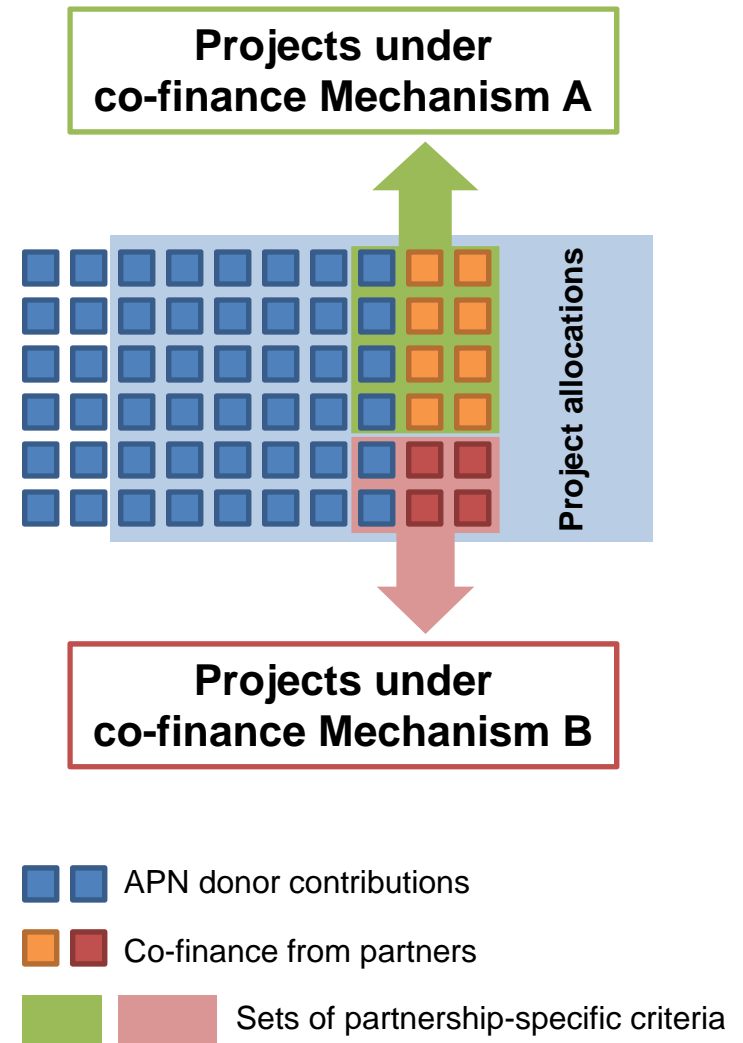
- **APN is committed to:**
 - strengthening evidence-based science-policy linkages
 - informing decision-making
 - enhancing public awareness
- **Science-Policy Dialogues**
 - Bangkok, Thailand (2012)
 - Thimphu, Bhutan (2014)
 - Ulaanbaatar, Mongolia (2015, planned)
- **Synthesis of APN Science-Policy Dialogue Series**



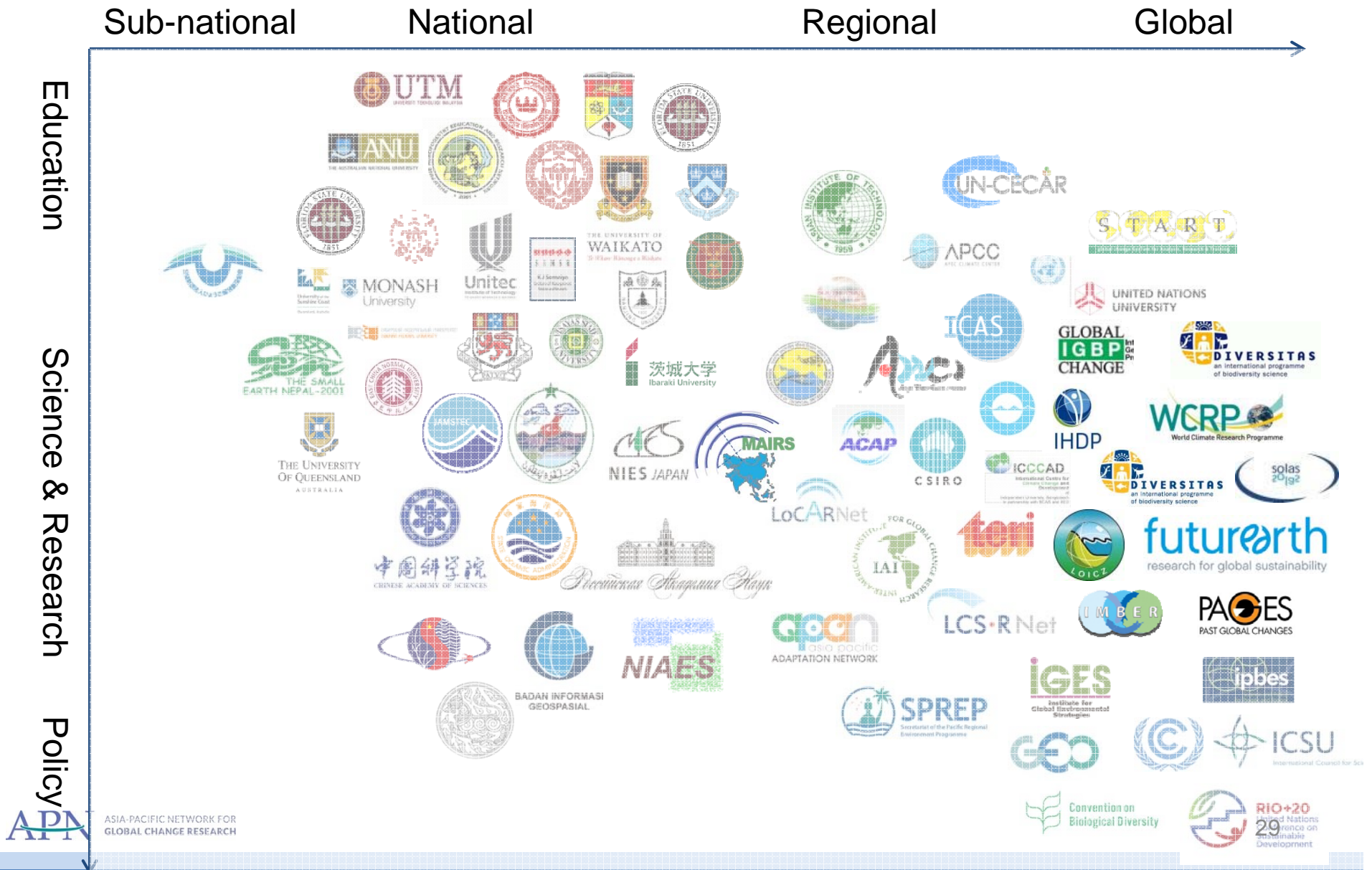
Co-Finance Mechanisms

A mechanism that is open to APN member countries or institutions to jointly support research and capacity development in Asia-Pacific region

- **With member countries**
 - Cambodia (2014);
 - Sri Lanka, Thailand (negotiation ongoing)
 - Makes use of APN's review and management process;
 - Provides direct funding support to APN approved projects involving specific countries;
- **With other institutions/ organisations**
 - University of Tokyo
 - ...



APN in the Evolving Global Change Community



Ongoing and Upcoming from the APN

1. 2015 APN Calls for Proposals

- Inviting proposals on **Regional Research and Capacity Building** in the Asia Pacific region, Deadline 9 August 2015
- URL: <https://www.apn-gcr.org/call/2015/>

2. Third APN Science-Policy Dialogue on Global Environmental Change: “Land Use and Climate Change in Temperate East Asia”

- Dialogue and field visit related to land use and climate change among countries: China, Japan, Mongolia, Republic of Korea and Russian Federation
- More information <https://www.apn-gcr.org/2015/06/25/third-apn-science-policy-dialogue-on-global-environmental-change-land-use-and-climate-change-in-temperate-east-asia/>

For more information



APN Website: <http://www.apn-gcr.org/>

News, announcements and global change community updates.



APN E-Lib: www.apn-gcr.org/resources

Archive of publications, project metadata and outputs of completed/ongoing projects.

FRIENDS of APN

Friends of APN: <http://friends.apn-gcr.org/>

A new social platform for digitally engaging with APN.



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