

Project kick-off Meeting: Asia-Pacific Regional Initiatives on Energy, Environment and Ecosystem (3E) Nexus for Sustainable Development, 24-25 February 2014, Maldives

## **Role of APN for Low Carbon Development in Asia-Pacific region**

Akio Takemoto (Ph.D.)  
Director, Asia-Pacific Network for  
Global Change Research (APN) Secretariat

E-mail: [atakemoto@apn-gcr.org](mailto:atakemoto@apn-gcr.org)

# What is APN

- **Inter-governmental network** of 22 countries in the Asia-Pacific
- **Funding Agency** to foster global change research

- Established **1996**
- Secretariat in **Kobe**, Japan since 1999
- Financial contribution from four donor countries: **Japan (MOEJ & Hyogo), USA, Republic of Korea, New Zealand**
- Financial Resources: **US\$ 3.4 Million** (2013/14)



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



# APN member countries



Australia



Bangladesh



Bhutan



Cambodia



China



Fiji



India



Indonesia



Japan



Lao DPR



Malaysia



Mongolia



Nepal



New Zealand



Pakistan



Philippines



Republic of Korea



Russian Federation



Sri Lanka



Thailand



USA



Viet Nam

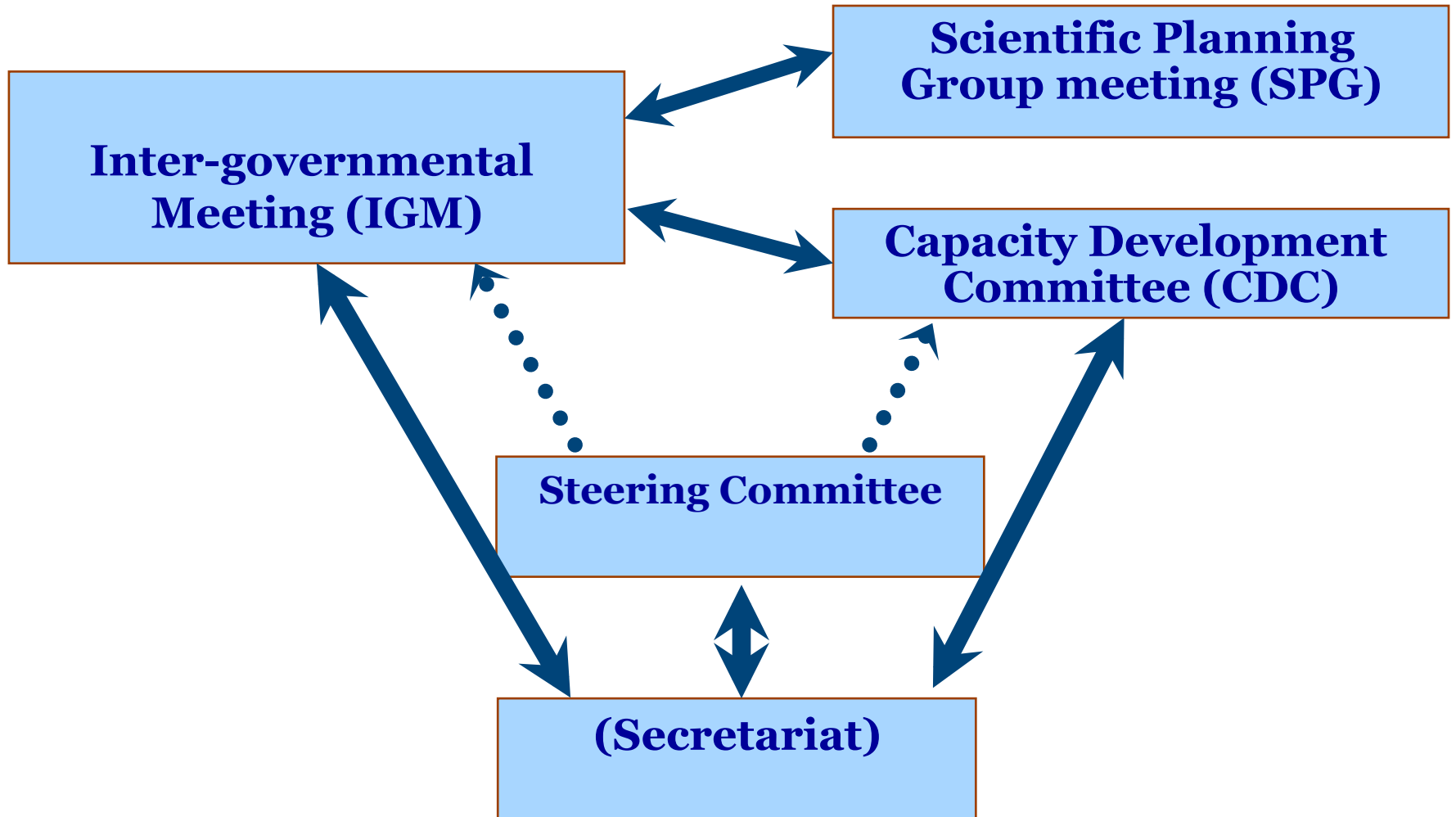
\* Pacific Island Countries, Singapore, Myanmar and Maldives are approved countries whose scientists are eligible to receive funding under APN awards.



# APN'S GOALS

- Supporting **regional cooperation** in global change research on issues particularly relevant to the region
- Strengthening appropriate **interactions among scientists and policy makers**, and providing scientific input to policy decision-making and scientific knowledge to the public
- Improving the **scientific and technical capabilities** of nations in the region including the transfer of know-how and technology
- Cooperating with **other global change networks and organisations**

# Structure of APN



# Major Activities (2013/14)

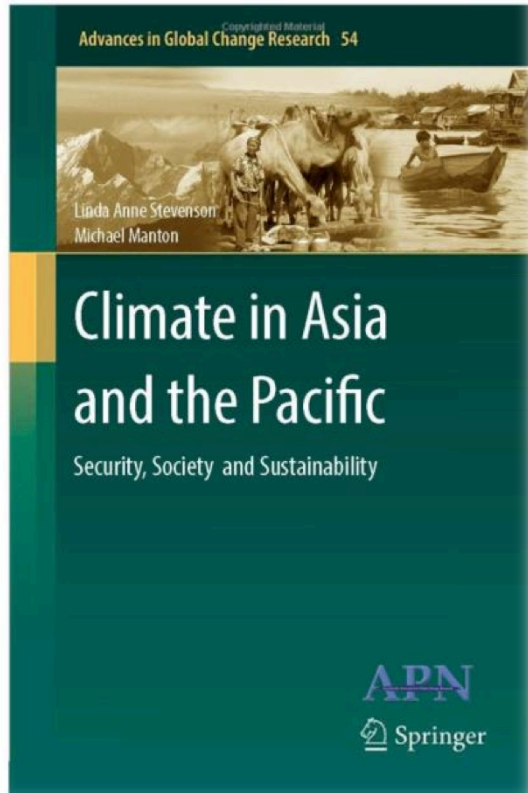
- Funding **regional research** projects (ARCP)
- Funding **capacity building/development** projects (CAPaBLE)
- Focused activities through 3 frameworks
  - **Low Carbon Initiatives** (2012)
  - **Climate Adaptation** (2013)
  - **Biodiversity and Ecosystem Services** (2013)
- Strengthening science-policy linkages

More than 70 projects annually

# APN Climate Book released October 2013

## Climate in Asia and the Pacific: Security, Society and Sustainability

Explains the **current status** of climate change and climate variability in the Asia-Pacific region; **future directions** in and overarching issues....copies available

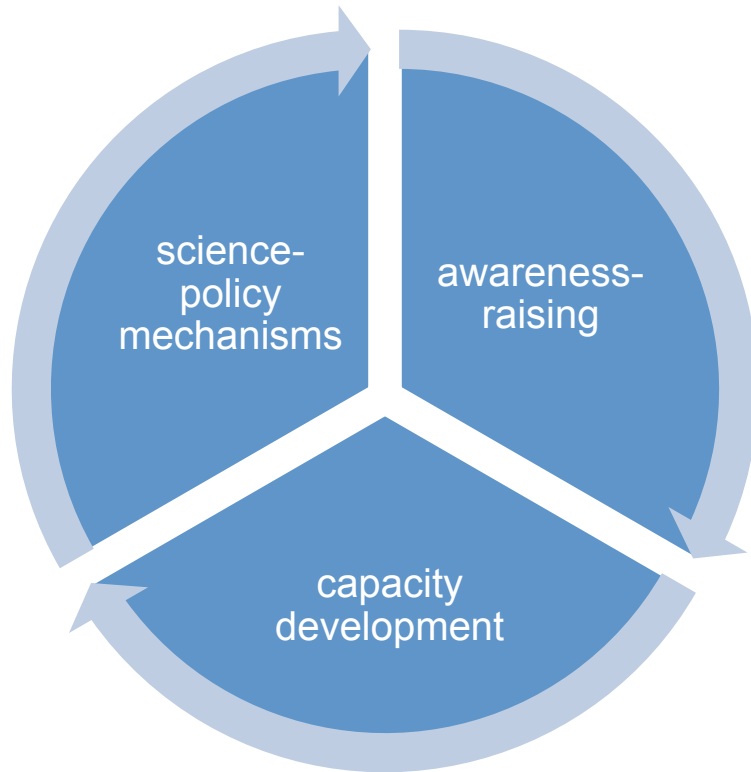


Follow-up of Synthesis Report (synthesizing 56 climate-related projects – 98 peer reviewed papers; over 50 training outputs such as toolkits and training packages)

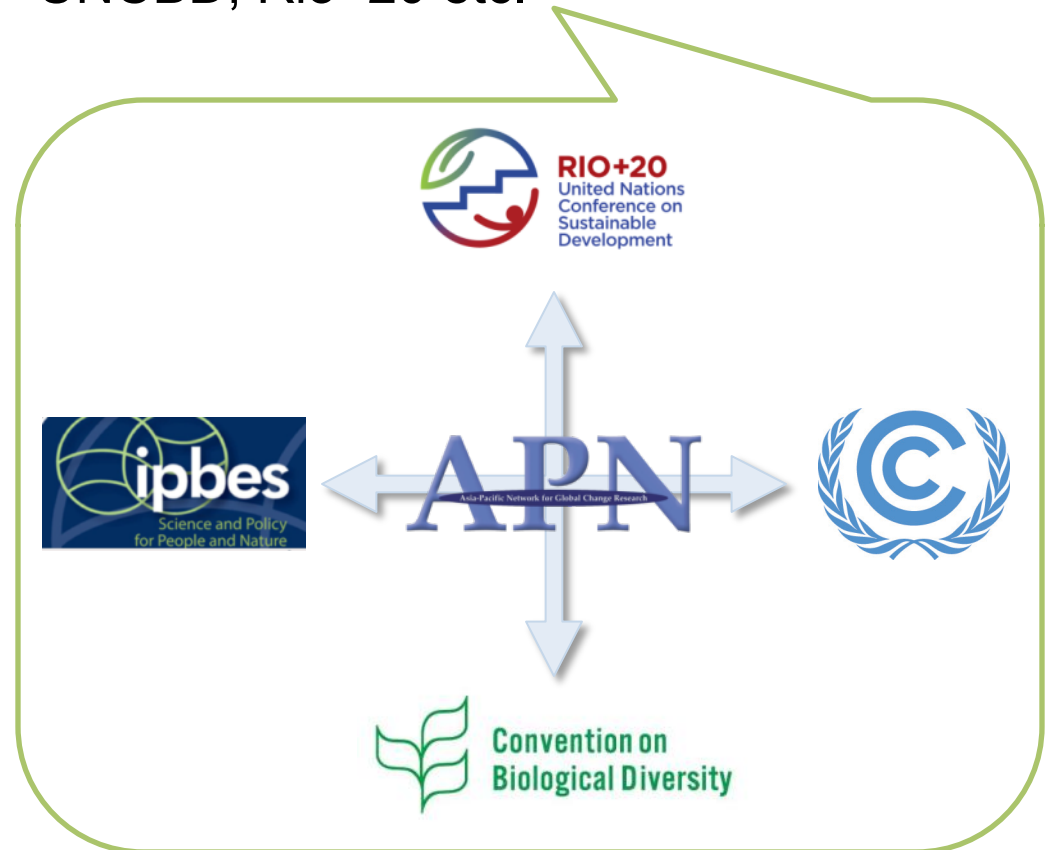
Chapters: (1) Introduction; (2) Climate change & climate variability; (3) Urbanisation; (4) Security: food, water, energy; (5) Society: governance, remote communities, human health; (6) Sustainability: energy, ecosystems services (Low Carbon Development).



# Emphasis on Science-Policy Interaction



Science-Policy is emphasised:  
Links with IPBES, UNFCCC;  
UNCBD; Rio+20 etc.







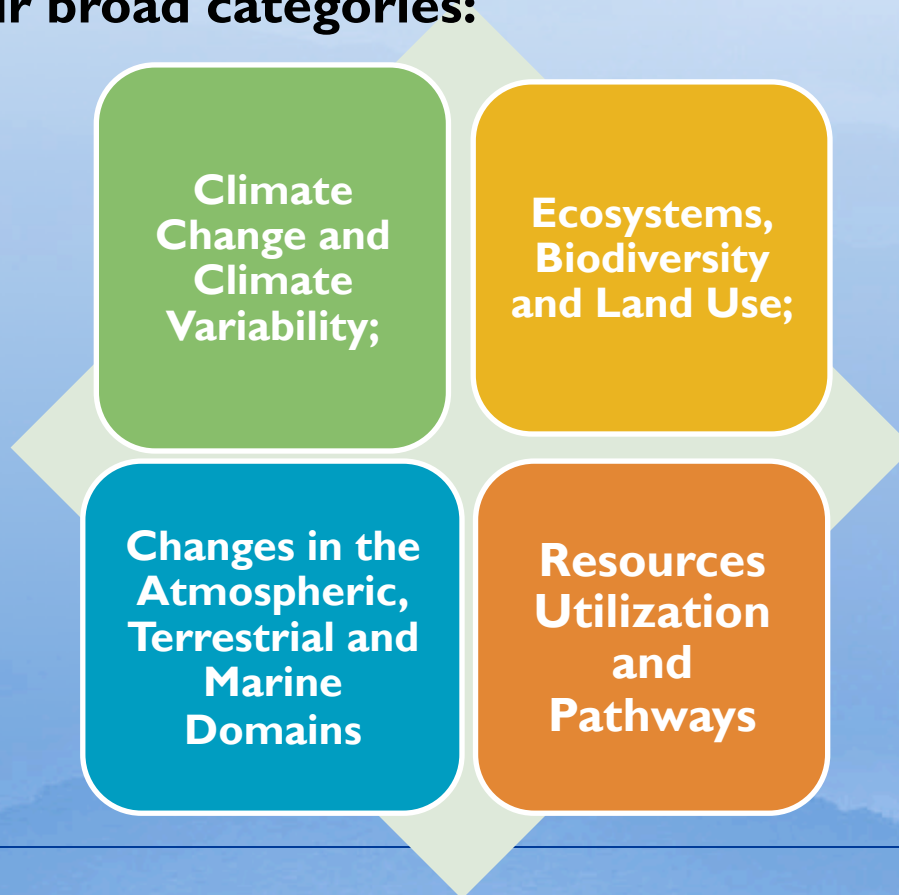
Core Activities

# ARCP AND CAPaBLE

# ARCP – Annual Regional Call for Research Proposals



- Under APN's **Science Agenda**, APN provides support to research that falls into the following four broad categories:



# Provisions on Parties' commitments related to research under UNFCCC



## **Project Eligibility, Duration and Funding:**

- The average grant awarded for 2011/12 (April 2011 – March 2012) projects was approximately US\$45,000. While APN may consider multi-year projects (maximum of 3 years), only a limited number may be funded
- If a multi-year proposal is approved, continued funding for year one is not guaranteed and the project will be subject to rigorous review after year one

# Proposal submission & Review STAGES

## Advisory Service

The Advisory Service is a **VOLUNTARY** component of the ARCP and CAPaBLE Calls for Proposals to provide advice on the appropriateness of the proposal intended for submission for APN funding consideration

## Stage 1

A proponent submits a Summary Proposal

SPG-SC and CDC review and select Summary Proposals that will proceed to Stage 2

## Stage 2

Successful proponents from Stage 1 submit their full proposals

**Step One:** Review and ranking by APN Internal Reviewers and External Reviewers

**Step Two:** Re-scoring by internal reviewers based on proponents' responses

## Stage 3

The SPG -SC makes recommendations to the 16<sup>th</sup> SPG Meeting. The APN's 16<sup>th</sup> IGM approves which proposals to fund, following recommendations from the 6<sup>th</sup> SPG Pre-Meeting.

# Core Activities: CAPaBLE

- **CAPaBLE: Scientific Capacity Building/Enhancement for Sustainable Development in Developing Countries**
- Launched in April 2003 as an initiative to realize parts 107 to 114 of the Johannesburg Plan of Implementation (JPOI) for the World Summit on Sustainable Development (WSSD);
- Registered as a WSSD Type II Partnership Initiative



Provide opportunities for young scientists to discuss relevant issues on global change and developed professional networking for future collaborative efforts



Facilitate interactions between scientists and policy-makers as well as enhanced the knowledge base of information relevant to regional climate change impacts



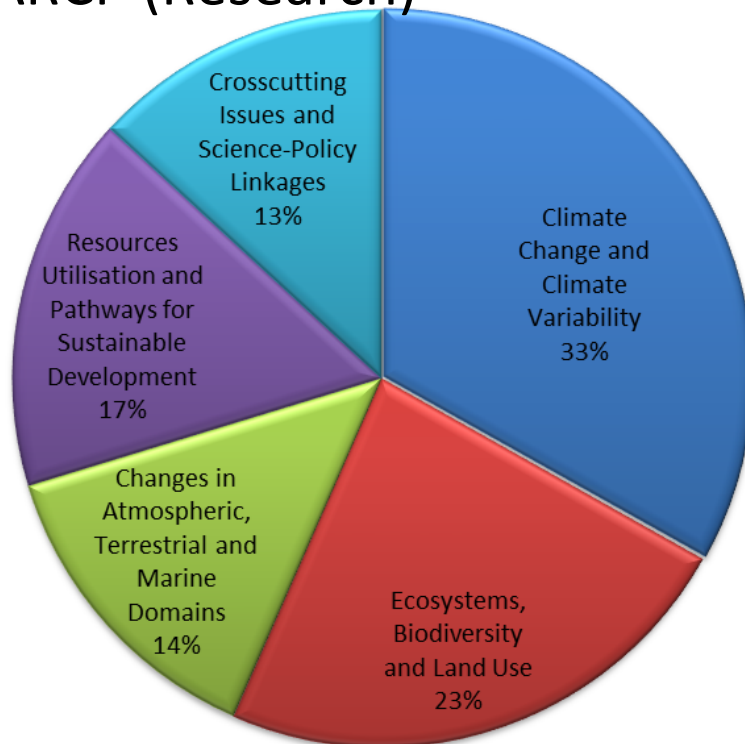
Enhance technical training of scientists and practitioners and produce well-designed educational and training materials for local application

### **Project Eligibility, Duration and Funding:**

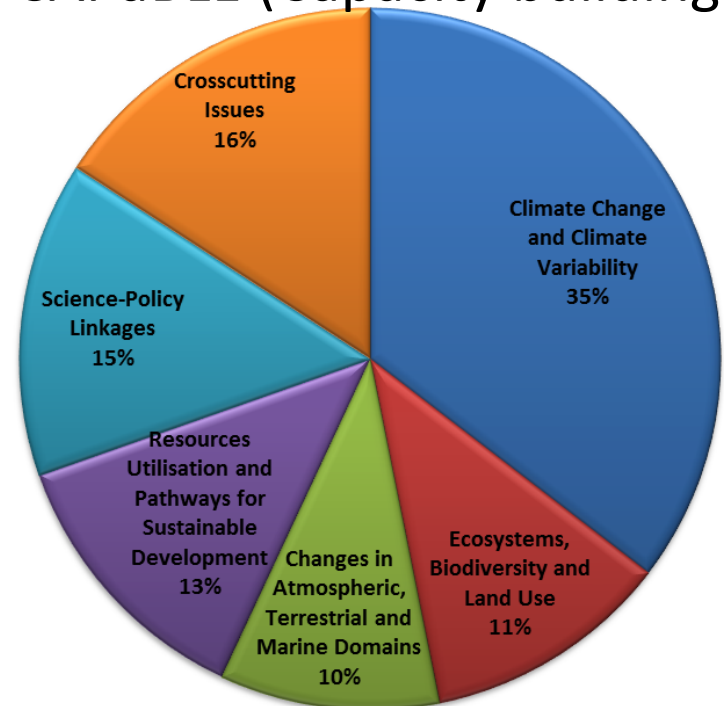
- While it is expected that capacity building projects will have a one-year duration, each proposal will be considered on a case by case basis
- The average grant awarded for 2011 projects with duration of 12 months was US\$ 35,000

# Them distribution of APN funded activities 2008-2013 (Multiple responses)

## ARCP (Research)

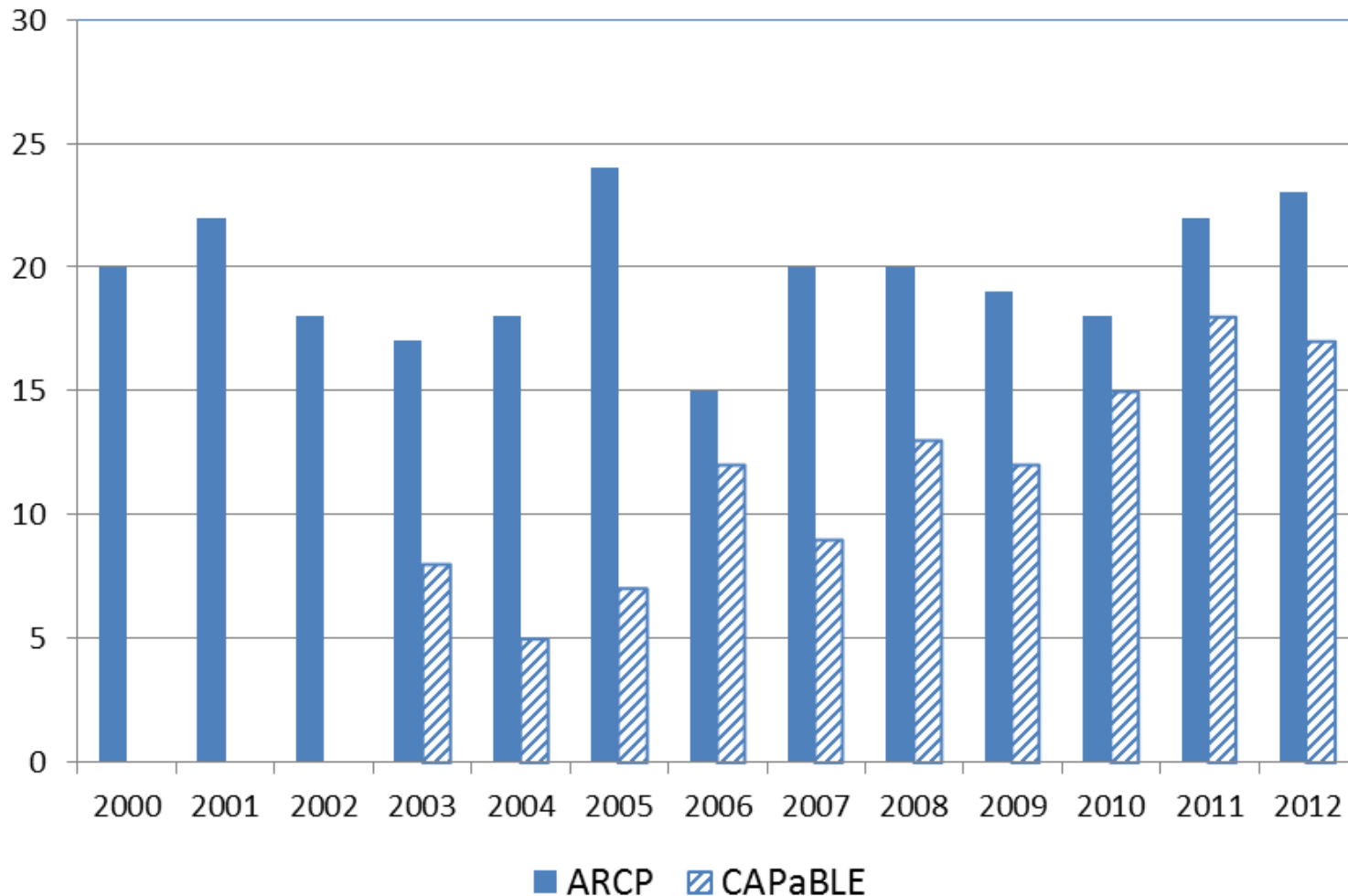


## CAPaBLE (Capacity building)

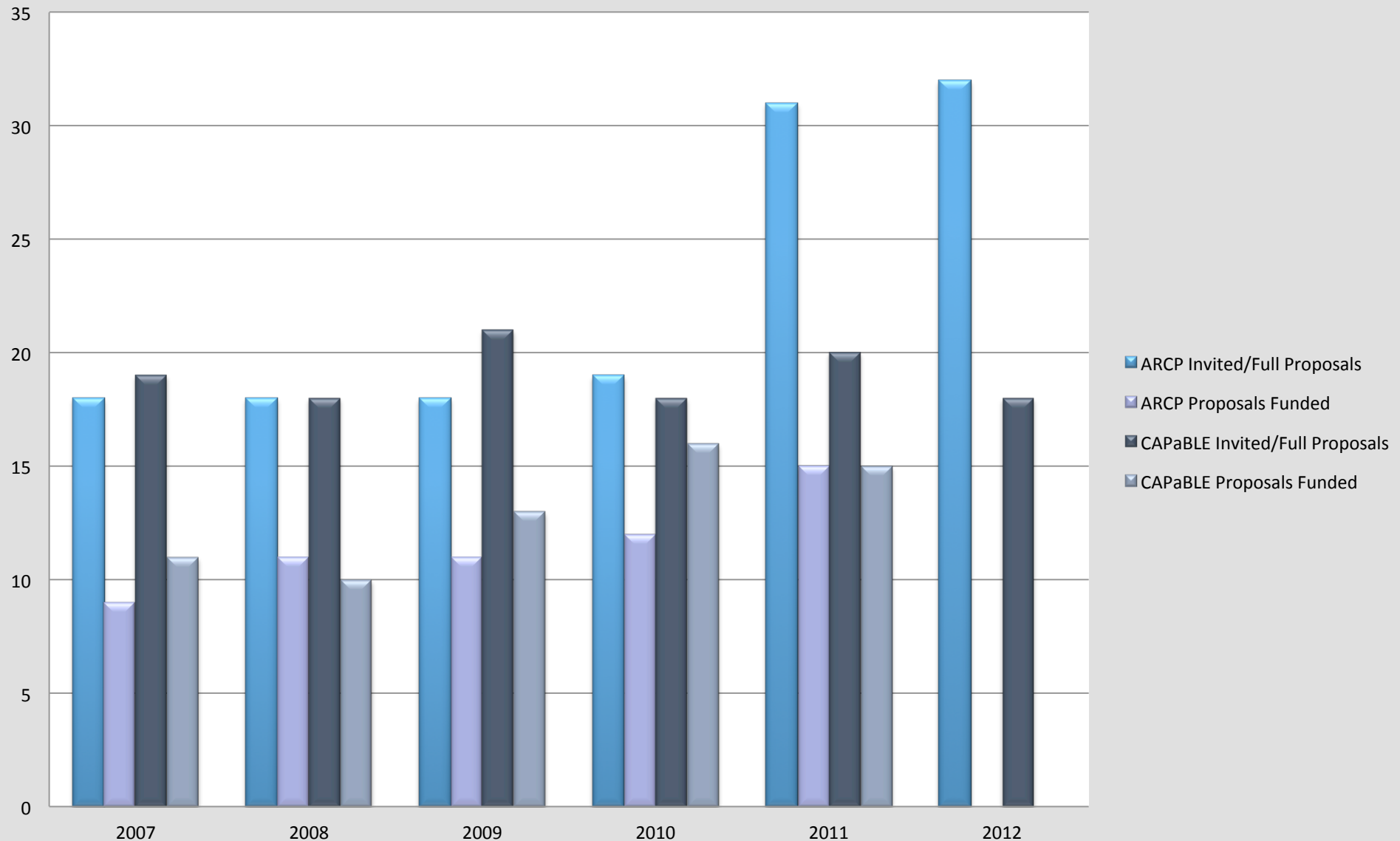


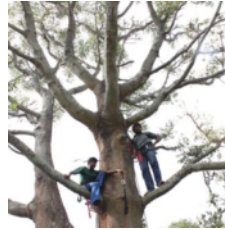


# Trend of number of funded projects under APN core programmes



## Success Rate of Full Proposals for ARCP and CAPaBLE 2007-2012





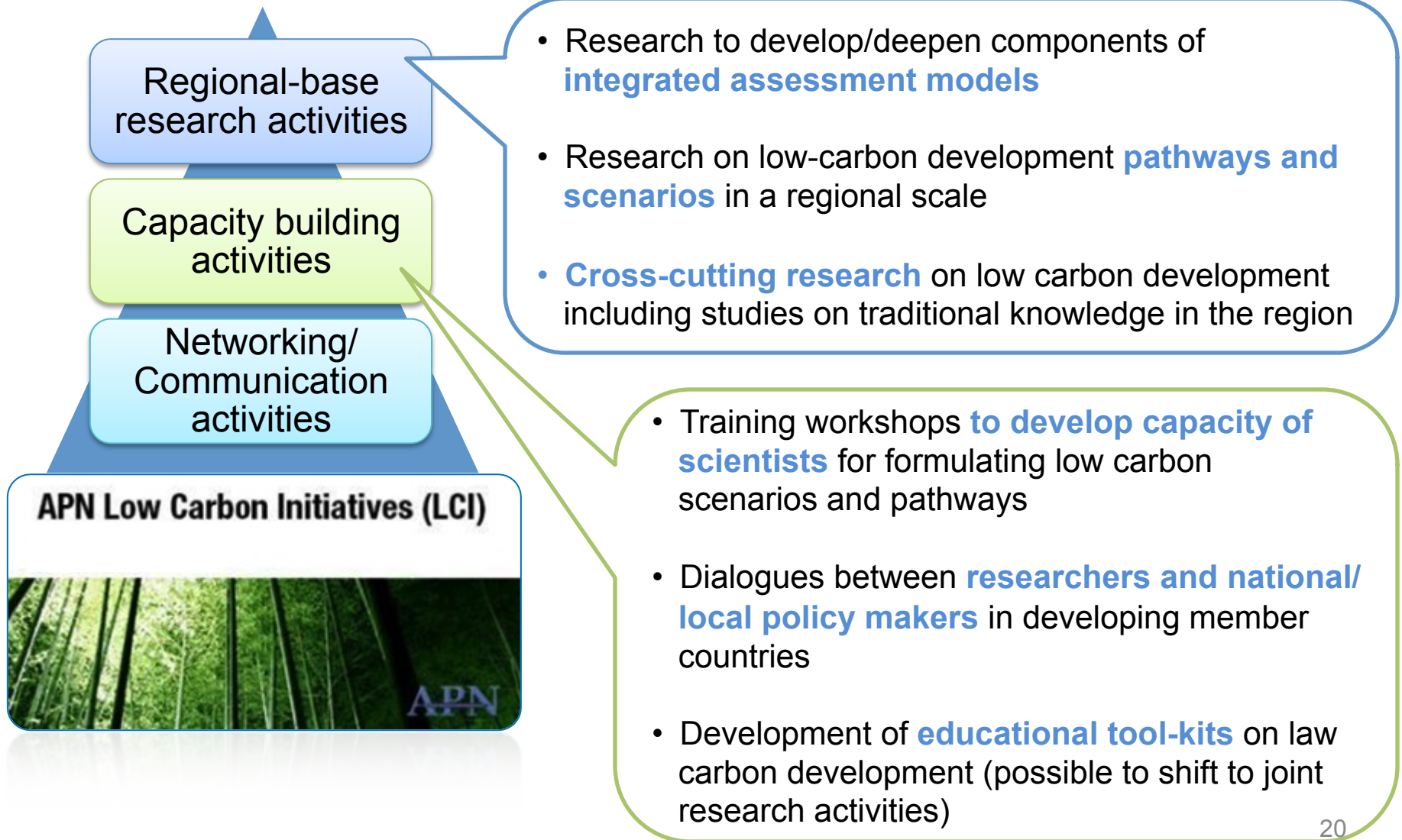
# WAY FORWARD

# How to address energy, environment & ecosystem (3E) nexus;

## Point1: Science agenda

- Multi-sectoral, comprehensive, cross-cutting, trans-disciplinary
  - Energy, agriculture land use, ecosystem, water, waste, etc.
- Co-benefits
  - Reduction and storage of greenhouse gases & reduction of pollutants and wastes, energy saving, economic and social development
- It's essential to promote 3E nexus through research activities under respective science agenda (low carbon, climate adaptation, biodiversity & ecosystem)..

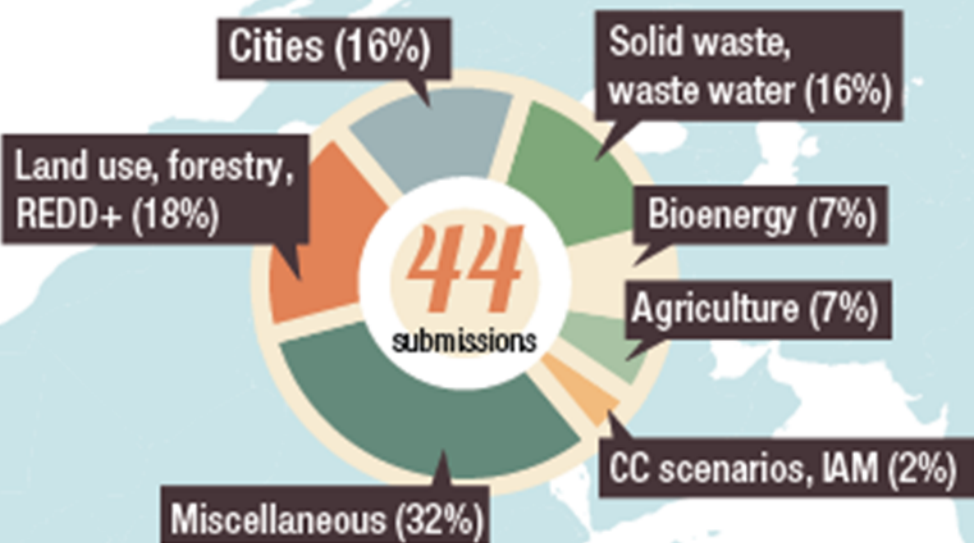
# Low Carbon Initiatives Framework



# APN Low Carbon Initiative

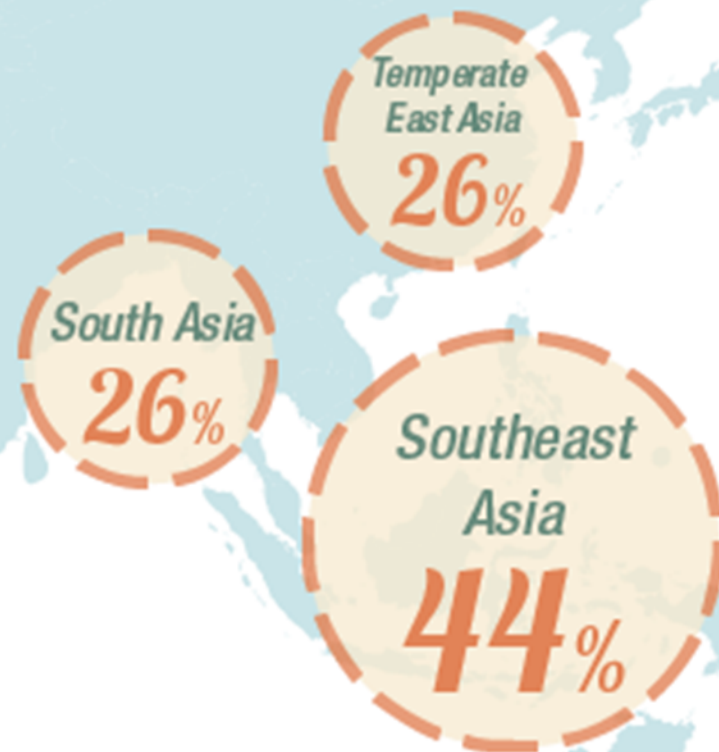
## THEMATIC DISTRIBUTION

*of LCI Submissions*



## PROJECT COLLABORATOR INVOLVEMENT

*by sub-region*



	Project Reference	Title
<b>Capacity Building</b>	LCI2012-01NSY(C)-Maeda	Capacity Building for Implementing a “Measurable, Verifiable and Reportable (MRV)” Model in a Mid-Sized Thai Municipality
	LCI2012-02NSY(C)-Guerrero	Strengthening Community Voices In REDD+ Policy
<b>Regional Research</b>	LCI2012-01NMY(R)-Lakshmi(Nagrath)	Identification of Policy and Institutional Gaps, Drivers and Strategies to Scale-up Low Carbon and Energy Efficient Technology Application in the Construction and Infrastructure Sectors in South Asia
	LCI2012-02NMY(R)-Dhakal	Understanding and Quantifying the Water-Energy-Carbon Nexus for Low Carbon Development in Asian Cities
	LCI2012-03NMY(R)-Lopez	Assessment of Carbon Sequestration through Vermitechnology in Organic Farming
	LCI2012-04NMY(R)-Macandog	Integrated Sustainability Assessment of Bio Energy Potentials in Asia: an Application of a Hybrid Approach on Trade-offs and Pathway
	LCI2012-05NMY(R)-Jupesta	Low Carbon Urban Infrastructure Investment: Cases of China, Indonesia, and Japan



# Good Practice - APN funded research output

## **Strategic Rice Cultivation for Sustainable Low Carbon Society Development in Southeast Asia, *Sirintornthep Towprayoon, et al. (ARCP2011-09CMY-Towprayoon)***

### **Highlights**

- Cultivation of energy crops in rotation with rice is a good strategy to reduce GHG emissions in rice fields.
- Strategic rice cultivation practices can enable SEA to develop towards a sustainable low carbon society.
- Sustainable low carbon agriculture can help address the competition between food and fuel crop cultivation while enhancing carbon sink potential and increasing welfare of farmers in SEA.

## SOC stock in year 2011-2030

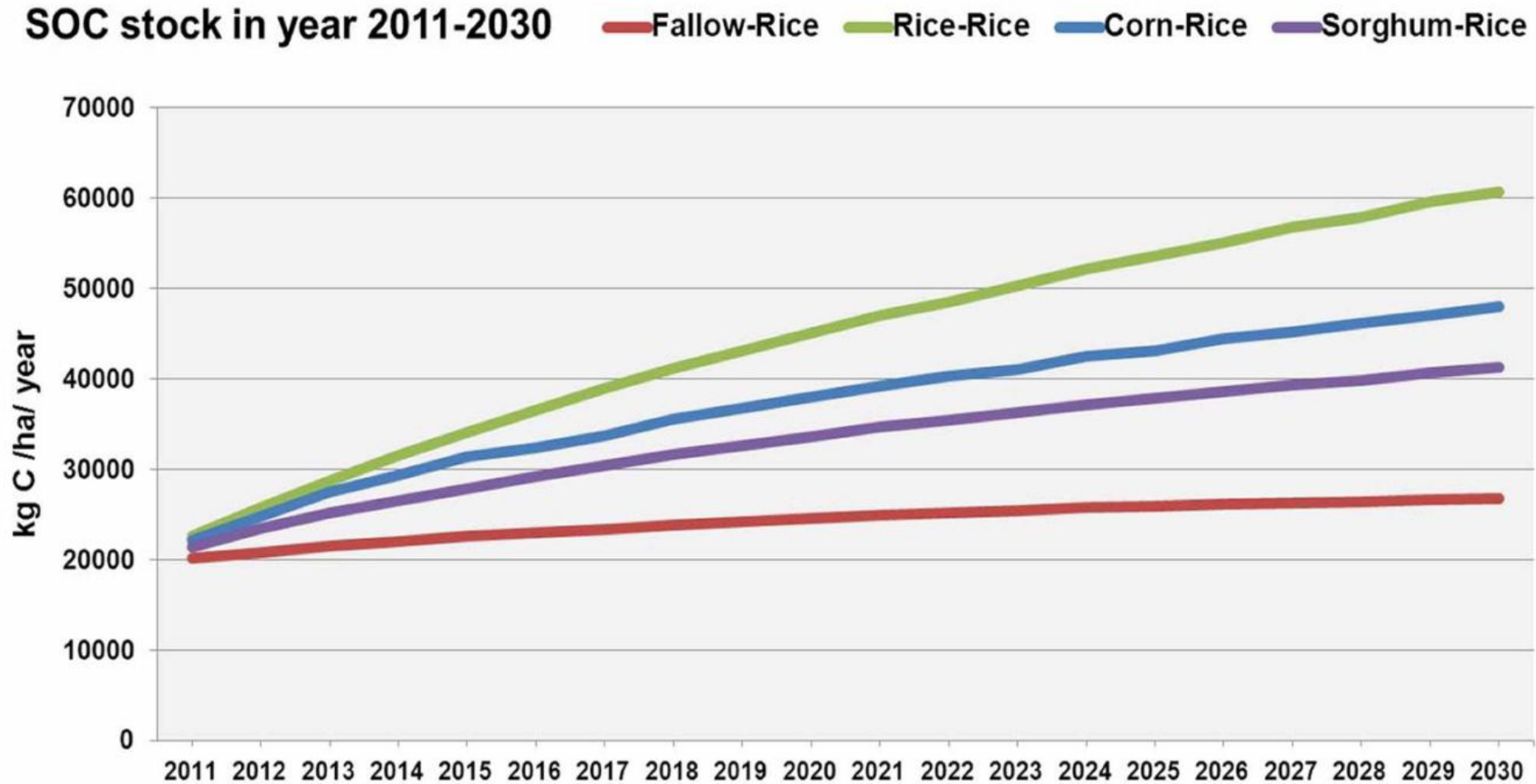


Fig. Long term simulation of annual SOC dynamics over 20 years.

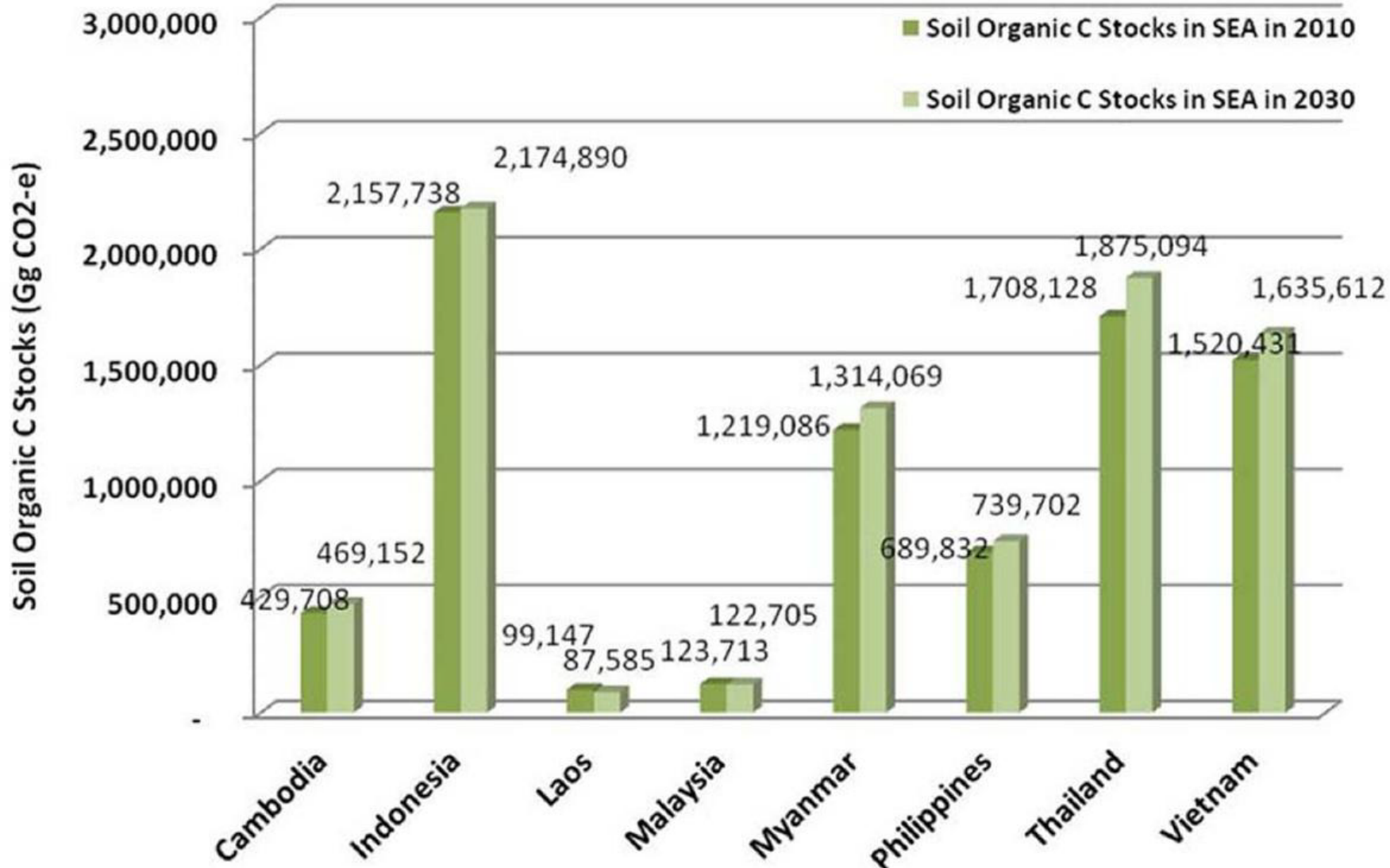


Fig. SOC stocks in SEA in 2010 and 2030 with implementation of rotating cultivation of energy crop and rice.

# APN Climate Adaptation Framework

- Developed at a scoping workshop in Kobe, Japan, 2012
- Activities of high priority
  - Development of high-resolution **observational, model and downscaled datasets** that can contribute to filling data gaps
  - Sharing of **needs-oriented data**
  - **Calibration and validation** of regional climate models; 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 with stakeholders
  - **Utilisation** of available information including climate data in applications for adaptation
- Partnership Development
  - ADB, ICAS-Ibaraki University, Ministry of Interior of Thailand, UNU, WCRP, ICCCAD, APCSS, CCI-ANU



UNITED NATIONS  
UNIVERSITY



# New Activities: Adaptation, Disaster Risk Reduction, Loss and Damage

- Earmarked financial support from Ministry of the Environment, Japan (MOEJ), aiming at Contribution to NFFCC/COP19
- Enhancing the understanding of:
  - The risk of **slow onset events**, and approaches to address them;
  - **Non-economic** losses and damages;
  - Impacts on **most vulnerable** and the approaches
  - Identify and develop **appropriate approaches** to address slow onset events and extreme weather events, including through risk reduction, risk sharing and risk transfer tools;
  - Approaches to address impacts to be **integrated** into climate-resilient development processes;
  - How impacts of climate change are affecting patterns of **mitigation, displacement and human mobility**;
- Supporting data collection, enhancing coordination, strengthening regional collaboration, capacity-building, strengthening institutional arrangements



Photo: A



# Launch of developing APN Biodiversity & Ecosystem Framework



- **Inviting 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



# Key messages from APN funded projects contributing to IPBES activities

(UNU-ISP and KEI, Asia-Pacific workshop on regional interpretation of the IPBES 2–4 September, 2013, Seoul, Republic of Korea)

## Capacity building actions should:

- Facilitate common data storage and sharing of knowledge to track changes over time
- Address most commonly identified capacity building needs - improved practitioner skills for ecosystem assessment and methods for integrating cross scale stakeholder knowledge and priorities

## Knowledge generation actions should:

- Expand scope to cover gaps in Western Asia, Polynesia, and Eastern Asia sub-regions
- Address gaps in assessments on urban and dry land ecosystems
- Create advanced knowledge systems across scales and institutional levels through the integration of social science, citizen, private sector, indigenous and local knowledge with contemporary science



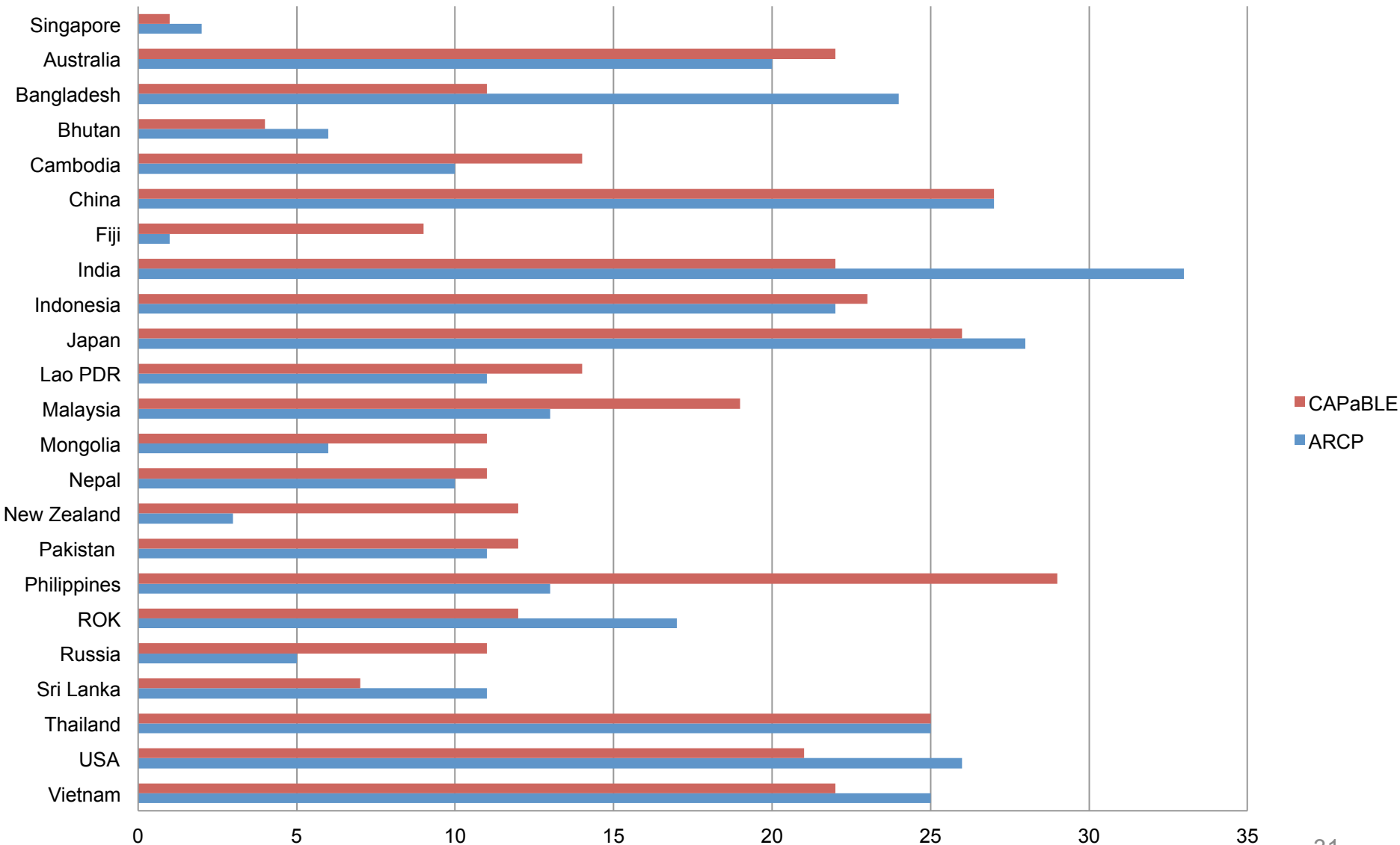
# How to address energy, environment & ecosystem (3E) nexus

## Point2: Scientific capacity building

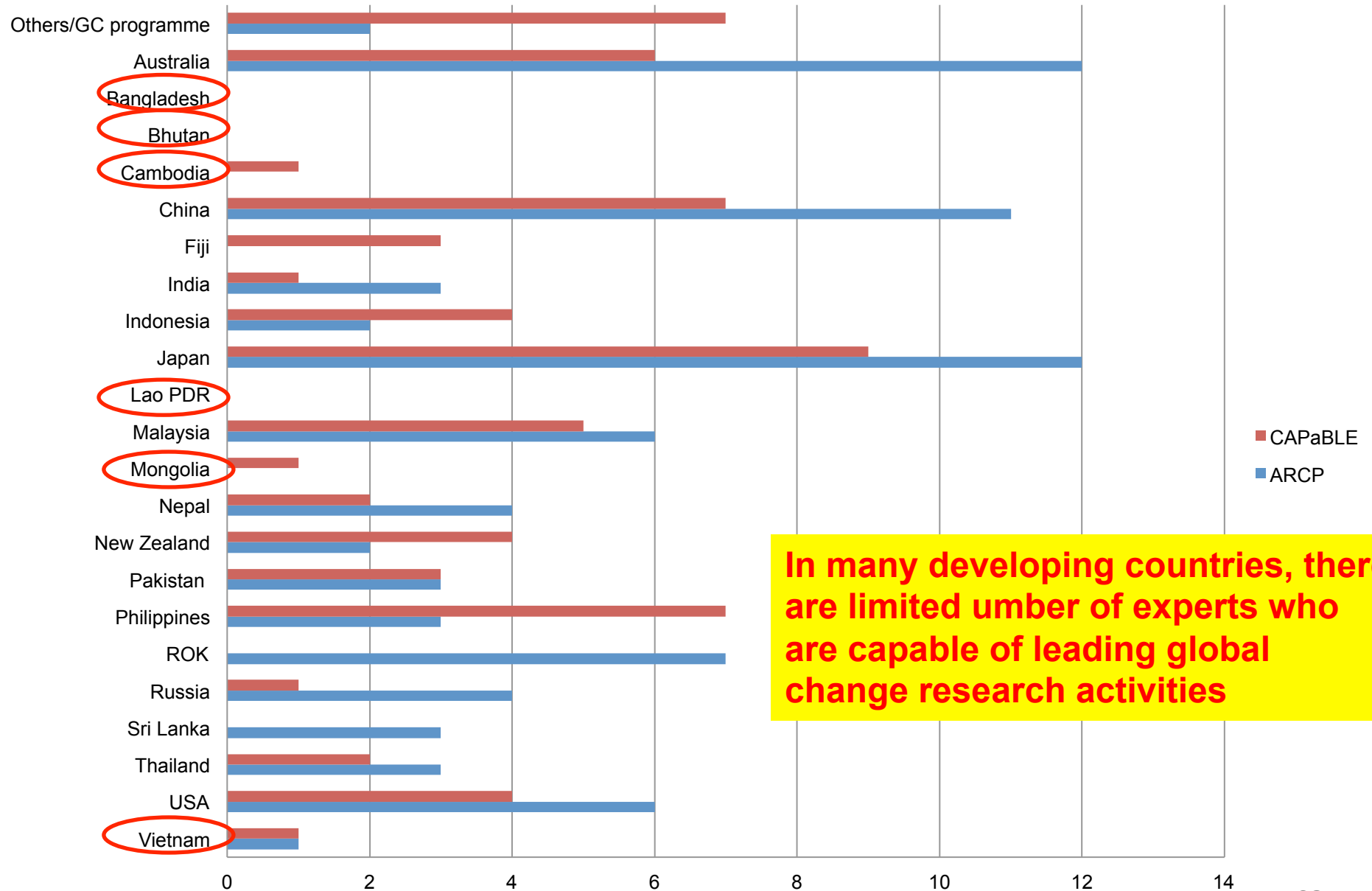
- 1) Scientific capacity for writing proposals submitted to competitive research funds
- 2) Scientific capacity for conducting research activities

# APN Member Countries Involvement (collaborators) 2009-2012 Projects

\* multiple responses. Some people are collaborators for both ARCP and CAPaBLE Projects



## 2009-2012 APN-funded Projects: Country of Project Leaders



**In many developing countries, there are limited number of experts who are capable of leading global change research activities**

# Proposal Development Training Workshops



- PDTWs are an important tool for APN to better enable young scientists to develop competitive proposals to the APN and provide these young scientists with the networking opportunities for career development.
- The PDTW workshops, when held back-to-back with SRC meetings, also enabled new APN members to better understand APN's proposal process.
- In 2012, More than **45** young/early-career scientists from **17** countries received training in the PDTWs held for the SEA, SA, and TEA sub-regions.

# How to address energy, environment & ecosystem (3E) nexus;

## Point3: Partnership approach among funding agencies

### Barrier for international / regional global change research

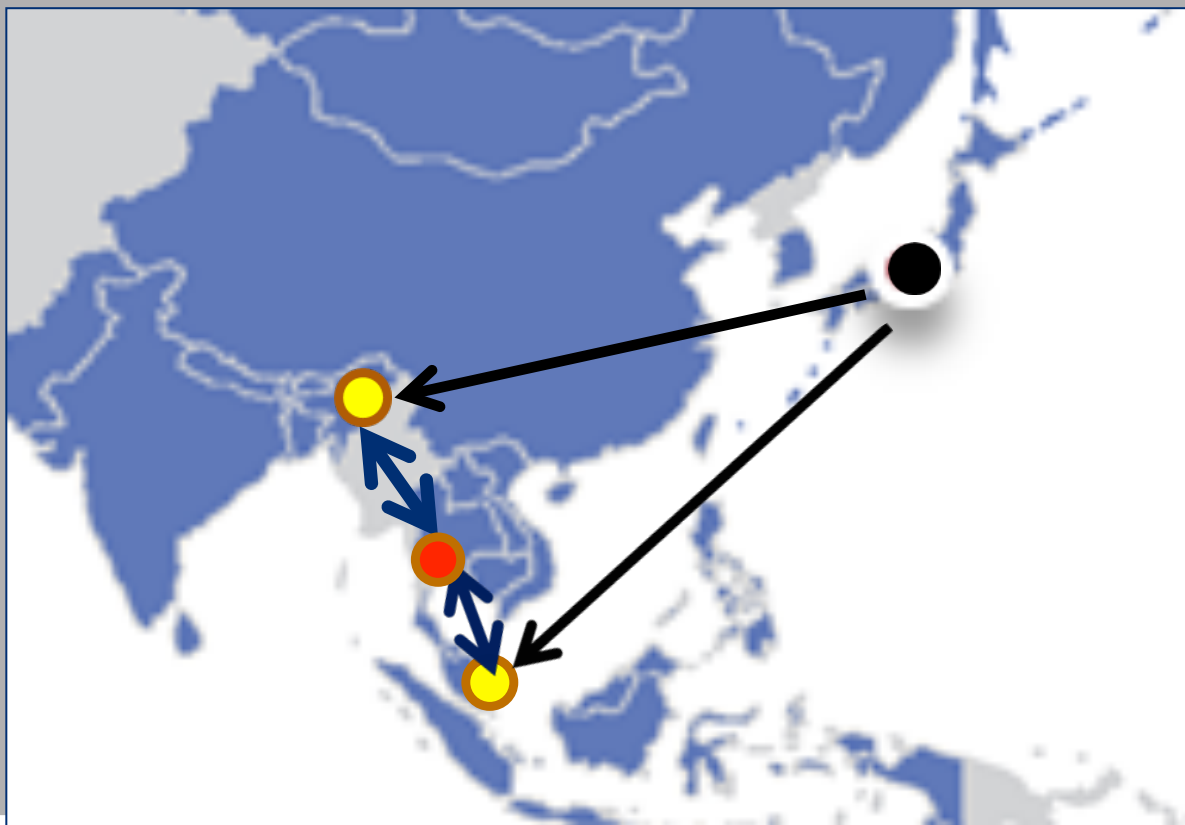
#### ● Financial mechanism

- Hard to finance collaborators outside the country...
- Hard to finance networking activities with other countries and international organizations...

#### ● Networking

- Hard to access data and information outside the country...
- Hard to connect experts outside the country...

# New partnership approach between funding agencies



- Government A**  
Supporting researchers in the country
- Collaborators**  
Engaging in & supporting research and CB in partnering countries
- APN**  
Supporting researchers in partnering countries

# Future We Want (Rio+20, 2013)

## C. Capacity-building

277. We emphasize the need for enhanced capacity- building for sustainable development and, in this regard, we call for the strengthening of technical and scientific cooperation, including North-South, South-South and triangular cooperation. We reiterate the importance of human resource development, including training, the exchange of experiences and expertise, knowledge transfer and technical assistance for capacity-building, which involves strengthening institutional capacity, including planning, management and monitoring capacities.



# Key messages

- 1) Promotion of research in various science agenda (i.e., low carbon, adaptation, biodiversity & ecosystem services) is necessary.
- 2) Capacity building for scientists through proposal development and research implementation is necessary
- 3) South-south and triangular cooperation under partnership among funding agencies (including APN) is very effective

**These approaches will enhance science-policy interaction, contributing to 3E Nexus**

# For more information...



## APN Website:

News, announcements and global change community updates

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



## Contact us:

East Building, 4F

1-5-2 Wakinohama Kaigan Dori

Chuo-ku, Kobe 651-0073, Japan

Tel: +81-78-230-8017

Fax: +81-78-230-8018

[info@apn-gcr.org](mailto:info@apn-gcr.org)

# Thank you!