An APN perspective on incorporating climate and disaster risk management into actions

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APN ASIA-PACIFIC NETWORK FOR GLOBAL CHANGE RESEARCH

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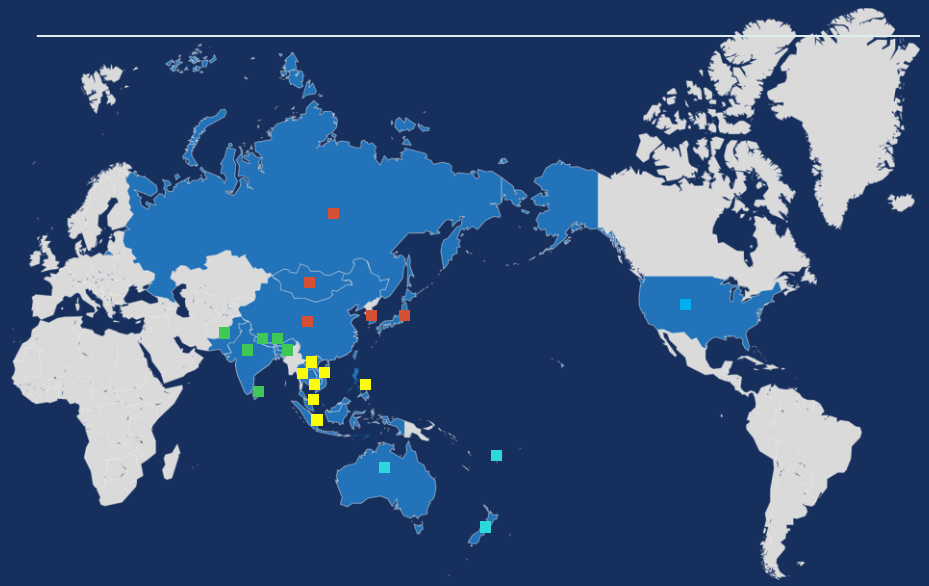
About APN

ESTABLISHED	▪ 1996
MEMBER COUNTRIES	▪ 22 countries in Asia-Pacific Region ▪ Additional “approved countries”
SECRETARIAT	▪ Kobe, Hyogo Prefecture, Japan
DONORS	▪ Ministry of the Environment, Japan ▪ Hyogo Prefectural Government, Japan ▪ Ministry of Environment, Republic of Korea ▪ Ministry for the Environment, New Zealand



Focus areas

Climate

Biodiversity & ecosystems

Air, land, coasts & oceans

Food, water & energy

Risk & resilience

Human dimensions

Strategic goals

1

REGIONAL RESEARCH

Support regional cooperation in global change research on issues particularly relevant to the Asia-Pacific region.

2

CAPACITY DEVELOPMENT

Enhance capabilities to participate in global change and sustainability research and support science-based decision-making.

3

SCIENCE-POLICY LINKAGES

Strengthen interactions among scientists and policymakers; provide scientific input to policy decision-making, and scientific knowledge to the public

4 **COMMUNITY ENGAGEMENT**

Cooperating with other global change and sustainability networks and organizations.

Fourth Strategic Phase Report (2015-2020)

Member country priority topics

- Over US$7M for **119 projects** completed
- Over **70%** of projects engaged early-career scientists
- Over **1,600** scientists directly engaged
- Over **11,600** people directly engaged
- Over **650** distinct outputs
- Over **97,000** unique views on project metadata pages on the APN website

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Special Issue in Elsevier Environmental Research: Climate Change Impacts, Vulnerability and Adaptation - Asian Perspective

Knowledge base in the region covering new climate information, policy gaps, and lessons learned are crucial and should be widely disseminated particularly to practitioners and policymakers. In this regard, a Special Issue "Climate Change Impacts, Vulnerability and Adaptation: Asian Perspective" that highlights findings of 15 APN projects was recently published with Dr Sangam Shrestha (AIT), Dr Linda Anne Stevenson (APN), Dr Rajib Shaw (Keio University) and Dr Juan Pulhin (UPLB) as editors. The results of which are expected to add value to the scientific literature.

APN Knowledge Synthesis

2013-2018

As part of the special issue, a knowledge synthesis of climate change efforts in Asia suggests there are 115 distinct and relevant projects in Southeast Asia, South Asia and Temperate East Asia, with many asserting issues around climate adaptation and mitigation, ecosystems and biodiversity, water-food-energy nexus, sustainable waste management, and climate education.

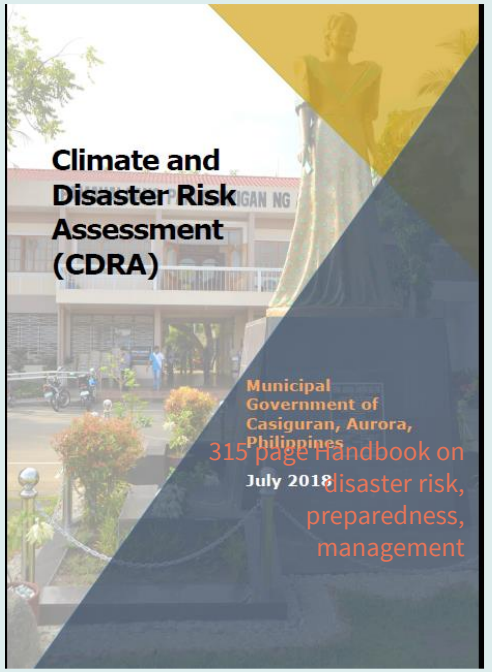
Climate and disaster risk management

- Case studies in Southeast Asia
- Case study in South Asia
- Importance of dialogue

APN ASIA-PACIFIC NETWORK FOR GLOBAL CHANGE RESEARCH

Institutional resilience as cornerstone to effective climate-adaptive action in Aurora, Philippines

Enhancing Climate Risk Resilience through Human Security Development and Capacity Building in the Province of Aurora, Philippines



315 page Handbook on disaster risk, preparedness, management

Building institutional resilience of local governments by engaging key actors to formulate local climate change and disaster risk action plans was the study's key focus.

Key results

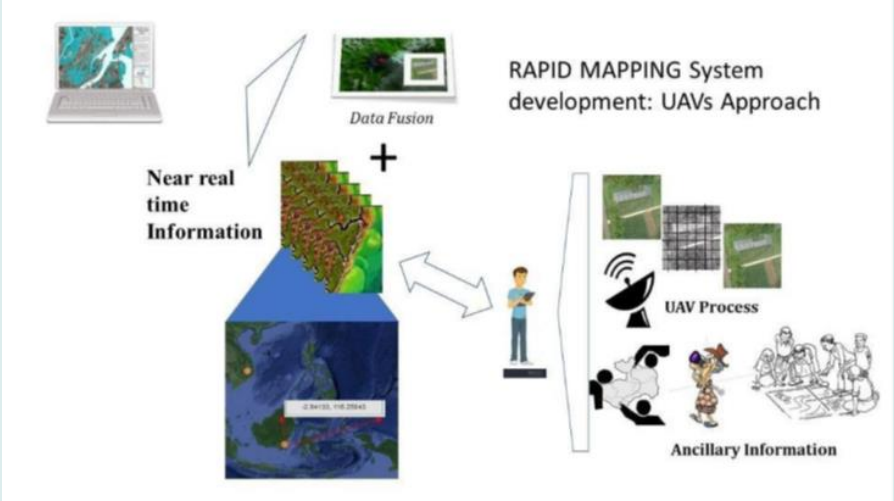
- The process of preparing the Local Climate Change Action Plans (LCCAP) is a major challenge for Local Government Units (LGUs) in Aurora, Philippines
- Engaging the LGUs in the activities reflects a shared learning process through knowledge generation and discussion.
- Institutional capacity assessment revealed a strong correlation between expertise and position in all conditions.
- A key to institutional capacity building is competency development among LGUs as frontline agencies in climate adaptation.
- LGUs need improvement in terms of staffing and human resource; access to financial support from other sources; and knowledge management systems.

Grefalda, L. B., Pulhin, J. M., Tapia, M. A., Anacio, D. B., Luna, C. C., Sabino, L. L., . . . Inoue, M. (2020). Building institutional resilience in the context of climate change in Aurora, Philippines. *Environmental Research, 186*, 109584. doi:10.1016/j.envres.2020.109584

Summer school on improving community capacity in rapid disaster mapping

The output of this project is the completion of capacity building of the science-based knowledge of young scientists form Southeast Asia countries dealing with the **Rapid Mapping** technology and the completion of a participatory forum to promote rapid mapping method to end users.

Experiences with natural disasters have intensified recent efforts to enhance cooperation mechanisms among official disaster management institutions to community participation. These experiences reveal a need to enhance rapid mapping technical assistance to be developed and shared among young scientists through a summer school.

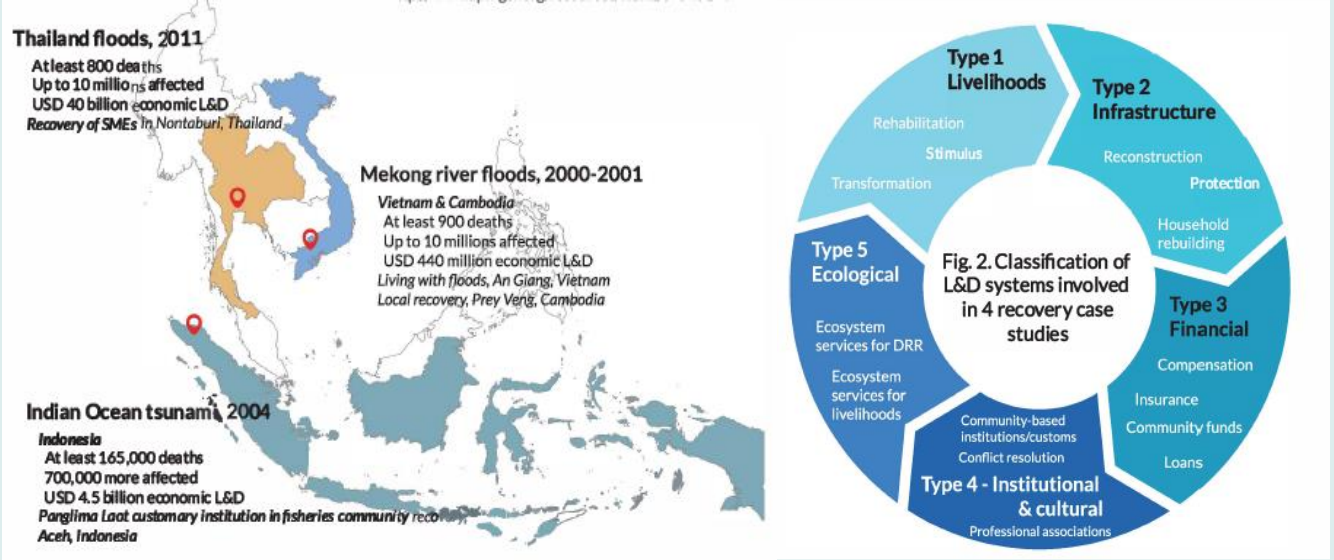


Objectives and outputs:

- train young scientists in practical ways on rapid spatial data acquisition into information needed for sustainable management and disaster risk reduction,
- promote the rapid mapping technique as a tool to assist decision-makers in managing disaster risk reduction and rapid environmental changes.
- support the idea of rapid mapping to community that portraying a spatial representation of a disaster-prone area may improve the awareness of community perception on the environmental-risk.
- The findings indicate that the summer school was successful and that it can play an important role in promoting faster and more effective and efficient capacity building in the field of rapid mapping.
- The evaluation of summer school was conducted to assess how important summer schools are for capacity building by using competence criteria approach, there is by measuring knowledge, skills and attitudes through observations, questionnaires and a weighted scoring method.

Identifying factors that lead to successful long-term approaches of DRR and CCA and strategies for integration into regional planning

Key goals of post-disaster response and longer-term recovery efforts in the affected areas have been to 'build back better', to place more emphasis on environmental sustainability, and to strengthen the resilience of communities at risk to be able to cope with and adapt to a range of future environmental changes and risks.



Building Back Better

- The research of 4 found a diversity of loss and damage systems which reflected the dominant recovery narratives around the disaster.
- The case study findings show that efforts to improve the performance of such systems so that they support long-term recovery need to closely consider the causes of vulnerability, intended beneficiaries, the framing of solutions, and issues of governance such as the legitimacy, responsiveness and accountability of authorities.

*"The topic of assessing and addressing Loss and Damage from human induced climate change is a relatively new and contentious issue in the global negotiations on climate change. One reason is the lack of knowledge of what this means in the context of climate change. This study adds significantly to our understanding from examining past events that have caused loss and damage from climatic events and tracing the outcomes beyond the immediate recovery period……**Dr. Saleemul Huq, Director, International Centre for Climate Change and Development (ICCCAD), Independent University, Bangladesh.***

Opportunities and challenges of compliance to safe building codes: Bangladesh and Nepal

The research is significant for two reasons: (1) disaster resilience is of high concern nationally in both Bangladesh and Nepal, where safe buildings are required to protect human lives and assets; and (2) the UN Sustainable Development Goals and Sendai Framework for Disaster Risk Reduction, among others, emphasize the importance of building codes.

Recent disasters in Bangladesh and Nepal highlight that non-compliance to building codes is one of the significant causes of building-related disasters. Increased institutional and community awareness of the importance of safe building codes presents an opportunity to explore barriers and enablers to compliance.

Key results

- **Integration of building regulations and building codes**: The level of differentiation and integration between regulations and codes varies widely, both in developed and developing countries, making compliance and enforcement complex for achieving disaster resilience.
- **Mounting emphasis to act**: In many developing countries, building codes exist but implementation is often not mandatory. However, after recent disasters in the case study countries, there is a stronger emphasis on the implementation of codes.
- **Need for greater intervention**: Despite the mounting emphasis on many existing challenges in terms of capacity, compliance and enforcement, there is little knowledge of them even among built environment professionals.
- **Lack of capacity**: There is a need for capacity building at all stakeholder levels from formally trained built environment professionals to informal sector construction workers.

Ahmed, I., Gajendran, T., Brewer, G., Maund, K., Von Meding, J., Kabir, H., . . . Sitoula, N. (2019). Opportunities and challenges of compliance to safe building codes: Bangladesh and Nepal. APN Science Bulletin, 9(1). doi:10.30852/sb.2019.834

Importance of informal dialogue and communication

Some countries in South Asia lack advanced scientific research and knowledge to integrate scientific findings into national level policy planning.

Regional dialogues provide opportunities to gain knowledge from other countries, scientific studies.

Regional cooperation is essential to effectively address climate issues. In particular, policy makers should consider regional issues together with national issues when formulating national policies.

Key points require consideration during the communication process:

- There is a need to **strengthen regional cooperation and collaboration in data collection**, sharing and use for effective response to disaster risk reduction & climate change adaptation.
- **Enable Informed decisions.**
  Collect information and advice from science and inform various levels up to policymakers for decision-making.
- **Write for people to understand and to act.**
  First we need to educate the audience to receive knowledge of scientific findings. On the other hand, scientific information that is policy-relevant must be written in simple language.
- **Capture knowledge from practice.**
  Knowledge has been distributed everywhere but we need to capture and connect each other's for effective usage.
- **Innovate—double the impact in half the time at quarter the cost.**
  Need to emphasise the importance of innovation over commercial benefit, which provides solutions for climate change and its impacts.

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Reports, proceedings, policy briefs, guides, tool kits and other outputs from APN funded projects
www.apn-gcr.org/publications-library/

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