

Call for submission on human settlements and adaptation

Name of the organization or entity:

Asia-Pacific Network for Global Change Research (APN)

Type of organization:

Please choose as appropriate:

- | | |
|--|--|
| <input type="checkbox"/> Local government/ municipal authority | <input checked="" type="checkbox"/> Regional center/network/initiative |
| <input type="checkbox"/> Intergovernmental organization (IGO) | <input type="checkbox"/> Research institution |
| <input type="checkbox"/> National/public entity | <input type="checkbox"/> UN and affiliated organization |
| <input type="checkbox"/> Non-governmental organization (NGO) | <input type="checkbox"/> University/education/training organization |
| <input type="checkbox"/> Private sector | |

Location

City: Kobe

Country: Japan

Scale of operation:

- | | |
|-----------------------------------|---|
| <input type="checkbox"/> Global | <input checked="" type="checkbox"/> Regional |
| <input type="checkbox"/> Local | <input checked="" type="checkbox"/> Subregional |
| <input type="checkbox"/> National | <input type="checkbox"/> Transboundary |

City(ies)/Country(ies) of operation (if appropriate):

Assessing sensitivity and vulnerability to climate change

Description of relevant activities/processes or research:

Rural communities throughout the Asia-Pacific are generally more exposed to climate-driven changes to their livelihoods than those in larger/urban communities. The researchers developed and piloted a community resilience tool to be used to support climate change adaptation within existing development planning pathways. The framework included 39 key questions based around the outcomes related to (i) livelihoods and environment, (ii) infrastructure, (iii) community, and (iv) climate change and disaster management. The study areas were in communes in Northwest Cambodia and Central VietNam

Description of relevant tools/methods:

Many tools exist for vulnerability assessment and community based adaptation planning and some are emerging for assessing urban resilience. However, these often require significant experience and resources to undertake due to their complex nature and/or reliance on detailed quantitative monitoring that may not exist or may be too expensive to undertake. Many communities must adapt to climate change without having detailed information to inform their adaptation choices. While robust technical information may be desirable, many communities lack resources for this. The toolkit developed is based on the assumption that providing simple structured dialogue can be effective in supporting decisions in the absence of technical information. The tool itself is a rapid community resilience assessment toolkit, with a climate focus.

Key outcomes of the activities undertaken:

Adaptation Options for Cambodia:

- Promote agricultural groups sharing knowledge, coordinating planting & irrigation
- Establish community gardens increasing food security & supporting micro-enterprise
- Initiate study club for migrants' children who work during the day
- Promote water and food storage
- Provide resources to implement climate adaptation

Adaptation Options for VietNam:

- Identify opportunities for livelihood diversification
- Improve disaster preparedness, especially for vulnerable and marginalized groups
- Improve understanding about climate change
- Improve funding for plan implementation

Publications

- Jacobson, C., & Nguon, C. (2016). Community resilience assessment and climate change adaptation planning: A Cambodian Guidebook. Maroochydore, Australia: University of the Sunshine Coast.
- Tran, T., Tran, P., Tran, T. A., & Jacobson, C. (2016). Community resilience assessment and climate change adaptation planning: A Vietnamese Guidebook. Maroochydore, Australia: University of the Sunshine Coast.
- Jacobson, C., Crevello, S., Nguong, C., & Chea, C. (n.d.). Resilience and vulnerability assessment as the basis for adaptation dialogue: a Cambodian example. In Developing and communicating climate change information for decision-making. Springer. (accepted)

Description of lessons learned and good practices identified:

- This tool was designed as a rapid assessment tool for community resilience, that can be used (1) to support climate adaptation planning across government departments, and (2) articulate commune needs to a variety of stakeholders, including provincial government and Non-Governmental Organizations. In the absence of detailed monitoring, it provides useful information that can be gathered at low cost without significant expertise, and therefore fills a critical information gap many government officials have.
- The toolkit is focussed at the commune and provincial scales, to support consideration of climate impacts and management options in policy and planning across all aspects of development. The toolkits is simple, yet informative and cost efficient, for use by provincial and commune governments and NGOs as part of regular planning processes.

Description of key challenges identified:

- In rural Lvea Krang (Cambodia) community outcomes were most concerning, limited by ineffective collaboration, and plan implementation funding. In peri-urban Chamkar Samrong, all outcomes except climate and disaster management are of concern, with plan implementation funding and information the most limiting factors.
- In peri-urban Thuy Thah Commune (Vietnam), climate and disaster management are most concerning, with plan implementation funding the most significant contributor.
- In rural Vinh Hai commune, livelihood and environment outcomes are of most concern but again, plan implementation funding and information contributed to poorer outcomes.
- Building resilience requires context-based consideration of desired outcomes and factors that affect them. The assessment tool provides a simple and cost-efficient means for monitoring the long-term effectiveness of un-coordinated aid donor projects in supporting community-based adaptation to climate change.

Planned next steps (as appropriate):

The assessment toolkit developed as part of this project can be readily used by Commune Councils as part of annual community (Commune) planning exercises and to mainstream climate change adaptation into development initiatives. Further work could be undertaken to develop aligned quantitative proxy indicators where sufficient financial resources exist to measure them (e.g. water quality as a measure of the quality of the natural environment, food security index as a measure of access to resources in times of crisis/stress). The sensitivity of the tool to detect changes in resilience on the basis of adaptation activities should be examined. The project work in conjunction with FAO-initiated surveys on food insecurity has also highlighted the need to consider how best to engage marginalised groups in resilience and vulnerability assessments, given that this indicator consistently scored poorly.

Relevant hyperlinks:

“Optimizing Climate Change Adaptation through Enhanced Community Resilience,” APN E-Lib, accessed September 20, 2017, <http://www.apn-gcr.org/resources/items/show/2028>. Toolkits, factsheets and project reports can be accessed at this site.

City-to-city partnerships on climate change adaptation

Description of relevant activities/processes or research:

Current vulnerability of urban areas like population pressures, inadequate infrastructure and services in India is so pronounced that cities are unable to prioritize climate change as one of their focus areas of action. Urban climate resilience not only prepares cities to withstand climate change related gradual impacts like change in precipitation and temperature and sea level rise, but also equip cities to respond to disasters and extreme events. The project designed and delivered capacity building programmes on urban climate resilience in four states of **India—Goa, Uttarakhand, Odisha, and Maharashtra**. The TERI-APN program funded under APN's capacity development programme, CAPaBLE, included a day-long orientation programme for elected representatives of the Urban Local Bodies (ULBs) of the selected states and a two-day long training programme for city officials and practitioners. The main objectives of the work were to:

- Sensitize city officials and other participants on issues and impacts related to climate change and the importance of adaptation interventions for the urban areas
- Bridge the science-policy divide by sensitizing city and state level decision-makers about the application of
- Facilitate dialogue to discuss opportunities in mainstreaming urban climate resilience agenda into planning.

Description of relevant tools/methods:

The training was provided through a series of modules, hands-on sessions and site visits. For example, one of the modules was on “mainstreaming urban climate resilience into the urban development paradigm”. The topics of the module included:

- Introduction to climate resilient cities- why a change in perspective in governance is needed”
- Introduction on what is mainstreaming
- Reasons to mainstream climate resilience
- Contextualizing resilience within institutional and theoretical frameworks
- Integration points for mainstreaming climate resilience

Key outcomes of the action undertaken:

- A key outcome of the project is a briefing paper titled: ‘**Capacity building for building sustainable and smart urban India**’ which was released during the national conference by Mr Sanjay Kothari, Secretary, Department of Personnel and Training (DoPT), Ministry of Personnel, Public Grievances and Pensions, Government of India.
- Partnerships and collaborations were established with key city-level institutions and departments in each State

Description of lessons learned and good practices identified:

There is merit in establishing a nodal body at the city level; e.g., the Municipal Corporation, that would have the statutory authority to coordinate and direct the resilience planning and implementation efforts with relevant officials, semi-official, and non-governmental agencies operating there. Capturing local communities’ interest and involvement could be one of the responsibilities of the nodal body. Replicability and scaled-up activities are very much a great output of this activity and a proposal is already being prepared to continue the work in other cities and states. In terms of sustainability and efficiency of resources, it is expected that future programmes would also be delivered via e-learning modules to city officials and practitioners.

Description of key challenges identified:

- While the subject matter was found interesting and new, and the overall reaction to the training programmes was positive, it was suggested that the training modules should give direct examples of day-to-day functioning. Subjects like climate change and resilience, and disaster management are not directly related to the functions of the city officials who attended. While the officials were very interested in knowing about the theme, they wanted sector specific solutions to be presented along with the problems, risks, and vulnerability.
- There should be more avenues for involvement and interaction for the participants, with their roles in the respective projects being discussed. It was also discussed how their role in the projects could be streamlined towards building climate resilience.
- Climate resilience is a fairly new concept in India, requiring specific technical know-how and data for cities to draw up their resilience plans.

Planned next steps (as appropriate):

- City official stressed that similar training programmes should be organized at regular intervals. A state level training calendar where municipal officials are trained on various topics of relevance on a regular basis will help in skill building as well as in inculcating a culture of education and learning on climate adaptation and resilience.
- Training programmes for specific group of officials, for example, junior engineers, etc., should be designed and conducted as these officials work on ground and deal with day-to-day challenges and has the least opportunity for skill building.

Relevant hyperlinks:

- A Comprehensive Capacity Building Program on Urban Climate Change Resilience in India. *APN E-Lib*, accessed September 14, 2017, <http://www.apn-gcr.org/resources/items/show/1966>.
- <http://www.teriin.org/projects/apn/>

Integrating both short-term and long-term climate considerations (including both extreme and slow onset events) into planning

Description of relevant activities/processes or research:

If we define risk more inclusively to cover both “rapid onset-high impact” events such as floods and heat waves, and “slow onset- high impact” events, such as climate change and poverty, we are in a position to relate DRM to SD. For example, we are in an advanced stage of risk as far as global climate change is concerned, and we are bordering on disaster stage for impacts and vulnerabilities of natural resources and biological diversity due to these changes. It is this risk that needs to be characterized and managed, instead of waiting to settle all the arguments about uncertainties before taking action. With this context, over a two-year period, learning labs for around 80 participants on “**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**” were undertaken by the Centre for Global Sustainability Studies (CGSS) in Malaysia, partnered with universities in VietNam, LaoPDR, and Cambodia and funded by APN.

The activities undertaken in the labs were:

- Discussion of Southeast Asia climate trends and scenarios with focus on climatic extremes
- Definition of disaster management terms, risk equations, disaster trends, population, urbanization and DRM, Malaysia and DRM
- DRM-SD cycle components – Risk management (before an event) – Prevention and Preparedness
- DRM-SD cycle – Disaster management side (after an event)
- Training of risk reduction project management tools involving Logical Framework Analysis (LFA), System thinking using Atkisson’s Pyramid approach, and World Café for effective stakeholder discussion.

The three day learning labs comprised personalized instruction and hands-on learning to develop risk reduction projects for country specific disasters. The backdrop of the entire discussion was the Hyogo Framework for Action 2005-2015, the Rio+20 outcomes The Future We Want and the Sendai Framework for Disaster Risk Reduction 2015-2030.

Description of relevant tools/methods:

Training used risk reduction project management tools involving Logical Framework Analysis (LFA), System thinking using Atkisson’s Pyramid approach, and World Café for effective stakeholder discussion.

Key outcomes of the activities undertaken:

1. Strengthened partnerships, risk reduction project development, specialized capacity building, documenting current approaches and recommending better approaches for improved policies
2. **Post-project toolkit/handbook: Building Capacity for Reducing Loss and Damage by Natural Hazards: A Guidance Manual for Good Practices:** The guidance manual will assist in addressing climate change issues by connecting risk to climate impacts, vulnerability of exposure units and the role of adaptation in enhancing capacity to address risks to all interested parties for both slow-onset and extreme events (see hyperlinks below for access to the manual)
3. Trained practitioners who now have the know-how and potential for leadership in Climate Change Adaptation (CCA), Disaster Risk Reduction (DDR), and Loss and Damage (L+D). The skills developed during the training are suitable for leadership roles in DRM and Climate Change project management, especially with vulnerable communities.
4. Realization that investing in enhanced capacity for disaster risk reduction, disaster preparedness and building resilience at all levels is a “no regret option” for climate change adaptation.

Description of lessons learned and good practices identified:

(a) effectiveness/impacts of the activities/processes (including measurability of the impacts):

Participants became clear that there is a need for improved understanding of climate science, assessment and risk reduction for both slow and rapid climatic disasters, adaptation to build resilience, and efficient policies coupled with an empowered community to effectively reduce Lost and Damage (L+D).

(b) efficiency in the use of resources: Very efficient: Pooled resources by collaboration from 4 national universities in 4 countries and funding from APN allowed 80 participants to be trained (USD68,000 cash contribution)

(c) replicability (e.g. in different locations, at different scales): Replicable by using the handbook outlined in key outcomes as well as approaches detailed in the final project report.

(d) sustainability (i.e. meeting the current economic, social and environmental needs without compromising the ability to address future needs). the training facilitated practitioners to plan for and respond to disasters more effectively, preserving lives and livelihoods, eventually preventing the effects of natural hazards from negatively impacting future development

Description of key challenges identified:

- The neo-DRM-SD is applicable to challenges in minimizing the risk face and to work in partnership with implementing agencies such as government and NGOs to apply sustainability principles and practices to effectively respond and recover from any disaster
- Recognition of cascading hazards and slow onset hazards - persistent, insidious and long-term
- Detection and attribution related to extreme events
- Identification of susceptible areas and spatial distribution of exposed and vulnerable communities therein
- Early warning and response systems
- New models for risk sharing / social protection schemes
- Legal implications and future security challenges

Planned next steps (as appropriate):

Future directions should consider policy-relevance and relate either to: (i) implementation issues of existing policies or (ii) existing policy gaps that need bridging. While the training addressed both issues, the emphasis was on the former since there are gaps in translating knowledge into action.

Relevant hyperlinks:

- 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,” APN E-Lib, accessed September 13, 2017, <http://www.apn-gcr.org/resources/items/show/1946>
- Ahmad Shabudin, A. F., Syed Azhar, S. N. F., & Ng, T. F. (2017). Learning lab on disaster risk management for sustainable development (DRM-SD): An evaluation. *International Journal of Climate Change Strategies and Management*, 9(5), 600–625. <https://doi.org/10.1108/IJCCSM-08-2016-0114>