



Building Urban Climate Resilience in Asia

AdaptationPartnership

July 31 - Aug 2
An Adaptation Partnership Workshop

Photo Credit: Flickr User: Araxav





About the Adaptation Partnership

At the Petersberg Ministerial Climate Dialogue in May 2010, Costa Rica, Spain, and the United States identified a need for development practitioners to share information and lessons on adaptation efforts. The three countries took on the role of chairing a global Adaptation Partnership. Since then, over 50 developing and developed countries have participated in the Partnership to identify common adaptation priorities and improve coordination of efforts to scale up action and financing for adaptation.

For more information please visit

www.adaptationpartnership.org

Workshop Overview

The United States (US) Agency for International Development (USAID) and the US Department of State, in partnership with International Resources Group (IRG/Engility) and the Institute for Social and Environmental Transition (ISET), hosted a three-day Adaptation Partnership workshop in Bangkok, Thailand, from July 31 through August 2, 2012 on building urban climate resilience in Asia. The 74 attendees included international and regional climate and adaptation/resilience researchers, city- and regional-level practitioners, and development agencies from over 15 countries, including Thailand, Vietnam, China, Indonesia, India, Nepal, Pakistan, Laos, Malaysia, Australia, South Africa, the United Kingdom, and the United States.

The workshop began with welcomes by Winston Bowman of USAID and Christina Chan of the US Department of State. Mr. Bowman described the context and purpose of the workshop; Ms. Chan provided an overview of the Adaptation Partnership. Kenneth MacClune greeted participants on behalf of ISET and provided an overview of the agenda. The workshop structure was designed so that each day built upon the previous day, with the final day devoted almost entirely to participant development of future activities for a potential Community of Practice (CoP). Mr. MacClune also presented the objectives of the workshop, as follows:

1) Improve understanding of latest approaches in the field and explore available models and practices that address planning for climate change resilience.

2) Create the foundations for a Community of Practice that connects global perspectives to grounded actors.

3) Generate practical follow-up steps for this community that take effective and cutting-edge approaches to urban climate resilience planning.

The workshop was comprised of 12 sessions over three days, with a combination of plenary panel sessions and breakout groups. Day One set the stage for the workshop with presentations on urbanization trends and climate change processes in urban areas. It also provided background on the concept of resilience and introduced a conceptual framework on which to “hang” urban resilience planning. On Day Two, speakers addressed the challenge of putting urban climate resilience concepts into practice and discussed tools and methods needed to assess vulnerability and to design and

implement urban climate resilience plans. Day Three was mostly structured around small group and plenary discussions focused on determining next steps and follow-up activities.

As the last day came to a close, the outcomes of the workshop came into focus. There was a general consensus that there are too many existing CoPs related to climate adaptation and resilience. Participants did not want to form another one, but they did identify several areas of action that they were interested in pursuing. They emphasized the need to link existing CoPs more effectively and encourage them to share experiences, knowledge, and tools. By the end of Day Three, the three participant groups (researchers, practitioners, and development agencies) had developed a list of prioritized potential actions.

Below is a brief summary of the actions that emerged from synthesizing this list and expanding upon ideas from other discussions throughout the workshop. These actions are described in more detail in the last section of this report.

1) Knowledge compilation and dissemination:

- Collect and synthesize research and information in useable and appropriate form for different audiences.
- Develop ways/entry points to communicate it appropriately.

2) Create a program of city-to-city exchanges.

3) Develop small grants program/small-scale catalytic funding:

- Practitioners/researchers/organizations apply for funding for a range of activities that would further research and/or resilience activities.

The overarching goal was to conceptualize and lay the groundwork for an urban-focused program, based on urban services and urban systems.

Summary of Proceedings

All the presentations given at the workshop are available under the resources tab of the Adaptation Partnership website (www.adaptationpartnership.org).

DAY ONE: CONCEPTS AND CONTEXT

The objective of the first day was to develop a common understanding of the context of urban climate resilience planning and the concepts involved. The day provided an understanding of the purpose of the workshop and participants' role in it. Participants learned about the growth of cities, the limitations of urban planning, and actions and leadership addressing climate change concerns. They were introduced to a comprehensive approach to framing urban climate resilience and learned through case studies about developing city climate resilience plans.

SETTING THE SCENE

The first session was designed to help participants gain an appreciation of how cities grow and how resilience to climate change does or does not factor in urban planning, as well as the particular climate change issues that cities face. Dipak Gyawali, former Minister of Water Resources of Nepal and academician at the Nepal Academy of Science and Technology, facilitated the session. He introduced the issues of climate change and urbanization as "wicked problems" – often involving multiple factors and for which there is no one clear solution.

Dr. Thongchai Roachnakanan began the session by reflecting on the Bangkok floods of 2011. Bangkok is one of the top 10 cities in the world that are likely to be underwater by 2050, yet the city has no clear policy on urban development and was unprepared for a disaster of this scope. Policy makers are uninformed about flood management and focus on costly structural measures, such as reinforcing concrete walls. Dr. Thongchai made clear that poor land use plans and development in historical waterways, both in Bangkok and upstream, are at the root of the flooding problems: upstream deforestation has increased runoff; local governments are building concrete walls that narrow the river and are opposed to floodways in their provinces; and farmers are using other materials to enclose waterways and protect their farms from flooding, worsening the problem elsewhere. Additionally, Dr. Thongchai spoke to how policy makers are hesitant to employ various "10 percent" or bottom-up solutions to climate change, largely due to political interests, which have become a significant obstacle to adequately addressing the problem.

Climate change, however, was not officially discussed as a factor in the floods.

Dr. Xiangzheng Deng, professor of resource economics from the Chinese Academy of Sciences (CAS), discussed urbanization trends in developing countries. While urban areas are expanding, population densities are decreasing. Professor Deng discussed the "triangle" of sustainable urban planning goals (equity/social justice, economic development, and environmental protection) and how they conflict with resource, property, and development interests, making actual sustainable development hard to achieve. He mentioned two Chinese cities that received special permission and subsidies from the central government to implement low carbon technology and planning strategies such as "compact city," and to encourage cycle and pedestrian traffic and mixed land use, as well as better energy use. He emphasized the importance of public participation in the planning process.

Dr. Sue Grimmond, an urban climatologist from King's College, London, described how various aspects of cities – including emissions, materials, and morphology (building density, height, roof shape) – affect urban climate, including temperature, humidity, wind and dispersion, air quality, and precipitation. Information about these effects is critical to a range of decision makers for both long- and short-term planning in order to predict, mitigate, or adapt to climate change in cities. It is critical that models are at the right scale and take the right urban processes into account. Dr. Grimmond also emphasized the importance of the building sector in fostering urban resiliency.

Dipak Gyawali closed the session pointing out that wicked problems create uncomfortable knowledge. It is critical to understand and address the institutional filters that prevent asking the questions that lead to such knowledge and resolve such complex issues. Solutions will be clumsy, not everyone will like them, and having complete knowledge before acting is unrealistic, but moving forward is imperative.

EMERGING CONCEPTS AND FRAMEWORKS

The second session focused on the concept of resilience. Richard Friend opened the session by asking people to write down what resilience means to them on an index card. (See box on next page for a sampling of responses.)

Dr. Marcus Moench from ISET discussed how we can employ "resilience" to best help plan for climate adaptation in Asian

A Sampling of Definitions of Resilience:

- “Ability to recover from unforeseen events, e.g., bamboo in a storm”
- “Ability to deal with pressures and recover from damages”
- “Ability to absorb shocks and keep the system intact”
- “Well-being of communities and the systems they depend on are secured”
- “Withstand and recover from stresses and shocks, bounce back, innovate, learn, move on”

cities, given the various understandings and uses of the term. The concept of resilience appears frequently in diverse contexts, but definitions vary by discipline and scale. The Asian Cities Climate Change Resilience Network (ACCCRN) and Mekong-Building Climate Resilient Asian Cities (M-BRACE) programs have helped to clarify what resilience means at different scales by developing and implementing a framework for urban climate resilience.

The Climate Resilience Framework (CRF) attempts to avoid the challenges in conventional adaptation planning by analyzing three core elements – systems, agents, and institutions – and the characteristics of each that enhance or decrease resilience. The CRF links vulnerability analysis with urban planning in an iterative process that is held together through shared learning dialogues. The framework has been developed through practice and is highly variable according to local contexts. The outcomes of the process are city resilience plans, developed by each city to implement resilient adaptation actions that are appropriate for their context. Resilience, then, is an ongoing iterative process that builds flexible, mobile relationships. It maintains essential flows (of energy, information, and water, for example), and is adaptive, dynamic, and equitable.

Several questions from participants allowed Dr. Moench to elaborate on this concept of resilience. The first questioned how resilience relates to switching states. Dr. Moench emphasized that stasis is not the goal for urban systems. The critical things are to maintain restore core systems (water, food, energy, transport, communications, etc.) after a disruptive event, but not necessarily with the same patterns as before, and to encourage the adaptive capacity of populations – getting access to key systems and changing as conditions change.

In response to a question about examples of implementation, Dr. Moench stated that 14 cities have applied the framework

to date. The process has not been uniform in all, but the foundations of the framework do hold across cities. Many tangible actions that link into urban planning processes have been identified and 40 to 50 are currently being implemented, including: developing a flood forecast and warning system in Semarang, Indonesia; implementing a curriculum on climate change adaptation in schools in Bandar Lampung, Indonesia to help increase adaptive capacity of teachers and students; and improving community management of sanitation and drainage at the ward level in Gorakhpur, India. In response to a question about how ACCCRN has helped cities make linkages with national policies, Dr. Moench discussed Vietnam, where the demand for planning at the national level is not matched by processes at the local level. ACCCRN provides a “bottom-up” approach, creating the demand and capacity first. The Vietnamese cities in the ACCCRN program have been able to articulate what they need and why, giving them a voice in the national planning process.

Dr. Chris Béné from the Institute of Development Studies provided an academic perspective on the concept of resilience. He and his colleagues have explored the advantages and disadvantages of the concept, questioning what a resilience-driven program would look like, what is the link between resilience and poverty, and if resilience is always useful as an objective or framework. Dr. Béné identified the positive aspects of the concept as that it encourages holistic thinking and works intuitively as a policy narrative by providing common ground between people and development agencies. The negative aspects are that questions of power, agency, and poverty are missing from the definitions of resilience. Resilience as it is popularly discussed is “poor-neutral” – there is no obvious relationship between building resilience and fighting poverty. And lastly, resilience implies winners and losers – decisions that privilege some over others, even within a single community. Well-being and resilience are not necessarily correlated. For example, a family that moves to follow the breadwinner’s job may be resilient, but the move may imply a decrease in the family’s overall well-being. Adaptive preference (reducing expectations in order to get by) can also make resilience a less-than-desirable state. Dr. Béné advocates for a resilience-centered program that recognizes and builds synergy between the three dimensions of the concept – stability, adaptability, and transformation – and that considers the impacts of resilience-building across groups and scales.

In response to a question about whether the problem is with the concept of resilience itself or rather, with how we define the system that we are trying to make resilient, Dr. Béné said that while it is important to specify resilience “of what” and “to what,” that would not resolve the gap in addressing well-being and poverty. Another question allowed Dr. Béné to explain that seeking stability in a system does not imply stasis. Adaptability in addition to stability is important.

This session generated a fruitful discussion among audience members, allowing both Dr. Moench and Dr. Béné to expand on their thoughts. The importance of the private sector in urban resilience was noted, as was the possible role of technology in building resilience. Participants questioned the usefulness of yet another new word in the development vocabulary, primarily because of the difficulties created when working with local communities to introduce new words (even if they are familiar with the concept when it is explained or demonstrated).

COMPONENTS OF URBAN RESILIENCE

This session was aimed at exploring further the Climate Resilience Framework and understanding how the core elements of urban resilience (systems, agents, and institutions) work in application. Marcus Moench opened the session with an overview of the CRF as a process that is driven by the shared learning dialogue, a form of participatory engagement aimed at bringing together a wide spectrum of knowledge and building a common understanding of potential urban vulnerabilities. Shared learning dialogues are based on and have much in common with participatory engagement in general, but emphasize the *process* over any other aspect.

Mr. Fawad Khan from ISET Pakistan presented on a research project that began in response to the Indus floods, questioning how to help exposed communities adapt and build resilience. The project found that while education and social capital were critical factors in building resilience in all areas studied, the other key factors varied. In some places, availability of credit and saving services were critical; land title, number of years that electricity was available, and sanitation were essential factors in other places. The project used shared learning dialogues in evaluating the presence of these factors. While the presentation focused on climate resilience in rural areas, Mr. Khan highlighted that urban systems extend far beyond the urban boundaries and that a systems approach that builds resilience through shared learning is applicable in both rural and urban areas.

Mr. Phong Tran from ISET Vietnam presented on learning about climate resilience planning from Typhoon Mirinae. Rainfall from the 2009 typhoon resulted in catastrophic flooding in Vietnam, as a result of several factors, including the severity of the storm and the unusual rainfall pattern it created; inadequate storm tracking and forecasting; lack of a warning system; and new construction in floodways that restricts the discharge of water and changes the flow and impacts of flood water. In Quy Nhon, the current master plan will lead to increased risk for existing settlements, including in protected areas, during extreme floods.

URBAN CLIMATE RESILIENCE PLANNING IN PRACTICE

The final session of day one provided a transition into the next day's focus on tools and methods used in developing climate resilience plans. Two case studies presented experiences from cities attempting to plan and implement activities that build urban climate resilience.

Dr. Ky Quang Vinh described resilience activities in the city of Can Tho, Vietnam. Can Tho faces high temperatures, flooding, riverbank erosion, and high winds – likely to be exacerbated by climate change – as well as environmental pollution and unsustainable development. The city implemented a Climate Change Coordination Office (CCCCO) to manage all adaptation activities at the city level. Dr. Vinh emphasized the importance of having a central organization that can function as a repository for knowledge about climate change as well as a regulatory body, and that can draw financial support. He also emphasized the importance of access to usable climate information, including statistics on weather and hydrology, as well as hazard, capacity, and vulnerability assessments.

Dr. Debra Roberts of the Environmental Planning and Climate Protection Department in Durban, South Africa discussed the complexities of trying to increase the adaptive capacity of a city with a multitude of other concerns. The common hook of increased risk from climate-related disasters does not work well in Durban because the population is exposed to so many different types of risk. Framing climate change adaptation in terms of sustainable livelihoods is more effective, because it offers the opportunity of better living conditions and job creation in a green economy.

Dr. Roberts' efforts in Durban have focused on adaptation, rather than mitigation, as the common-sense response to the storms and flooding that Durban experiences, but her stance is controversial. She has found that working on sector-based municipal adaptation plans, rather than an integrated approach, has been the best strategy in Durban. The ultimate goal is to move from project-based adaptation to transformational adaptation that includes the potential for reform or replacement of the dominant regime. Dr. Roberts emphasized that there is no one neat solution for climate change and failures along the way can provide important and useful lessons. In her experience, a small, devoted staff with little municipal funding can be very effective, but outside funding is critical. Unconditional international funding has been a key to Durban's success in increasing adaptive capacity. She also highlighted that the importance of local governments and local actors is undervalued – both can have significant influence even on international playing field – and do not need to be dependent on international and national policies. At the 17th Conference of the Parties (COP17) to the United Nations Framework Convention on Climate Change in Durban in 2011, the city of Durban pushed for a focus on adaptation in addition to mitigation. The result was the Durban Adaptation Charter for Local Governments, which called on local and sub-national governments to commit to 10 actions that would accelerate adaptation efforts.

Dr. Roberts's presentation generated much discussion about sector versus integrated approaches, with several participants relaying experiences that favored an integrated approach. One participant asked how to ultimately accomplish coordination among sectors to avoid separate, project-based interventions. Another asked about how a city can position itself to take advantage of specific opportune events, since much action is a result of circumstance. Dr. Roberts emphasized creating sectoral champions who are attuned to opportunities in their sectors. Spaces of exchange where people

can talk and work together encourage intuitive links rather than forced links.

DAY TWO: TOOLS AND APPROACHES

The objective of the second day was to introduce tools and methods that can be used in applying the concepts discussed on Day One. Three plenary sessions provided perspectives on the use of and access to climate information and presented a variety of tools, approaches, and methods for conducting vulnerability assessments, developing urban climate resilience strategies, and establishing resilience indicators. After the three plenaries, an “integration session” provided time for participants to digest and discuss what they had learned so far, in smaller group settings.

USE OF AND ACCESS TO CLIMATE INFORMATION

Mr. Spencer Reeder from Cascadia Consulting Group in Seattle, Washington (United States) described the application of the Climate Impacts Decision Support Tool (CIMPACTS DST) in Seattle and Hue, Vietnam. The tool requires inputs of local climate hazards and sector-specific policy information as well as regional climate projections. The outputs include brief summaries of the latest climate information and of local impacts, and sector-specific guidelines and recommendations (e.g., areas not to build, materials to use, etc.). The goal of the tool is to give decision makers access to simple, straightforward information.

Dr. Amy Snover of Climate Impact Group (CIG), also based in Seattle, spoke on how CIG engages with researchers and stakeholders to build climate resilience through making science useful. Science must be relevant to the system, community, location, and decision in question, and information and tools must be delivered effectively and include guidance/assistance to support their use. Dr. Snover discussed two cases – the Swinomish Indian Tribal Community and the Sound Transit Urban Transportation Agency – in which CIG was asked to assess vulnerabilities and define data needs.

ASSESSING VULNERABILITY

The three presentations in this session took varied approaches to vulnerability assessments, providing an overview of how differently assessments can be employed and to what ends. Ms. Ratri Sutarto from Mercy Corps Indonesia described the vulnerability assessment process used in ACCCRN cities in Indonesia. The process began with a city-wide analysis of climate history, climate projections, and a vulnerability map. Conditions of sub-districts in the city were classified based on the vulnerability and capacity index. The next step was a community-based vulnerability assessment, and the final step was an assessment of the strengths and weaknesses of governance structures. The assessment process laid the groundwork for the development of city resilience strategies.

Dr. Buapun Promphakping from Khon Kaen University, Thailand discussed his work on the dynamic and complex linkages between well-

being and ecosystems: goods and services provided by ecosystems shape human well-being, and humans, in pursuing well-being, affect ecosystems. Human well-being should be the central focus of analysis, as a healthy ecosystem does not necessarily translate into human well-being. He then applied the principles of the framework to the analysis of urban vulnerability assessments, considering what factors make urban areas “urban,” who are urban stakeholders, and how to build future scenarios that address climate change.

Dr. Darryn McEvoy from Royal Melbourne Institute of Technology (RMIT) University and the Victorian Centre for Climate Change Research reviewed various approaches to vulnerability. Hazards or disaster-based assessment is based on experience and therefore targets current and short-term impacts. Risk-based assessment is framed around likelihood and consequence, and explicitly considers uncertainty; it tends to neglect the bigger picture and can omit low probability and high consequence events. Vulnerability assessment highlights existing socio-economic issues and current needs: livelihoods, inequalities, and improved infrastructure. It is bottom-up rather than expert-driven and includes many different voices, but can be hard to compare across situations. Dr. McEvoy also identified several key considerations when developing climate change adaptation plans, including: temporal scale; characteristics of different hazards; the dynamism of vulnerability to climate change and its effect on existing inequalities; the importance of language and definitions; and the role of politics in adaptation processes.

DEVELOPING URBAN RESILIENCE STRATEGIES AND PLANS

This session was designed to introduce participants to a variety of tools for and approaches to developing urban resilience strategies, both quantitative and qualitative. Presenters gave practical examples from cities engaged in resilience planning. Mr. Monojeet Ghoshal from Gorakhpur Environmental Action Group (GEAG) discussed how GEAG has helped communities participate in decision making about adaptation actions in the face of massive and complex problems (including institutional inadequacy). GEAG has been successful in helping government and communities work together to create change from bottom-up that the city has responded to.

Mr. Stelios Grafakos from the Institute for Housing and Urban Development Studies presented on CLIMACT Prio, a decision support tool used to prioritize climate actions. The tool is designed to be participatory and encourage stakeholder engagement and to help decision makers prioritize development actions and vulnerabilities and identify and evaluate adaptation options. It aims to integrate multiple objectives, facilitate learning, and stimulate knowledge generation.

Mr. Steve Gawler from ICLEI-Local Governments for Sustainability's Oceania Secretariat discussed using the Integrated Climate Action (ICA) methodology used to develop climate resilience plans for cities in Java, Indonesia. The goal of the framework is to develop an Integrated City Climate Strategy. Some of the challenges confronted in the city of Surakarta, Java included: 1) how to deal with local election cycles that introduce changes in leadership, plans, organizational structure, etc.;

2) whether to focus on low carbon development or climate resilience; 3) understanding and addressing recent catastrophic events and the pressures they create; 4) balancing competition between divisions and sectors; and 5) whether to create a new climate change plan or to integrate new climate actions into existing plans. Surakarta, like many other cities in Asia and around the world, will have to face these problems in building climate resilience.

INTEGRATION SESSION

Participants split into three smaller groups and migrated to smaller rooms to assess key lessons to date and identify learning goals for the rest of the workshop. As a jumping-off point to encourage discussion, groups were asked to begin by thinking about the following question: What is new and most useful to you that you think could contribute to a Community of Practice?

A Sampling of Notes from Integration Session Flipcharts:

- Risk versus vulnerability
- Tailor tools/approaches to user needs
- Participation of users
- Economics of climate change
- Horizontal learning between cities
- Disconnect between scales – city to national
- Collection of good practices
- Defining concepts
- Creating partnerships

The integration session was a key step in beginning to draw out the concerns and interests of the participants and their thoughts on forming a Community of Practice. The discussions also provided a sense of the general areas of interest for potential further action. Participants discussed the question in small groups and one person recorded notes on a flipchart. At the end of the day, facilitators organized the responses from participants into broad groups. They were presented at the beginning of Day Three.

SIGNPOSTS AND PROGRESS: RESILIENCE INDICATORS, AND EVALUATING AND MEASURING LEARNING FOR URBAN AGENTS, SYSTEMS, AND INSTITUTIONS

The last session of Day Two described two approaches to developing resilience indicators and evaluating progress towards climate

resilience. Pham Thanh Hang from the United Nations International Strategy for Disaster Reduction (UNISDR) presented on the Local Government Self-Assessment Tool (LG-SAT) for disaster risk reduction. The ISDR Making Cities Resilient program has developed a checklist of Ten Essentials for Making Cities Resilient, which includes: assigning a budget for disaster risk reduction, preparing risk assessments, investing in critical infrastructure that reduces risk, installing early warning systems, etc. Based on these essentials, UNISDR developed 41 indicators or key questions that can help local governments develop a self-assessment of where they stand. In addition to self-assessment, the tool is a feedback mechanism for local and city governments and can facilitate the understanding of gaps and challenges in disaster risk reduction at the local level.

Mr. Greg Guibert from the National Center Atmospheric Research presented on the urban climate resilience indicators being developed by ISET through the ACCCRN program. Indicators can function as guidance for local interventions, as they monitor change over time. Rather than measuring resilience, they provide simplified proxies of factors related to resilience. These indicators are based on the core elements of the Climate Resilience Framework. For example, preliminary indicators of system resilience for water supply are: source capacity per 10-year projected demand; leakage rate; storage as percent of daily use; and days per year of supply failure. Developing indicators is a way to build capacity among local organizations, and they are themselves a good gauge of agent capacity and institutional response. While the indicators were developed to be simple to understand, feedback from groups using them reports that they can be complicated. Other goals of the indicators are that they will build capacity among local organizations, embed the notion of climate resilience in practical operational actions, and themselves function as an indicator of agent capacity and institutions. At this stage, however, it is too soon to know if these goals are being met.

DAY THREE: LAYING THE FOUNDATION

The objective of the third day was to identify the basis for a potential Community of Practice among participants and/or to develop common interests around which to move forward. The day began with a presentation of the general themes that emerged from the integration session on Day Two. After one last plenary on innovative ways to build capacity in the region, the day was devoted to small group discussions aimed at redacting the themes that had been identified and detecting gaps and common interests.

Marcus Moench presented the responses from the integration session, grouped into 11 broad themes. (See box on next page.)

Many participants said that no new tools were needed, but that a comprehensive assessment of existing tools would be useful, as would open access to existing tools. Some participants expressed the view that working sector-by-sector, instead of starting with an integrated approach, is the most effective way to build resilience. Many participants also recognized that rather than one grand solution, many “10 percent” solutions – although possibly clumsy

Grouped Emergent Themes:

- **No New Tools. We Need:**
 - Assessment
 - Access
 - Testing in use
- **Traction happens in sectors:**
 - Sectors are natural units of organization within cities
 - Integration is often an outcome of sector action
- **No grand solution:**
 - Many 10-percent solutions
 - Clumsy
 - Opportunistic
- **Context is important:**
 - Socio-political
 - Physical
- **Local champions play a critical role in giving cities a voice**
- **Need more doing and action versus planning**
- **Severe capacity and bandwidth gaps at the city level**
- **Value of grounded experience:**
 - Theory and practice disconnected
 - Tools and the realities of urban processes disconnected
- **Need to institutionalize learning:**
 - Horizontally, between cities
 - Create open spaces where cities can dialogue
 - Share what works, what doesn't
- **Solutions must be real, problems are urgent and current:**
 - Poverty/social equity
 - Migration
 - Environmental pressure
 - Systems vulnerabilities
- **Do not need new communities of practice**
 - Existing communities of practice need to coalesce

and opportunistic – will make real, effective steps towards resilience. Many emphasized that socio-political and physical context is critical. Not all solutions will work in all places, and every city has particular conditions that will affect resilience. Groups also recognized that cities with a local champion have a higher profile and more access to higher levels of government, but at the same time, cities are hindered by lack of capacity. Participants placed high value on grounded experience, noting that available tools and the realities of urban processes are often not connected.

Many participants also mentioned the benefits of horizontal learning between cities, and of spaces where city practitioners can openly

discuss needs and share what works and what doesn't. There was broad consensus among participants that the climate resilience community does not need new Communities of Practice, even though the urban focus is not currently over-addressed. There was a general sense that it would be more useful for existing CoP to unite rather than to create a new one. The rest of the day, after the plenary session, was devoted to voicing reaction to these themes and identifying gaps and misstatements in order to develop a common platform for future activities that would emerge from the workshop.

GENERATING TRANSFORMATIVE CHANGE

The final plenary session of the workshop was devoted to thinking about how to influence change in order to encourage sustainable efforts to build urban climate resilience. It addressed new thinking about capacity building, as well as how decisions actually unfold – exploring the murky world of governance.

Mr. Nick Innes-Taylor from the Poverty Reduction and Agricultural Management Initiative (PRAM) discussed PRAM's work in Laos and Thailand to strengthen local capacity for poverty reduction through a new approach aimed at integrating development action and education. He noted that effectively building local capacity for development – without actions being overly project-dependent – is difficult. PRAM's goal is to make an immediate impact on poverty, in addition to training and education. Key attributes of the program include: reaching out to professionals (working with existing staff in local government agencies, for example); establishing regional standards; allowing students to decide what, when, and where they study; assessment based on impact in the field – “fitness for purpose”; and problem-based learning. Mr. Innes-Taylor emphasized the following as important aspects: integrating the PRAM approach into existing systems and processes; using local languages and local rhetoric; empowering local champions; and increasing local ownership of projects. He cited several advantages to linking education to developmental impacts, including: helping projects better measure their success; providing strong motivational force for change; rooting action in long-term change; and allowing local stakeholders to experiment with new approaches. PRAM has worked mostly in rural settings, but is exploring what principles of their program are applicable to the urban context.

Mr. Peter Haddawy from the United Nations University–International Institute for Software Technology discussed using information and communications technology (ICT) to build capacity among professionals in government and other key sectors. Mr. Haddawy described a professional network platform for agricultural extension officers, developed in conjunction with PRAM and the Laos Ministry of Agriculture and Forestry. The platform functions as a local knowledge repository, and offers opportunities to connect people at the national, provincial, and community levels, through sharing data, posting announcements, asking and answering questions, asking for and offering technical support, and uploading stories.

Mr. Jim Jarvie from Mercy Corps discussed generating transformative change through building urban resilience, with a focus on governance. He highlighted the fact that while the private sector is a major driver of urban expansion in Asia, it is not included in the resilience dialogue. Discussions around resilience generally overlook the question of resilience of what and for whom, as well as the complexities of power and politics and the role of corruption – either explicit or implicit. Treating planning as a technical exercise that simply needs increased capacity does not reflect the reality of the politics behind planning. Technical issues, while the focus of most projects, are really the least complicated aspect bringing about change. Resilience-building should be a platform for reconfiguring urban policy and planning, and should incorporate representative governance and commercial drivers.

The discussion following Dr. Jarvie's presentation drew out the useful tension between participants who see resilience-building in developing cities as a technical exercise and those that consider the technical side to be the easy part, and governance and power the more difficult aspect.

This session sparked an extensive and lively discussion among presenters and participants about the role of the private sector. Throughout the workshop, several participants commented on the challenge of approaching the private sector and including it in a forum such as this one. Many participants made the point that the climate-related needs of the private sector must be understood and that we must develop different ways to engage the private sector or different strategies to maintain its interest and integrate it into a resilience-planning process. The role of the private sector, however, was most thoroughly debated in this session. Participants expressed varying degrees of support for including the private sector in resilience building and of confidence that its engagement could be trusted. Several also pointed out the diversity of the private sector – from the family-run corner store to Microsoft – and noted that it cannot be thought of as monolithic. Nevertheless, there was considerable agreement among participants that the private sector must be engaged in order to effectively build urban resilience. Some suggested engaging with the sector by first involving sub-sectors, including insurance and those with large infrastructural investments in at-risk locations.

IDENTIFYING FOLLOW-UP STEPS AND ACTIONS

The bulk of Day Three was spent finding common interests among participant groups about key next steps that would be useful for this community of researchers, practitioners, and development agencies, all working on or interested in urban climate resilience. What useful connections, relationships, and knowledge exchanges could come out of this workshop and how could they be turned into actions that would further urban climate resilience in Asian cities?

The first step was to break into groups based on self-identification as researcher, practitioner, or development agency and to discuss and add to the themes and potential actions presented at the beginning of the day. The groups were asked to address three questions:

- Are there any missing or misstated themes?
- What are the key actions that we haven't captured?
- How would you prioritize the action areas?

Each group nominated a volunteer to capture ideas and report back to plenary after lunch.

PRACTITIONERS

In reporting back, practitioners noted that the themes that were captured from the discussions on the previous day were "urban-blind" – did not recognize the unique position of urban climate resilience. They also noted that it is important to consider:

- 1) Satellite cities, peri-urban areas, the complex functioning of urban environments
- 2) The political economy of land use
- 3) Urban poverty and the role of government funding (especially concerning notified and non-notified slums, formal and informal settlements)
- 4) The role of cultural services: how to maintain cultural practices in an urbanizing world; how cities build on their history and draw on local wisdom for architecture and design
- 5) How to cultivate local champions if they don't exist

The potential actions that the practitioner group developed were:

- 1) City-to-city exchanges (in the context of other projects)
- 2) Learning programs (also building on larger projects) aimed at capacity building and learning in the absence of local champions
- 3) Small-scale catalytic funding (not necessarily tied to external programs), with the goal of creating sustained action (actions need constant nudging to keep the momentum going); linking cities into international funding without going through national funding
- 4) Capture private sector success stories
- 5) Take advantage of opportunities to build on shocks to systems: disruptive innovation

DEVELOPMENT AGENCIES

The development agencies group added the following as important issues to consider:

- 1) Is there a false dichotomy between working by sector and integration?
- 2) Local government is most effective for on-the-ground action, but needs the national level to connect to international level in order to facilitate learning on the ground.
- 3) Urban issues need to be legitimized within the development community:
 - Institutional restructuring within agencies to make urban issues more important
 - Different entry points to motivate agencies and others to focus more on climate impacts in urban areas and help them understand how to address urban issues, e.g., health issues; rural to urban migration/development
 - Help key actors, including the private sector, take advantage of this opportunity
- 4) Importance of community empowerment.

The potential actions that the researcher group developed were:

- 1) Need for knowledge system to be developed with an urban focus; need to develop common language in this area and to translate into local languages.
- 2) Link communities of practice with other existing communities of practice, e.g., urban sanitation, architects, etc.

In the last session, the three participant groups (researchers, practitioners, and development agencies) gathered again – this time intermixing among groups – to prioritize the potential actions they had come up with earlier. Each group’s final list was as follows:

Development Agencies	Practitioners	Researchers
<ol style="list-style-type: none"> 1) Improving knowledge or presentation of data and scenarios to development agencies in order to make the case for why urban issues related to development should be a key priority 2) Advancing the integration of urban issues into development agency strategies 3) Media engagement and advocacy 4) Bottom-up needs assessment and increased engagement with local governments 	<ol style="list-style-type: none"> 1) Small-scale catalytic funding (untied) (as the overarching entry point) for specific things: city-to-city exchange, private sector success stories 2) Institutional change is necessary before getting urban issues on the agenda for development agencies 3) Co-definition of the problem that researchers, practitioners, development agencies are trying to solve 	<ol style="list-style-type: none"> 1) Focus on knowledge: how to bring people and information together to create shared understanding of resilience for policy-makers and politicians, private sector, the general public (need for communication channels and entry points, i.e., social media) 2) Repository for knowledge (“knowledge system”): online Community of Practice (database of activities, sharing forum)

The following list of actions resulted from synthesizing the above list and expanding upon ideas that emerged from other discussions throughout the workshop. These actions are aimed at fulfilling the needs expressed by participants of the urban climate resilience community:

1) Knowledge compilation and dissemination:

- Collect and synthesize research and information in useable and appropriate form for different audiences
- Leverage, build on, and bring together existing initiatives
- Develop ways/entry points to communicate it appropriately
 - a) Provide development agencies with key research and information with the goal of helping them make the urban sector a key priority: synthesize and communicate existing research, document case studies/experiences that would help inform people, and communicate this information through factsheets and/or presentations to agencies;
 - b) Increase the profile of climate change impacts: work strategically with media and advocacy groups to place stories about climate change appropriately so that people connect with the messages, i.e., after storms, during intense heat waves, etc.; document experiences people can connect to;

- c) Develop a platform/system/online repository for knowledge: database of activities, sharing forum;
- d) Explore the concept of resilience to come to a shared understanding researchers, practitioners, policy-makers and politicians, private sector;
- e) Conduct tools assessment: by and for practitioners – what works, what is accessible, user-friendly, etc.
- f) Organize a forum to link development-sector efforts with private sector efforts: Co-organized and co-generated content meant to enhance cross-sector communication and understanding to search for linkages and collaboration

2) Create a program of city-to-city exchanges aimed at:

- a) Revealing and replicating innovation at the local scale
- b) Bottom-up needs assessment
- c) Documenting private sector success stories
- d) Identifying actions that have worked in particular places to build resilience
- e) Identifying potential “small grant” champions in new locations
- f) Apply lessons learned in Asia to other regions (Africa, Latin America)

3) Develop small grants program/small-scale catalytic funding:

Practitioners/researchers/organizations apply for funding for a range of activities that would further research and/or resilience activities:

- a) Key research areas:
 - i) Urban-rural linkages, including migration, remittance networks, food
 - ii) Urban agriculture
 - iii) Built environment/role of the building sector in mitigation and adaptation
 - iv) Role of the private sector – autonomous adaptation, innovation
 - v) Role of formal vs. informal in autonomous adaptation and innovation
- b) Thematic case studies, e.g.:
 - i) Water security
 - ii) Consequences of specific adaptation actions
 - iii) Analysis of specific events
 - iv) Private sector autonomous adaptation, etc.
- c) Conference attendance/participation:

Encourage engagement, maintain momentum, and generate new ideas and connections. E.g., Regional Development Mission for Asia (RDMA) Adaptation Futures conference, Urban Research and Knowledge Symposium, Rethinking Cities: Framing the Future, World Urban Forum, Resilient Cities congress.

Overarching goal: Conceptualize and lay the groundwork for an urban-focused program, based on urban services and urban systems.

SUMMARY

The consensus emerged from the workshop that cities are at a moment of rapid transformation and that this presents a window of opportunity for those working on urban climate resilience. However, city-level practitioners as well as development agencies need ammunition to make the case that urban areas are a critical sphere on which to focus climate adaptation and development actions. Development agencies need to understand why urban planning, growth and development is important and city practitioners need to be able to advocate for urban areas.

The broad consensus was that the way to achieve these would not be by developing new communities of practice but rather building on the communities that presently exist, perhaps bridging efforts. Participants emphasized the importance of co-production of knowledge among groups, sharing examples of what is working and what is not. They expressed interest in a community of resources that would link existing Communities of Practice.