nurturing knowledge
## creating community

People "must often solve complex, ill-defined problems with short time horizons. Doing so requires more than simply finding an answer in a database. They must define relevant dimensions of a problem space, craft a solution that is a feasible and appropriate for the situation and convince others of the correctness of a proposed course of action. Given this dynamic problem-solving process, it is no surprise that databases did not supplant people as a key source of information [or knowledge]. Instead, informal networks continue to be critical to knowledge transfer, diffusion of innovations and ideas, and creation of knowledge that is actionable in a given organisational context."

Cross, R., & Borgatti, S. P. (2004). The Ties That Share: Relational Characteristics That Facilitate Information Seeking. In M. Huysman & V. Wulf (Eds.), Social Capital and Information Technology (pp. 137-161). Cambridge, MA: MIT Press.

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Introduction

i

Since 2008, the Asian Cities Climate Change Resilience Network (ACCCRN) funded by the Rockefeller Foundation has been working in cities undergoing rapid growth in four countries – Vietnam, Thailand, India and Indonesia – to promote urban climate change resilience (UCCR). Arup is part of a diverse group of ACCCRN partners that includes private sector, non-governmental organisations and other institutions that have worked collaboratively with multi-stakeholder groups including local government. These actors promote awareness of climate change risk and develop and test local approaches to building urban resilience to climate change.

From the outset, the programme recognised the importance of local champions and multi-stakeholder participation in initiating a new urban agenda. Secondly, it recognised that the impacts of climate change are unique to local conditions, as are the capacities, governance structures and availability of resources which will determine a city's ability to act. ACCCRN therefore set out to identify a diversity of approaches that might inform future action in these and other rapidly urbanising cities in Asia and beyond, rather than to define or apply a 'one size fits all' methodology.

The ten initial ACCCRN cities are pioneers and innovators, tackling the challenge of initiating and creating sustained action to integrate UCCR in the urban development agenda. In the absence of national policy and regulations, mandates to guide action or best practices to emulate, the confidence and
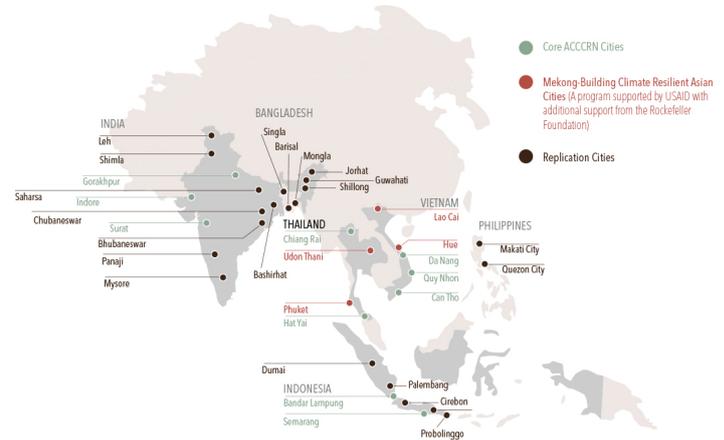
credibility of local champions and the legitimacy of new ideas have been founded on emerging evidence of what does (or does not) work in the local context. This has been reinforced by peer-to-peer exchange within and between cities. Arup has supported this process by developing a strategic approach to knowledge management that enabled tacit or experiential knowledge – as well as explicit or documented knowledge – to be created, shared, and progressively applied by local partners across the four countries as the programme has evolved.

Between February 2011-2013, workshops referred to as 'knowledge forums' were held bi-annually bringing together local actors from the ten cities participating in the ACCCRN

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programme, so that they could share stories, ask questions, build context and discuss possibilities. The themes for the five forums – knowledge exchange strategy, mainstreaming climate change adaptation, governance, impact of projects, and sustaining city action – were determined by knowledge focal points from each country, and reflected the key challenges and shifting priorities of local partners as city engagement and action has evolved. The approach also included the use of a Knowledge Hub, based on a social networking platform. This was configured to enable the exchanging of information, posting of documentation and promotion of partner interaction between knowledge forums.

Nurturing Knowledge, Creating Community is the result of our reflections on this strategy and the journey taken by ACCCRN partners. It is neither a manual nor a recipe; it simply captures the route we and our partners took to foster a community of actors with common interests – namely UCCR. It is designed to emphasise how knowledge and networks are born, evolve and develop, potentially leading to a community of practice (family) which in turn has the potential to propagate new communities that can further the generation of knowledge.

The 15 cards are structured as 3 sets of 5 cards. The first set of cards describes the evolution of knowledge management in ACCCRN using an analogy of human development through five stages – infancy, childhood, adolescence, adulthood and family. Additional cards provide further information on the key processes (lifecycle, flows, forums, platforms and networks)

that supported the growth of knowledge and collective learning (strategy, mainstreaming, governance, impact, and sustaining action) on UCCR amongst ACCCRN partners. The ACCCRN experience is used throughout as a case study to illustrate the journey.

Although numbered sequentially the cards can be used individually or collectively depending on the reader's aim. Our hope is that this innovative format will enable those who are interested in catalysing city networks on urban climate change resilience, or other urban agendas, to chart their own course aided by this simple navigational tool.

Jo da Silva - Director, Arup International Development

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Acknowledgements

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ADPC	www.adpc.net
APCO	www.apcoworldwide.com
GeaG	www.geagindia.org
ICLEI	www.iclei.org
ICCCAD	www.centres.iub.edu.bd/icccad
ISET	www.i-s-e-t.org
Mercy Corps	www.mercycorps.org/indonesia
NISTPASS	www.nistpass.gov.vn
NIUA	www.niua.org
TARU	www.taru.org
TEI	www.tei.or.th
The Verulam Group	www.verulamassociates.org

nurturing knowledge   creating community

Contents

nurturing knowledge   creating community

References

Introduction

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Stages

Adapted from 'Erik Ericson's Eight Stages of Human Development'

Process

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Figures

1 ACCCRN lifecycle diagram, adapted from Arup (2010). Making sense of knowledge in ACCCRN: A review document. 15 Dec 2010. Arup (UK).

2 DIKW Hierarchy, adapted from Cleveland, H. (1982). Information as Resource. *The Futurist*, Dec 1982, pp. 34-39. Cited in Arup (2010). Knowledge Management theory for ACCCRN: A common reference document. 1 Dec 2010. Arup (UK).

3 ACCCRN Knowledge flow diagram, adapted from Arup (2011). Enabling the flow of Knowledge in ACCCRN: Consultation document on establishing the vision and strategy for knowledge management. 22 May 2011. Arup (UK).

4 ACCCRN knowledge platforms diagram, adapted from Arup (2011). Enabling the flow of Knowledge in ACCCRN: Consultation document on establishing the vision and strategy for knowledge management. 22 May 2011. Arup (UK).

5 Network operating model, adapted from Arup (2013). Rockefeller ACCCRN Network: Catalysing Country Networks. June 2013. Arup (UK).

6 ACCCRN network model, adapted from Arup (2013). Rockefeller ACCCRN Network: Catalysing Country Networks. June 2013. Arup (UK).

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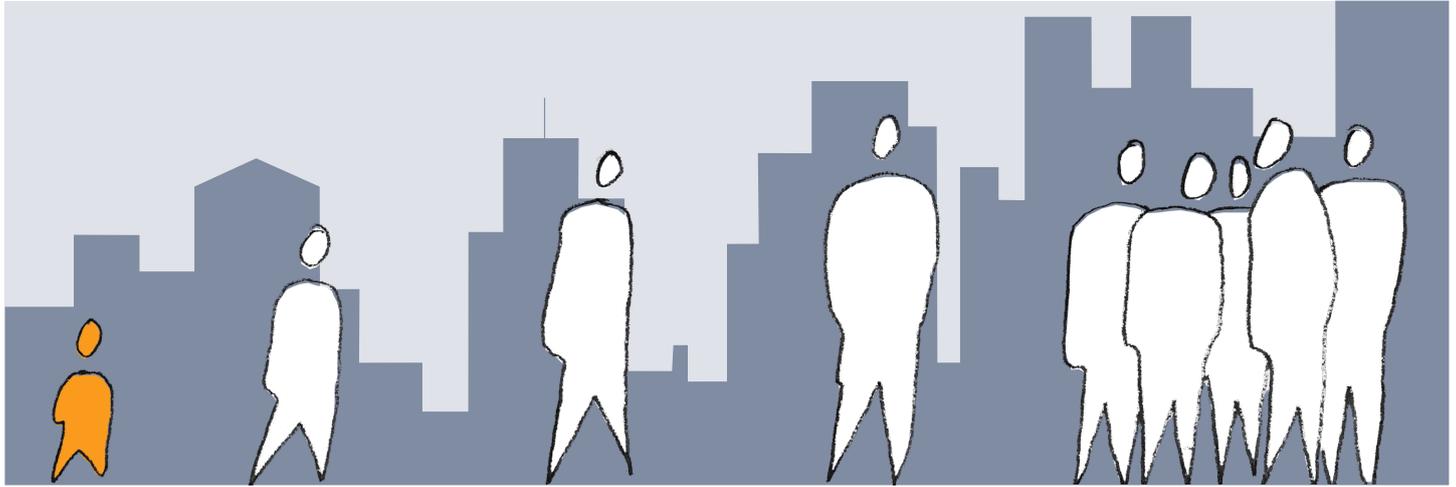
support

In infancy, a sense of trust is developed, alongside a dependency on others for reliability, care and nurture. A sense of personal control over skills and a sense of independence is also developed at this stage. Success leads to feelings of autonomy, but failure results in feelings of doubt.

stages **creating community** **nurturing knowledge**

infancy childhood adolescence adulthood family

Support

The challenge for those charged with facilitating a knowledge network is how to foster reflection and sharing of experiences, and create interconnections. When initiating a knowledge network, participants are likely to have been actively promoting a new agenda for some time; and they will likely already have significant practical experience.

A peer-to-peer learning approach helps build a shared knowledge base for what does (or does not) work at the local level, to guide action or identify best practice. Face-to-face meetings ('knowledge forums') at an early stage help to establish a feeling of trust and neutrality among participants. This approach also supports a focus on empowering participants to share 'tacit' knowledge, rather than adopting an 'expert-led' approach. Internet platforms also facilitate interaction and sharing of information and documentation.

Initial meetings can explore and establish what form knowledge management should take for a programme, defining a common vision and approach. Short 'burst' presentations, facilitated group discussions, physical distribution exercises and energisers are all tools which can stimulate engagement.

Of critical importance is the identification of a knowledge champion ('knowledge focal point') for each partner organisation. These individuals are integral to the design and facilitation of the knowledge management process.

Connecting the dots

Organisations involved in programmes in several countries involving multiple partners can lack a feeling of total unity, despite sharing a common goal or purpose. Convening a series of meetings – knowledge forums – specifically to share information and knowledge based on learning by doing can engender confidence and shared ownership in an otherwise emerging field of learning, such as urban climate change resilience (UCCR).

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The 'knowledge bank' exercise during ACCCRN Knowledge Forum 1

Focus on knowledge sharing and building relationships. Avoid discussing programme strategy, and allow enough time for discussion to develop to a meaningful level.

nurturing knowledge   creating community   stages

infancy   **childhood**   **adolescence**   **adulthood**   **family**

stages creating community nurturing knowledge
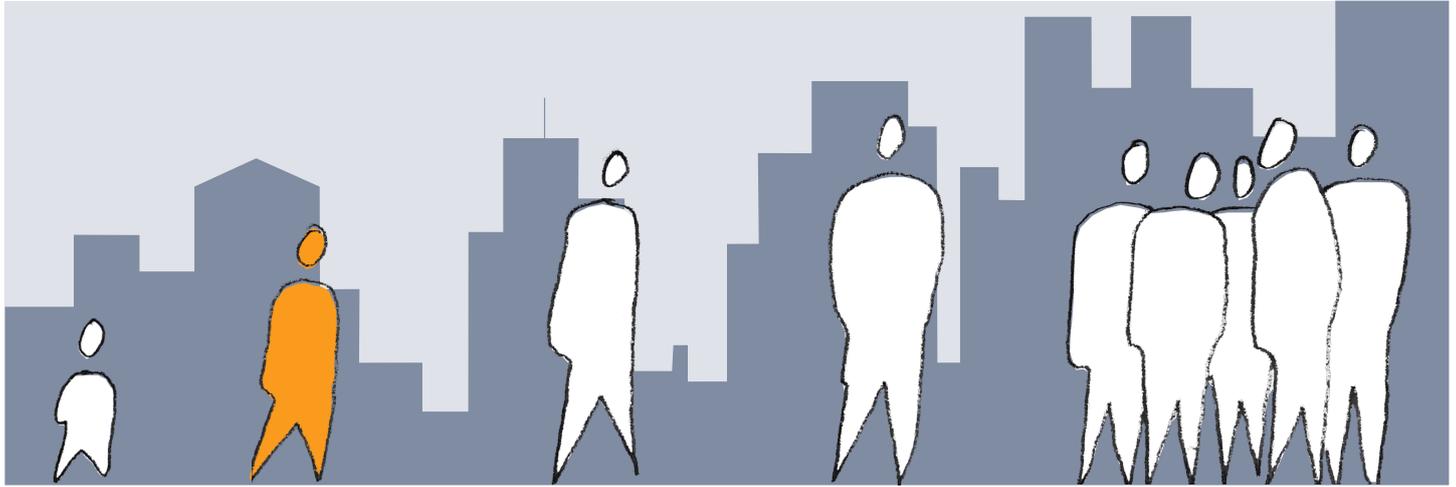
capacity building

Assertion of control and power over the environment occurs at this stage, as new demands are encountered. Trying to exert too much power may lead to loss of confidence, resulting in a sense of disappointment. Success leads to a sense of competence and purpose, while failure results in feelings of inferiority.

infancy childhood adolescence adulthood family

Capacity building

After the initial stage of trust building, a knowledge management process is established, and participants begin to recognise commonalities in practice and experience. The purpose of this stage is to experiment with a range of innovative tools and techniques that support tacit knowledge exchange at various levels, so that participants are able to share experiences, despite differing contexts, stages of work and governance systems.

Topics for discussion can reflect the level of understanding at the time. Gaps in knowledge and practice can be explored within a safe and trusting peer-to-peer environment, and addressed by comparing and contrasting different partners' approaches. Continuity of partners attending meetings is important and should be preserved where possible. New interested parties can attend as long as they contribute knowledge based on relevant practical experience. Involving knowledge focal points creates partner ownership of meeting direction.

Attending and contributing to external conferences (local, national or international) or holding training events provides further opportunity for collaboration and capacity building. Coordinated presentations can be effective in conveying programme specific knowledge from different perspectives to a wider audience.

Training of trainers

A two-day training of trainers (ToT) workshop on Effective Project Delivery was held in Surat, India, following Knowledge Forum 2. It was facilitated by Arup and attended by 18 ACCCRN participants representing partner organisations in all four countries. Its purpose was to equip ACCCRN partners with basic tools and information to enable them to train and support city working groups to plan, coordinate and implement urban resilience building projects at the city level. The workshop proved to be a valuable 'learning by doing' opportunity.

©Arup International Development

Training of trainers event, India.

Ensure that all partners are invited to contribute ideas and are provided with opportunities to participate. Identify a theme and focus topics for workshops and meetings collaboratively.

nurturing knowledge   creating community   stages

infancy   childhood   adolescence   adulthood   family
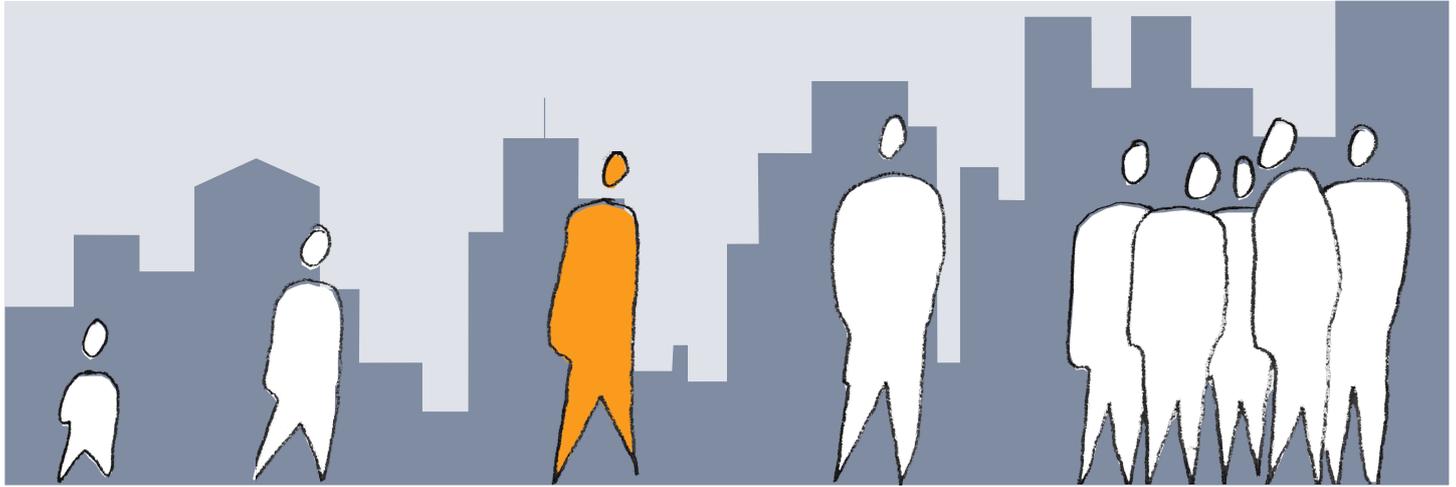
identity

A sense of self and personal identity is necessary by this stage, as well as a need to form intimate and connected relationships with others. Success leads to an ability to stay true to purpose and develop strong relationships, while failure leads to role confusion and isolation.

nurturing knowledge creating community **stages**

| infancy | childhood | adolescence | adulthood | family |

Identity

Participants gradually begin to take greater ownership of forums and take the lead on associated activities; for example, individual cities can host knowledge forums. This presents an opportunity to more directly relate discussions to practical action. It also intensifies local learning and knowledge generation by directly involving key stakeholders such as city administration officers. City-to-city connections are supported, deepening the potential for partnerships and future exchanges.

Media involvement can benefit the programme by highlighting key messages to a broader audience, generating awareness of relevant local action as well as the wider context. External visibility of ACCCRN was created by local and national media documenting the knowledge sharing exercises and site visits.

Hosting the knowledge forums provides opportunities to build capacity and confidence amongst city partners, in facilitation and organisational skills. Changes to the design and format of events (e.g. time keeping, number of participants etc.) may be necessary to accommodate local interests. In Surat, India a two-day event was extended over three days to allow a full day for visiting local project sites.

Cities host forums

Surat, India, was the first city to volunteer to co-own a knowledge forum and drive the agenda and organisation for the event. It represented a dynamic change in the way in which subsequent forums were conceived and managed. City team members and an external research expert brought new perspectives to the sessions, and visits to projects provided opportunity for in-situ discussion and contextualised practical learning. Bandar Lampung, Indonesia, and Can Tho, Vietnam, hosted subsequent meetings.

Times of India article and visit to a re-settlement project in Surat, India.

© Times of India

Opening up the forum beyond the intimate founding group can be beneficial. However, this process should be carefully managed to harness additional perspectives and experience without detracting from the sense of community.

nurturing knowledge   creating community   stages
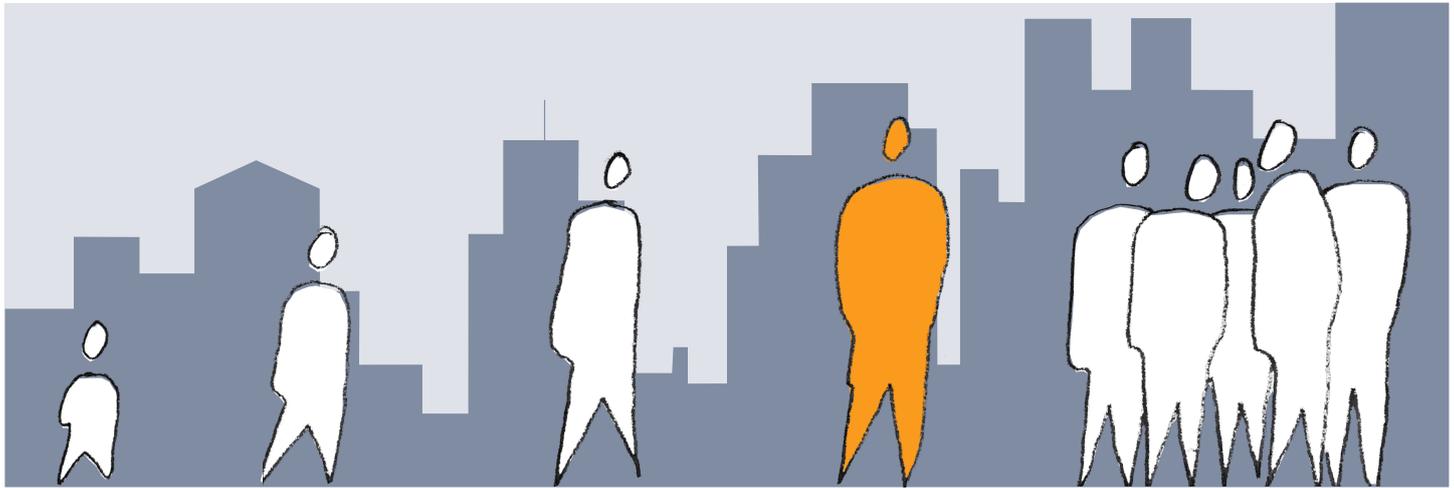
maturity

The focus at this stage is upon creation or nurturing of things that will outlast their presence, through propagation and creating a positive change that benefits other people. Success leads to feelings of usefulness and accomplishment, while failure results in isolation in the world.

nurturing knowledge creating community stages

| infancy | childhood | adolescence | adulthood | family |

Maturity

Maturity is demonstrated via a shift in emphasis from sharing experiences and challenges to questioning the impact of actions. In ACCCRN this stage allowed reflection on whether UCCR action is building resilience and capacity, and how such action can be scaled.

At this point, openness about the overall impact of the work achieved so far is necessary, as is looking more explicitly at the application of knowledge. Knowledge relating to implementation and impact bridges an important gap between theory and practice, and paves the way for replication and innovation. Themes at this stage need to reflect the issues causing greatest concern, inhibiting progress or compromising impact of projects. Involvement of academic researchers can help contextualise knowledge derived from practice and create linkages to current research on UCCR.

Purposely convening a knowledge forum to coincide with a higher-level national forum on climate change, promotes 'vertical' transfer of knowledge. This can also create potential to influence national level actors responsible for related policies and budget lines that provide a pathway to future action.

Expert reflection

The International Institute of Environment and Development (IIED), an ACCCRN partner, has regularly participated in knowledge forums since Knowledge Forum 3.

IIED is internationally recognised for their contribution to knowledge and research capability in the field of urban climate change impacts. IIED staff have provided contextualised commentary on forum discussions and themes that have lent a sense of validity and grounding to the knowledge sharing process.

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IIED at Knowledge Forum 4, Bandar Lampung, Indonesia.

Facilitation skills are critical to enabling reflective learning and sharing experiences in an appropriate and inclusive way. Recruit facilitators based on their style of facilitation and also their personality.

nurturing knowledge   creating community   stages

stages

creating community

nurturing knowledge
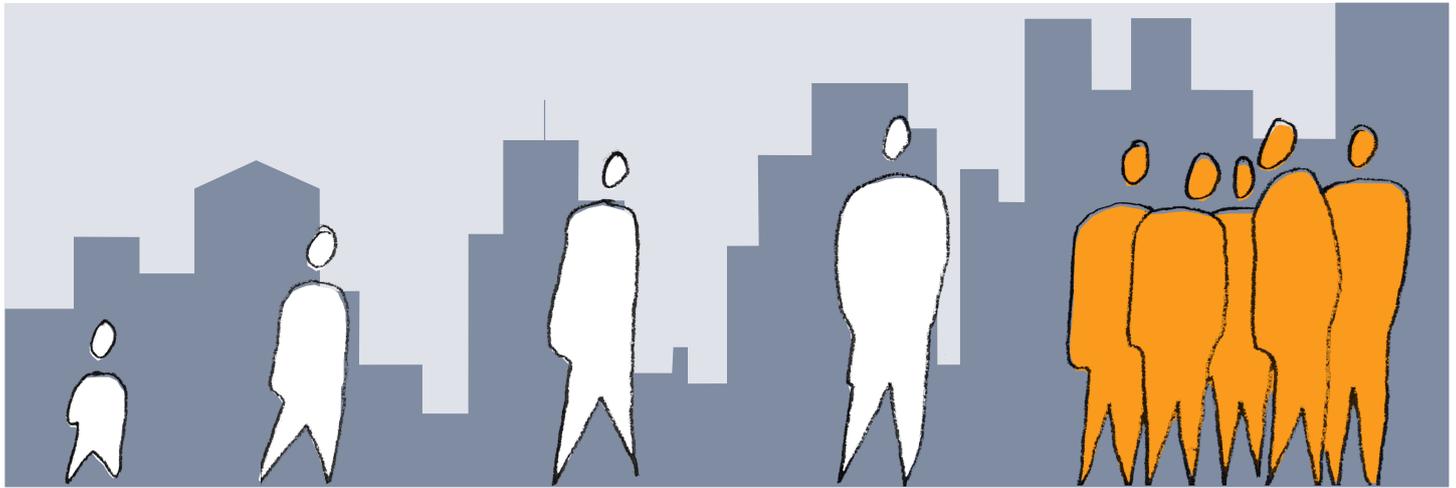
community

At the final stage, an organised group, and a durable network of kin and non-kin who interact providing further experiences and knowledge exists. It is possible to look back and feel a sense of fulfilment. Success leads to feelings of wisdom, while failure results in regret and despair.

infancy childhood adolescence adulthood family

Community

By the final stage in the knowledge lifecycle, there is an established sense of community. Strong relationships are evident between partners and the focus of discussion and enquiry shifts towards looking beyond the programme activities to possibilities for sustaining action and creating wider impact.

The community will either continue to grow further, or may split and seed other entities. It may even have fulfilled its purpose and then disappear. This is the point at which the community needs to decide how the network will evolve, and address the challenges of sustainability beyond the timeframe of the programme.

Creating national level linkages that reflect national planning and funding cycles, and building institutions are mechanisms to maintain focus and action on UCCR beyond the programme. For example, the Climate Change Coordination Offices in Vietnam are embedded in the formal government structure with the ability to collaborate with NGOs on locally devised plans for adaptation. These coordination offices were advocated for during the city resilience planning stage within the ACCCRN programme.

Rather than focussing on what next – i.e. how to sustain action – the question can instead be reversed; reflect on what actions you would need to stop doing in order for UCCR activities to cease.

Sustaining action

Replication of ACCCRN initiatives is now underway, with many new cities joining the programme and engaging practically on issues and processes of building urban climate change resilience. Techniques for knowledge sharing were also taken to the national level. In June 2013, Mercy Corps convened an initial national level knowledge forum in Indonesia. This forum's objective was to create an effective horizontal learning platform to support national level UCCR practitioners in Indonesia.

Participants at the Knowledge Forum 5 in Can Tho, Vietnam.

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This is not the end of the process. Allow the network to evolve along a natural path where it will either continue or transform into new initiatives.

nurturing knowledge   creating community   stages

Knowledge lifecycle

The process by which individual experience becomes common knowledge and best practice can be referred to as the 'knowledge lifecycle'. The knowledge lifecycle comprises the creation of knowledge, coordination (synthesis and sharing) of that knowledge, and dissemination to a wider group that ultimately leads to application (or replication). At this point it is accepted as common knowledge or best practice and provides the foundation for a further iterative cycle (see Figure 1).

In ACCCRN, activity at city level created local knowledge about the challenges and opportunities for UCCR through a process of learning by doing. Knowledge management enabled the learning and experience gained from a diversity of approaches and contexts to be shared among ACCCRN partners. This knowledge could then be reviewed and tested against emerging concepts of urban resilience. Finally, it could be analysed and synthesised to create a body of knowledge which, once disseminated, could inform future practice.

The original vision for knowledge management within ACCCRN was that:

"ACCCRN partners will collaborate to build a recognisably credible knowledge base of practical and actionable know-how to meet key UCCR challenges that will ultimately improve the lives of poor and vulnerable people".

Execute projects: The initiation of knowledge, starting the journey from an idea through testing to evaluation to a point where it can be shared.

Review products: Originators share their knowledge with a trusted community who review, develop and synthesise to create content for dissemination.

Network: The content is so well known as to be common knowledge that informs emerging best practice and creation of new knowledge.

Distribution channels: The content is made easily and readily available to targeted audiences and publically to anyone that wants to make use of it.

Figure 1: ACCCRN lifecycle diagram

Knowledge management strategy

Establishment of knowledge focal points within partner organisations as key points of contact and local owners of the development of the knowledge management solution; Bi-annual facilitated knowledge forums to enable face-to-face knowledge sharing; A private online knowledge platform to virtually connect partners, facilitate knowledge sharing and collaboration, and act as an information and media repository; An effective process for document management, storage and retrieval; Development of thematic synthesis documents to capture emerging knowledge on specific topics and themes.

nurturing knowledge   creating community   process

Knowledge hierarchy

The term 'knowledge' means different things to different people. However, it is generally accepted that:

- Knowledge is a human property embodied in individuals, organisational processes and practices.
- It is dynamic and variable over time, and is generated through tacit learning or perception.

Figure 2 highlights how knowledge, and ultimately wisdom, evolves as a result of understanding and contextualisation.

Explicit knowledge is written down or recorded. It can be systemised, stored and communicated through documents, manuals, procedures and audio-visual materials.

Tacit knowledge exists largely in people's heads. It can only be transferred through extensive personal contact and trust. People are often not aware of the knowledge they possess or how it can be of value to others.

Knowledge management recognises that the key assets of organisations often exist in the heads of programme partners and implementers (i.e. in tacit knowledge). It is the process of collecting and sharing knowledge that enables people to work more effectively, improves decision-making, avoids 'reinventing the wheel' and catalyses innovation. Knowledge management unlocks human intuition and experience, and facilitates the adoption of insights and experiences, and formulation of best practices.
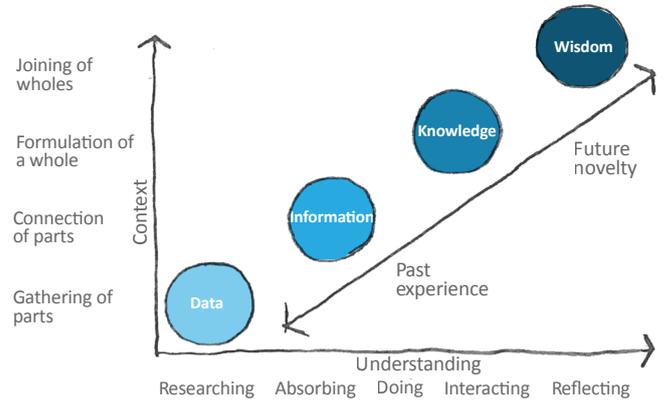
Figure 2: The DIKW Hierachy

Data, Information, Knowledge and Wisdom (DIKW) Hierarchy

Data is unprocessed information; it exists as a resource.
Information is processed data that has been given meaning.
Knowledge is the appropriate collection of information so that it can be used. It is personal, subjective and local. It is internalised within people and as such it is shaped by their existing perceptions and experiences.
Wisdom is the application of knowledge, empowering the ability to choose or act to consistently produce the optimum results with a minimum of time and energy. (This hierarchy is illustrated in Figure 2 above).

nurturing knowledge   creating community   process

| lifecycle | flows | forums | platforms | networks |

Knowledge flows

Knowledge management is not a linear process; it is messy and iterative, involving many different sources, participants and audiences, ranging from implementers to influencers. It is also fluid and dynamic. Different processes are needed to enable knowledge to flow within and between different groups at different times.

Simple distinctions can be made between the different types of knowledge flow to help identify what processes are appropriate at different stages in the knowledge lifecycle (Figure 3):

Horizontal (across) – Sharing knowledge (tacit) through peer-to-peer collaboration exchange of ideas and approaches. Informal, participatory, and demand driven; enabled by social interactions and collaborative systems, notably face-to-face meetings.

Vertical (up and down) – Formalising knowledge (explicit) through collection of evidence and experience; research, synthesis, documentation and dissemination. A structured and quality controlled process that includes document management and peer-review.

External (in and out) – Sharing knowledge in order to influence parties outside the immediate network. Participation in events, PR and communications including links with other networks, publications, and maintaining an internet presence (www.acccrn.org).
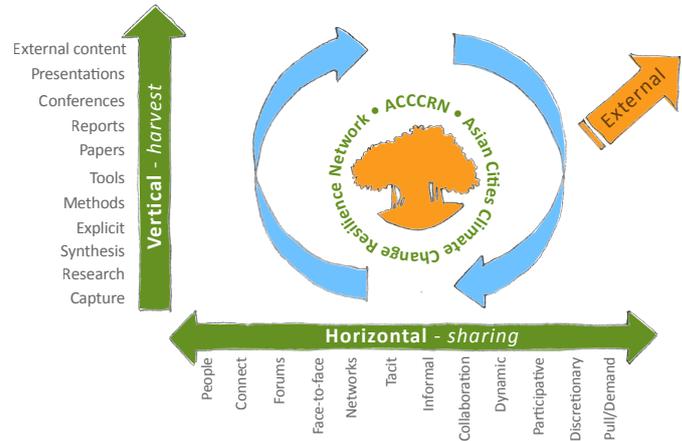
Figure 3: ACCCRN knowledge flow

Challenges

- UCCR is a new agenda.
- Diversity of partners, languages, contexts, approaches and projects.
- Knowledge lost in translation from one language to another.
- Knowledge generated is often context specific.
- Knowledge generated is tacit rather than explicit.
- Limited time and resources available for knowledge sharing.
- Different types of organisations (NGO, academic, donor, private sector) interpret 'knowledge' differently, and have varying attitudes and approaches to sharing knowledge.
- Generating knowledge does not necessarily build a knowledge base

nurturing knowledge   creating community   process

lifecycle   flows   forums   platforms   networks

External knowledge

A dissemination strategy which identifies key audiences, themes, messages and mediums can help to ensure new knowledge generated is produced in a format that enables wider influence and impact, beyond the network.

Knowledge management can seek to address knowledge gaps (horizontal, vertical or external) by focussing on specific areas of thematic interest or relevance for particular audiences. Documentation plays a key role in capturing new learning and best practice in a format that can be reviewed and referenced, in order to inform future debate and activity.

The Intergovernmental Panel on Climate Change (IPCC) Assessment Report draws heavily on research findings to inform the global policy debate on climate change. Previous IPCC Reports highlight the lack of research originating from low and middle-income countries despite these countries being highly exposed to climate change impacts.

IIED has adopted a variety of approaches to support new research related to UCCR in ACCCRN cities to help fill this gap. A research and writing skills workshop led to the selection of four research teams who have received funding to carry out a six month research project. Each project will contribute to the ACCCRN Working Paper and Briefing Paper series shared through www.acccrn.org.

Climate Resilient Housing: An Approach to Adaptation and Housing in Da Nang City, Vietnam

Sarah Reed, ISET

Presenting on behalf of:
Women's Union Da Nang
Department of Foreign Affairs, Da Nang
Nguyen Phuc Hoa, Challenge to Change
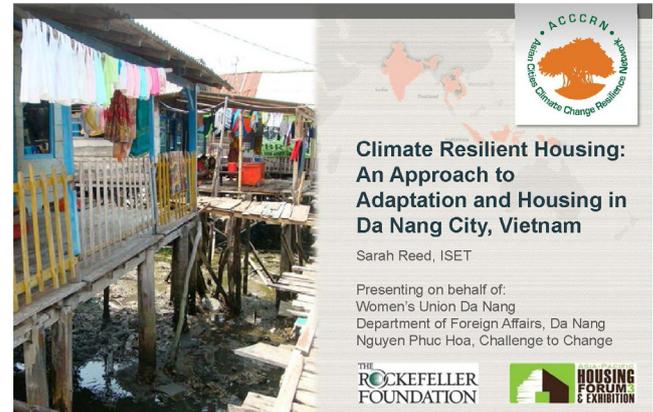
An example of the presentations prepared specifically for the Asia-Pacific Housing Forum in Bangkok. ISET, Da Nang City, Vietnam

External events

The Third Asia-Pacific Housing Forum was an opportunity for partners from 4 ACCCRN cities to consider the role of shelter in UCCR. This reflection was then shared with a wider audience through a series of co-ordinated presentations and panel discussions including:

- Safe Habitat Planning and Design Competition – raising awareness of UCCR in Surat, India;
- Climate Resilient Housing – linking micro finance with upgrading storm affected housing in Da Nang, Vietnam;
- Resettlement Resilience Indicators – measuring the contribution of housing resettlement programmes to UCCR in Can Tho City, Vietnam.

Knowledge forums

Peer-to-peer (or horizontal) learning based on sharing knowledge and experience requires a trusting and safe environment that enables individuals to talk openly, explore ideas and build relationships.

For a vibrant community to emerge, it is important to bring people together face-to-face. They then have time and space to share stories, ask questions, build context and discuss possibilities. Hence, a key component of the ACCCRN knowledge management strategy was the bi-annual knowledge forums attended by up to 30 partners from ACCCRN cities.

The key features of ACCCRN knowledge forums were:

- Knowledge focal points acting as the key links within partner organisations;
- A collaborative process to identify common themes of interest prior to events;
- Meetings structured and facilitated using of a range of tools to encourage the free flow of knowledge and discussion in a safe environment;
- Time invested in establishing the process of peer-to-peer knowledge exchange;
- Emphasis on creating and strengthening personal links to better enable sharing between forum events;
- A post-forum process for capturing learning and sharing information which is posted on the Knowledge Hub.

How do you like to share your knowledge?

written   or   verbal
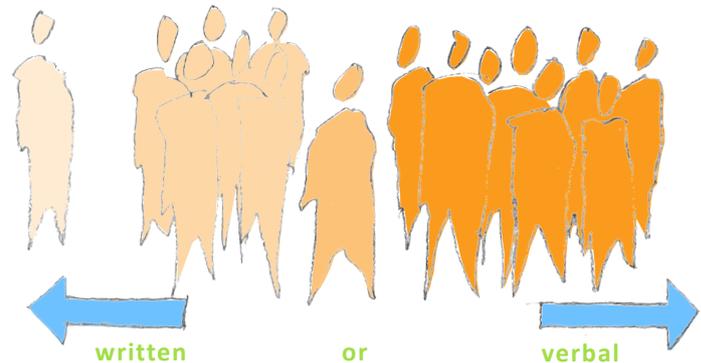
Participants in a 'Quick-fire questions' exercise

Knowledge focal points

Key expectations of the role include:

- Acting as the main point of contact for development and implementation of the knowledge management strategy within their organisation;
- Developing specific organisational content for the Knowledge Hub;
- Sponsoring and championing knowledge management within their organisations;
- Participating in knowledge management group discussions;
- Raising issues and identifying ways to ensure knowledge management is efficient, effective and relevant;
- Supporting the collection and capture of key content.

nurturing knowledge   creating community   process

lifecycle   flows   forums   platforms   networks

Forum facilitation

Facilitation of ACCCRN knowledge forums was purposely non-directive so that participants became the main contributors to the event.

At each of the five ACCCRN knowledge forums, a range of tools were used, in order to maximise engagement and maintain interest throughout the two days: The World Café; Knowledge Bursts; Peer Assist; Open Space; De Bono's Hats; the River Diagram; SWOT Analysis; Lessons Learnt Review; Intervention Mapping; Reversals Exercise; Reflections Exercise; Traffic Lights; 5 Why's; Key Lessons; Knowledge Exchange; and the RACI (Responsible, Accountable, Consulted, Informed) tool. (See cards 21-30 for more details on several of these tools.)

These tools were selected for their ability to surface knowledge in discrete sessions using a particular format of sharing and enquiry. Each tool (or exercise) employs different materials, working group dynamics and scenarios to promote interaction and to stimulate sharing of information and innovative thinking.

Capturing the discussion and disseminating the outputs immediately after the event reinforced learning, and provided a basis for continued dialogue. Outputs from knowledge sharing exercises were photographed or filmed and instantly uploaded to the knowledge hub, thereby allowing access to those unable to participate in the forums themselves.

Knowledge Sessions

Knowledge Cafe
Participants were asked to examine what is meant by the term 'governance', using the Knowledge Cafe exercise introduced at an earlier Knowledge Forum.

Ideas about the actors, processes and elements of governance were shared by participants in small groups then fed back to the rest of the Forum.

River Diagram
Using the river diagram, participants compared the levels of good governance within each of the ten ACCCRN cities.

A peer-assist learning technique was then used to pair cities which had been ranked the highest and lowest on issues such as transparency and participation, so that the cities struggling with these issues could learn from those performing better.

Problem Trees
The final exercise of the first day was a new tool called 'Problem Trees', in which participants explored the root causes, challenges and effects of poor governance.

This exercise illustrated that linkages between causes and effects were often more complicated than assumed, but that arranging them in problem trees helped to understand relationships between them.

BURSTS

In a similar format to previous knowledge forums, a series of bursts – short presentations – were delivered throughout the two days of the Knowledge Forum. This Forum these bursts all examined the topic of governance, from actors involved in governance, to case studies illustrating the challenges of good governance.

Burst 1
G. K. Bhatt (TARU)

Bhatt delivered a burst on urban governance in India; outlining the history of urban governance, the ever-increasing challenge of urbanisation, existing governance systems, and finally explaining the example of water governance in India to demonstrate the varying roles of different actors in governance.

Burst 2
Phong Tran (ISET Vietnam)

Phong introduced a short 15 minute film on ACCCRN in Danang City, Vietnam, and began his burst by providing participants with a contextual overview of urban governance in Vietnam. The video showcased resilience-building projects including a storm-resistant housing scheme and a winch project to ensure fishing boats were sheltered during storms.

Burst 3
Vu Canh Toan (NISTPASS)

Toan began his burst with an introduction to urban governance, outlining the various actors involved. Governance in Vietnam is very much led by policy-makers, via a top-down approach. Good urban governance should help build resilience to climate change, via development of all the characteristics discussed in the earlier session.

Typical A5 booklet output

Synthesis paper

Shortly after the knowledge forums, and as a forerunner to the dissemination of the synthesis paper, a short A5 summary of each event (with embedded links to the session outputs posted on the Knowledge Hub) was emailed to participants thanking them for attendance and encouraging them to share the learning.

The final output from the knowledge forums was a synthesis paper which provided an 'aide memoire' of the event. Each paper captured the key learning from the discussions, exercises and site visits, and included illustrations and exercise outputs produced by participants, as well as photographs of group activities.

nurturing knowledge   creating community   process

lifecycle   flows   forums   platforms   networks

Knowledge sharing platforms

Knowledge sharing is generally recognised as a highly social process, often predicated on the development of relationships and the establishment of trust. This development of relationships and trust – for example, through face-to-face meetings – is often constrained by the challenges of multiple geographies and finite resources. Online knowledge platforms can play an important role in supporting participant interaction and learning, as well as sharing and disseminating information, ideas and documentation.

In ACCCRN a clear distinction was made between internal and external knowledge sharing platforms.

Internal - The Knowledge Hub operated as a closed community with membership restricted to ACCCRN partners, thereby creating a safe environment to share information, ideas and perspectives at various stages of development and validation. This generated an iterative cycle of sharing, feedback and learning that helped build confidence in new ideas and their application.

External - The ACCCRN internet site (wwww.acccrn.org) provided an open forum used to disseminate knowledge and information that has been validated either by ACCCRN partners or through wider peer-review, to provide confidence that it is founded on sufficient evidence and quality of thought for it to be shared more widely.

CLOSED COMMUNITY
(Invited members only)

OPEN PUBLIC DOMAIN
(Wider dissemination)

ACCCRN Knowledge Hub
(Intranet)

ACCCRN internet site
(External)

sharing, learning and re-use

Process required to validate for external dissemination
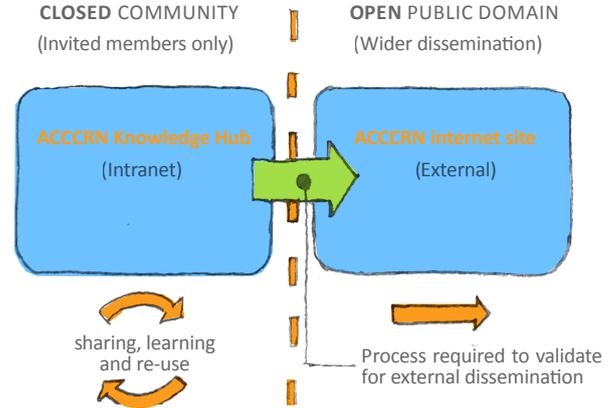
Figure 4: ACCCRN knowledge platforms

ACCCRN knowledge platforms

The two separate sites reflect varying needs at different stages of the knowledge lifecycle. One site addresses the need for co-ordination/synthesis, involving sharing of internal ideas and draft outputs for discussion, and the other focusses on dissemination of information in the wider public domain. The relationship between the ACCCRN knowledge hub and ACCCRN.org is shown in Figure 4.

It was important to establish the internal platform early on. This was achieved quickly by subscribing to a social network platform, 'Ning'. The external platform took longer to develop, requiring wider consultation to ensure its appearance and functionality appealed to the target audience.

nurturing knowledge   creating community   process

Knowledge hub

The ACCCRN Knowledge Hub (online platform) was set up to provide a means to share documentation and information, to enable discussion forums, and to provide a directory of members. Membership of the Knowledge Hub was granted by application to an administrator. Personal profiles were created as part of the application process, allowing members to instantly identify people they might wish to make contact with.

Interest groups allowed members to start their own online working groups. These emerged spontaneously, uniting individuals with common interests; such as, shelter and housing, monitoring and evaluation, resilience indicators. The number of groups and level of participation indicate a level of maturity and growth. To perform effectively the hub required active engagement and contributions from members.

Document management on the Hub relied on members regularly submitting documents to the platform, with a description of content and relevant keyword tags to facilitate searching. Periodically, the knowledge focal points reviewed the documentation, identifying those that were particularly useful or relevant to other partners, or the wider public via acccrn.org.

Weekly newsletters highlighting recent activities and upcoming events, and quarterly status updates provided a snapshot of current and future ACCCRN activities were circulated by email.

The acccrn.org home page

www.acccrn.org

ACCCRN's external website was designed and managed by APCO, a media and communication specialist. Acccrn.org was created for knowledge dissemination to a wider audience engaged in UCCR. It included a repository of peer-reviewed documentation and links to blogs, activities and related networks. Once the site launched the media and other interested stakeholders were invited to explore the site and to engage via social media pages. National media reportage on specific meetings and projects helped ACCCRN to attain greater visibility at international public events.

nurturing knowledge   creating community   process

lifecycle   flows   forums   platforms   networks

Knowledge networks

Knowledge sharing is a common component of many networks. A network is a set of individuals or organisations that are connected by a set of relationships. Networks often rely on voluntary membership and participation, and negotiated governance. They are more dynamic and less predictable than conventional organisations. Their adaptable nature fulfils a need for non-linear approaches to solving complex problems such as UCCR.

In its simplest form, the foundations of a knowledge network are community (members) and content (knowledge). These are made up of assets, such as the membership, information and knowledge (implicit and explicit) generated or shared as a result of the network.

A network's effectiveness is determined by activities – such as meetings, online forums, production of outputs etc. – successfully contributing to building a community and developing content; via these processes the assets increase and the processes becomes self-perpetuating (Figure 5).

The degree to which the network needs to be managed or moderated depends on its purpose, its scope of activities, the resources of the members and the extent to which the network choses to operate on a formal or informal basis.
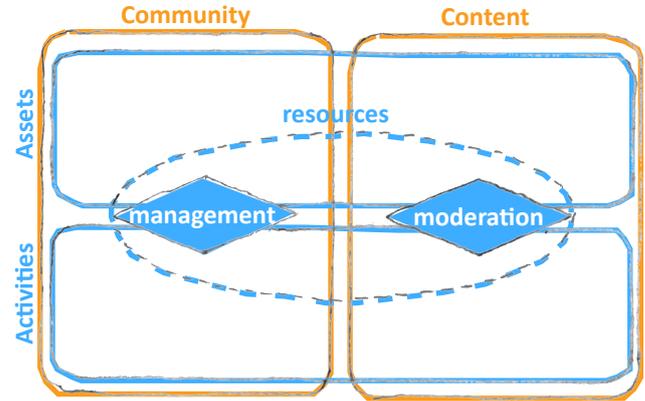
Figure 5: Network operating model

Practical considerations for nurturing networks

- What is the main driver for developing a network with knowledge management? Is it to disseminate or filter existing knowledge? Or is it to use existing knowledge and build new content to influence other actors?
- Does a recognised community already exist in this area?
- How well is the thematic concept understood amongst fellow practitioners? Is it an emerging concept which will benefit from consensus building?
- How much management does your network need? Can it be self-moderated?

ACCCRN network model

ACCCRN has initiated a network comprising city, country and regional partners and extending to a broader community of donors, practitioners and academic institutions that have contributed to the programme or share a common interest in UCCR.

The network has been nurtured and supported by various knowledge management processes – the creation of knowledge focal points and the knowledge hub, and the organisation of knowledge forums – as well as collaborations ranging from site visits, to documentation, to external events. These have contributed to the development of an internal community.

The ACCCRN network possesses a body of experience and knowledge relating to the process of building UCCR in Asian cities. The network is engaged in a range of activities to ensure this experience and knowledge is captured, disseminated and propagated. Platforms for sharing knowledge on ACCCRN include the knowledge forums, the hub, acccrn.org, conferences and seminars, and synthesis and working papers (see Figure 6).

The ACCCRN community has potential to expand within the region, building on established relationships and a shared understanding of UCCR based on collective experiences.

Community	Content
Members	**Info/Knowledge**
Regional partners	**Process:**
Country partners	Network development and growth
City partners	Knowledge creation/sharing methods
Research institutes/academics	Network governance
Facilitator/enabler	**Technical:**
Donor	UCCR
Professionals	Sector specific knowedge
	Tacit knowledge
Platform for *creating* community	Platforms for *sharing* knowledge
Knowledge hub (intranet)	Knowedge forums
Knowledge forums	Conferences and seminars
Knowledge focal points	Synthesis papers
Multi-stakeholder meetings	Working papers
Field visits	Lessons and learning meetings
Website (ACCCRN.org)	Website (ACCCRN.org)

Assets / *Activities*

Figure 6: ACCCRN network model

The next generation

Across ACCCRN there is evidence of new UCCR communities emerging at national levels that are seeded – at least in part – by members of the ACCCRN 'family'. These tend to be focused on creating local opportunities to share knowledge.

- In Vietnam, a UCCR network is being developed as part of the Vietnam Urban Forum.
- In Indonesia, the ACCCRN country partner Mercy Corps has organised their first national level knowledge forums on UCCR using some of the tools from previous knowledge forums to enable national policy makers to access city level knowledge produced by ACCCRN activities.

nurturing knowledge   creating community   process

Strategy

The increasing demand for direct interaction between cities to enable peer-to-peer sharing of problems and possible solutions led to the development of the knowledge forum series. **Defining a strategy for improving knowledge exchange** was selected as the first knowledge forum topic. In Knowledge Forum 1, partners recognised that their work on UCCR was contributing to a new agenda and that neither regional nor local partners were yet experts. Engagement at the city level, through a process of 'learning by doing', led ACCCRN partners to generate a number of questions on their experiences which they wanted to share with others across the programme.

Workshop tools such as 'Open Space' encouraged partners to go beyond process reflections and consider key challenges in building urban resilience to climate change. The two priority issues that emerged from discussion during the forum were (1) managing risk beyond city boundaries, and (2) the role of peri-urban areas in building resilience:

1. The impacts of climate change on cities cannot always be managed within the boundaries of the city municipality; requiring cities to look beyond their boundaries to act to reduce risk. In Surat, India the flood management system (Ukai Dam) is beyond the municipal boundary and controlled by the Gujarat State Irrigation Department. This results in the frequency and intensity of flooding in Surat being largely beyond the control of city government.

2. The land surrounding cities - rural or peri-urban areas - is often integral to enhancing the resilience of cities. Due to their proximity to the city boundary, these lands are often subject to further encroachment of the city's built environment. In cities such as Quy Nhon in Vietnam, peri-urban agriculture contributes to local food supply, so urban expansion would force the city to rely on longer, and potentially more expensive, supply chains to replace local supplies.

Through the knowledge forum process, participants were able to appreciate the value of peer-to-peer reflection on emerging issues and challenges being faced across the ACCCRN programme, as well as areas of common ground for further discussion.

Key learning

- Peer-to-peer relationships between cities and country partners help identify common challenges and create the potential for shared problem-solving and information sharing.
- Impacts of climate change can affect or occur in areas outside city administrative boundaries, requiring collaborative and coordinated approaches to reduce risk to urban areas.
- Before land surrounding cities is developed for urban purposes, its role in contributing to urban resilience to climate related shocks and stresses should be considered.

nurturing knowledge   creating community   learning

strategy   mainstreaming   governance   impact   sustaining action

Open Space

Open Space is an interactive technique best used for generating informal discussions around several topics or themes. Largely unstructured, the technique allows for relaxed networking, communication and collaboration. It enables new ideas to emerge among a diverse group of people facing similar problems. The technique gives participants control over the topics to be discussed, and which topics they wish to spend their limited time discussing. Participants are free to 'move on' to another conversation at their own discretion.

Topics put forward by participants for discussion at Knowledge Forum 1 included:

- *How can emerging practical knowledge influence policy formation?*
- *How can scientific and traditional knowledge be best combined?*
- *If maintaining ecosystems is increasingly important to creating more resilient cities, how should ecosystems be integrated into the ACCCRN process?*
- *What role do peri-urban areas play in supporting the resilience of cities?*
- *What are the characteristics of resilience?*

This knowledge forum was the first time partners came together to share experiences and challenges. These topics gave an insight into the issues that were emerging at the city level (peri-urban links and urban systems and boundaries) as well as conceptually (how to link knowledge to policy and learning to define resilience more clearly).

Participants in a 'Open Space' exercise

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Participants cluster around a topic of interest in the 'Open Space' exercise, moving onto another topic/group only when discussion was exhausted.

nurturing knowledge   creating community   learning

Mainstreaming

The value of programme outputs, such as city resilience strategies, can be multiplied if these outputs are integrated into city planning and budget cycles, or can influence policies and plans in the longer term. Therefore **mainstreaming climate change resilience** was selected as the theme for Knowledge Forum 2. This term refers to the integration of climate change related policies and measures into planning processes and decision-making.

One mainstreaming approach is integrating climate change adaptation into urban planning. This has the potential to reduce the exposure of both people and businesses, thereby increasing human safety and safeguarding income.
Key constraints to mainstreaming include:

1. While climate change projections often provide long term (30 or 50 year) scenarios for changing sea level, rainfall or temperature, urban planning cycles are often much shorter (5-15 years) timeframes. Connecting different timescales is an ongoing challenge.

2. Due to uncertainty about the specific implications of climate change at the local level, planners often have limited confidence, tools and techniques to address uncertainty in planning documents, which invariably require more specific guidelines (such as land use designation and flood lines).

3. Municipal planning departments often lack influence over central government; whose need to sell land to finance infrastructure projects can often have greater influence in land use decision-making processes.

In Surat, India, a design competition to find an innovative solution for a flood constrained site, produced a number of land use and planning solutions which challenged existing rules and regulations. While implementation of the ultimate solution requires changes to planning regulations, a key learning from the competition was the need for flexibility in planning controls to accommodate the expected changes in future climate related hazards.

Key learning

- "Mainstreaming climate change resilience is the integration of climate change related policies and measures into planning processes and decision-making by government and non-governmental actors (including business)" (see card v for reference details).
- Connecting long term climate projections with short term planning horizons is a key challenge for urban planners, and may require new techniques (such as scenario planning).
- Incorporating climate change projections into land use planning is challenging, and may require increased flexibility in planning controls in order to accommodate future uncertainty.

nurturing knowledge   creating community   learning

World Café

The World Café is a method which fosters collaborative dialogue, active engagement and nurturing ideas in open discussion. In Knowledge Forum 2 this exercise initiated debate on the challenges of mainstreaming climate change adaptation in ACCCRN. A knowledge focal point chaired each of the five tables and recorded key thoughts on the paper tablecloths provided. Each table explored one question in detail through group discussion. The periodic mixing of participants allowed a greater depth of learning to emerge as new participants built on earlier discussions at each table.

Two broad questions were explored in Knowledge Forum 2:

1. *Why is mainstreaming climate change adaptation different from mainstreaming other topics?*
   Partners agreed that mainstreaming climate adaptation is not noticeably different to mainstreaming other issues such as poverty reduction or disaster risk reduction. Learning can be sought from experience in mainstreaming issues in other sectors.

2. *How can we work with other actors to mainstream climate change adaptation?*
   Partners noted that government collaboration at national and local levels is especially important for mainstreaming. Essential to mainstreaming is a multi-stakeholder approach that includes the private sector and other key partners with relevant capabilities. Establishing formal/informal networks of actors can help to ensure there is shared responsibility for climate change adaptation.

World Café guidelines

Room arrangement for World Café (above) and one of the tablecloths used for recording the thoughts and discussions (right).

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nurturing knowledge creating community learning

strategy — mainstreaming — governance — impact — sustaining action
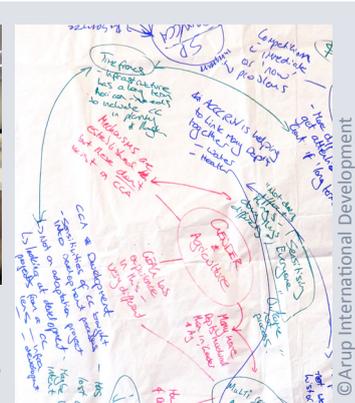
Governance

Recognising the need for collaboration in the area of UCCR, the focus of Knowledge Forum 3 was **governance**; specifically the process of decision-making and implementation to build urban climate change resilience. The agenda recognised the role of civil society and the private sector in ACCCRN cities, particularly in situations where city government stakeholders exhibit changing levels of engagement and commitment (often due to local elections, political drivers or other demands).

Discussions focussed on identifying the motivations of the private sector, and the potential entry points for civil society to engage in the process of building urban resilience.

1. In several ACCCRN cities, the Chamber of Commerce has played a key role in UCCR, recognising how business continuity can be directly linked to climate related hazards (such as flooding in Hat Yai, Thailand or health epidemics and flooding in Surat, India). In Surat, the Chamber of Commerce – recognising the dependence of much of the city's business upon migrant work – has lobbied successfully for greater government action in support of those migrants living in informal housing on marginal land, at risk of river flooding.

2. Civil society is recognised as a source of deep, practical expertise, as well as widening the base of actors driving municipalities to institutionalise change, in response to climate induced shocks and stresses. For example, while an effective level of engagement with city government has developed in Gorakhpur, India, it has been the action of a local non-governmental organisation – Gorakhpur Environmental Action Group – that has led the initial stages of vulnerability assessments, multi-stakeholder engagement, and the implementation of projects (such as the ward-level micro resilience planning) which has sparked government interest.

Knowledge Forum 3 contextualised knowledge through greater engagement with city partners (an opportunity provided by the Forum hosts) and through visiting current city projects. Further commentary was gained by welcoming academic research experts and inviting their view on the subsequent discussions.

Key learning
- Governance is the process of decision-making and the process by which decisions are implemented (or not) by government, civil society and private sector.
- Resources from the private sector can be leveraged where business continuity has been directly linked to climate related hazards such as flooding or health epidemics.
- Civil society has the potential to drive municipalities to institutionalise change based on the local agenda, action and evidence.

nurturing knowledge   creating community   learning

| strategy | mainstreaming | governance | impact | sustaining action |

'De Bono's Hats'

The six 'thinking hats' approach, devised by Edward de Bono, is a tool designed to help with creativity, problem-solving and decision-making. This exercise uses a clear structure to solve problems and can be used in both small and large group settings. By wearing each of the six different coloured hats a participant can better consider multiple aspects of a problem. In Knowledge Forum 3 this exercise helped to solve three key problems identified over the course of the forum.

1. *How do we engage with the private sector to build UCCR?*
Examples of success across ACCCRN countries included tax incentives or subsidies for measures which increase climate resilience, and regulatory approaches that require prescribed percentages of profits for investment in corporate social responsibility schemes.

2. *How do we influence city governments to consider the most vulnerable?*
Civil society groups representing vulnerable citizens can lobby to ensure that participatory planning and implementation processes are employed in support of actions and projects concerning UCCR.

3. *How do we plan for uncertainty?*
Planning for uncertainty requires understanding of what is viewed as 'acceptable risk' by locals, as well as understanding how to manage risks which exceed this level. Employing participatory scenario planning and risk mapping approaches can increase resilience by raising awareness of potential threats.
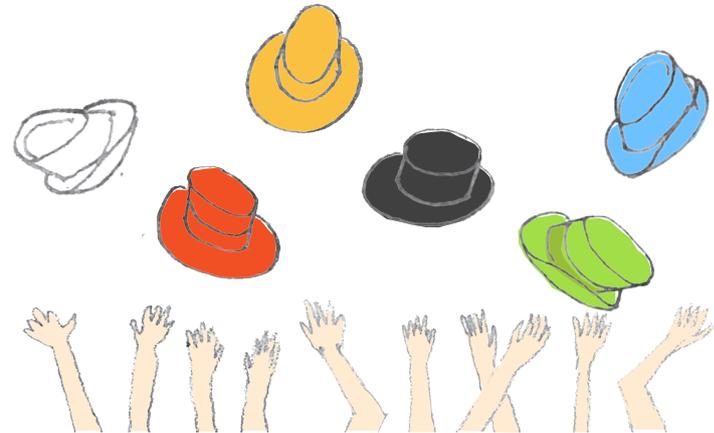
De Bono's Hats

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White - what do you know about a problem?
Red - what is your emotional reaction to the problem?
Black - what are the negative aspects?
Yellow - what are the positive aspects?
Green - What creative solutions are there?
Blue - Use this hat to direct/chair the discussion.

nurturing knowledge   creating community   learning

strategy   mainstreaming   governance   impact   sustaining action

Impact

Knowledge Forum 4 focussed on the **impact of projects at the city level**, and what learning was emerging at various stages of implementation. With over 30 actions identified in city resilience strategies across the ten cities, partners took this opportunity to share their own learning and discuss successes and challenges. This included discussion of cross-sectoral implementation, repeating needs assessments, relying on city systems, and the use of indicators.

Resilience building projects often require cross-sectoral implementation teams who have not worked together before. In Indore, India, a participatory planning technique was used to design a community water management project; this allowed the capacity of the project management team to be improved.

A needs assessment is a necessary part of proposal design. Experience has shown however that this assessment should be repeated prior to implementation, to ensure projects are targeted effectively. Semarang's Flood Forecasting and Warning System required more detailed needs assessments to be completed, in order to better understand the complexities of multi-stakeholder intervention in this project.

Projects in cities often propose to leverage existing systems, making the success of the project reliant on the effective operation of an original system. Can Tho's dengue fever surveillance system is one example where additional efforts have been made to improve early detection, response, and access to vulnerable communities for treatment.

Indicators can be generated to monitor progress and impact at the project level; but demonstrating a specific project's contribution to urban climate change resilience remains challenging. In Bandar Lampung, Indonesia, city level statistics are used to track water scarcity, flooding, and health, which are relevant indicators for projects such as the integrated solid waste management masterplan.

Knowledge Forum 4 investigated what the ultimate impact of city level project implementation and learning has within ACCRN cities. Transferring knowledge into action and impact is a sign of knowledge maturity. Recognition of successes can lead to possibilities for replication.

Key learning

- City resilience strategies help to identify projects and provide the link between projects on the ground and overall resilience building objectives at the city level.
- Learning by doing, through project implementation and multi-stakeholder processes (like participatory vulnerability assessments), are critical to building capacity at city level.
- There is as much to learn from success as from failure. Sharing success is easy, but sharing failure requires a safe environment where critical reflection is accepted.

nurturing knowledge   creating community   learning

Lessons Learnt Review

Reflection is a useful tool to employ at key milestones in a project. This allows assessment of what has worked well and what could be improved. The key to the 'Lessons Learnt Review' exercise is openness and honesty about these questions, in order to understand how improvements can be made. The focus on impact of intervention in Knowledge Forum 4 created the opportunity to explore detailed lessons from a selection of city projects. Three key transferable lessons were identified as:

1. *Conduct a needs assessment prior to project development.*
   Detailed vulnerability assessments form the basis of city resilience strategies and help prioritise action. Their funding requires further specific assessments to enable effective targeting of planned action. Key stakeholders need to be identified, as well as similar projects that can form the basis of learning.

2. *Assessing and building capacity, particularly at the city level.*
   It is important to assess the capacity of all project stakeholders prior to the planning stage, to define the project scope, and to determine the appropriate scale at which it should be run.

3. *Ensuring consensus on project objectives before implementation.*
   Consensus on objectives, methodology and coordination is critical from the beginning of any project. A well-defined scope and engagement of key stakeholders ensures there is clear direction for implementation.

What was supposed to happen in the intervention?

What actually happened?

Why did this happen?

What should be done in future?
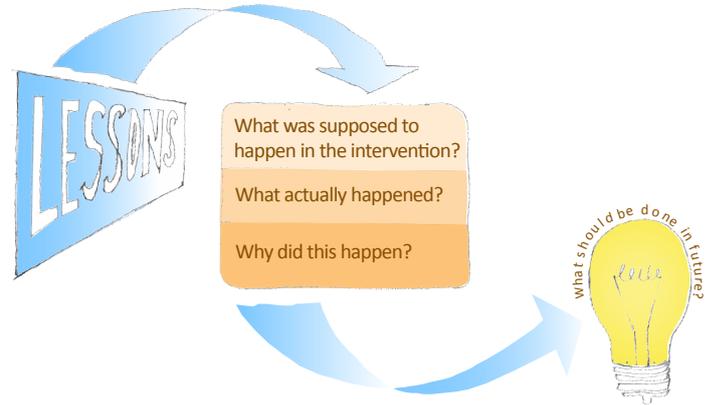
Lessons Learnt Review procedure

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Participants analyse lessons learnt and distill learning into ideas for future action. This was undertaken in country groups.

nurturing knowledge creating community learning

strategy mainstreaming governance impact sustaining action

Sustaining action

Programme funding is, by its nature, finite. With the end of core programme funding looming, participants came to Knowledge Forum 5 focused on exchanging ideas and experiences on **how to sustain action on climate change resilience in cities** beyond the ACCCRN programme.

Two main issues emerged relating to finance and knowledge exchange:

1. Identifying innovative funding solutions to sustain action beyond donor support; including co-funding opportunities and sources of public and private finance. A key driver in setting up the Surat Climate Change Trust (and similar structures in Vietnam and Indonesia), was the need for a mechanism that would allow the city to receive funding directly from donors, and to attract, control and implement projects with external financing. Indore, India, and Bandar Lampung, Indonesia, have each created municipal budget lines for climate change resilience action – a long term goal of ACCCRN advocacy is to embed and mainstream climate change action within the city.

2. Mechanisms for learning and knowledge exchange enable stories, successes and failures to be shared; contributing to increasing the depth of knowledge and awareness of technical and non-technical actors across the city. Mercy Corps Indonesia has established a 'Best Practice Transfer

Programme' to enable other cities in Indonesia to learn from the successes, challenges, tools and approaches, associated with building resilience to climate change in Semarang and Bandar Lampung. A city-based think tank in Semarang, the Initiatives for Urban Climate Change and Environment (IUCCE), is also being set up to facilitate information exchange and learning between government, the private sector and non-governmental urban actors.

Knowledge Forum 5 acknowledged an established sense of community, with strong relationships between partners. These partners are now focussed on determining how to continue action beyond the programme activities, through addressing challenges to the sustainability of the network.

Key learning

- Donor funding is important for initiating action, while a combination of donor, public and private funding can help sustain action beyond finite programmes.
- Existing municipal level budgets are the primary long term source of funds (whether derived from national or state funds, municipal bonds or local taxation) to support ongoing implementation.
- Increasing the awareness of government, businesses and the community requires learning to be generated and communicated appropriately to each audience.

nurturing knowledge   creating community   learning

strategy   >   mainstreaming   >   governance   >   impact   >   **sustaining action**

Traffic Lights and the 5 Why's

The Traffic Light tool brought participants together in country groups to assess 'What have we learnt so far?'. The tool helped consider (i) what actions would you continue doing? (green), (ii) what would you change? (orange) and (iii) what would you stop doing? (red). Participants then used the iterative questioning technique (5 Why's) to explore the reasons for the causal relationships underlying a particular problem or solution.

1. *What would partners continue doing?*
   Multi-stakeholder engagement and establishing institutions were considered effective in the coordination of urban climate change resilience processes. Allowing for flexibility in programme design proved useful in developing approaches which responded to local context and culture.

2. *What would partners change?*
   Multi-stakeholder consultation and capacity building of ACCCRN partners should start earlier (in fact, as early as possible) and involve national level government to generate buy-in.

3. *What would partners stop doing?*
   Stand-alone city resilience strategies; in some ACCCRN cities these strategies did not link to formal city development plans and masterplans prepared by local governments. The concepts of adaptation and resilience are unfamiliar to some cities. By using terms more familiar to stakeholders (such as 'DRR') buy-in and understanding can be increased.

stop doing?
change?
continue?
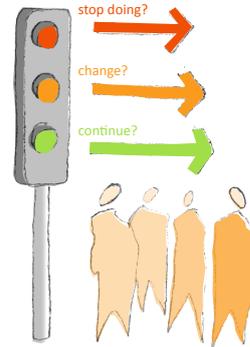
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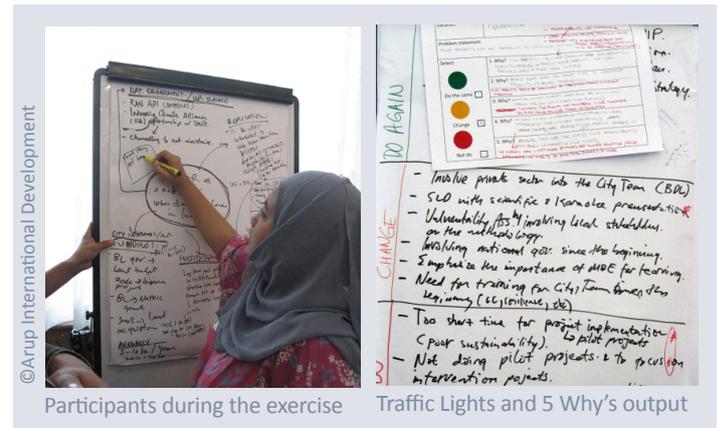
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Participants during the exercise

Traffic Lights and 5 Why's output

nurturing knowledge   creating community   learning

strategy   mainstreaming   governance   impact   sustaining action