



**Community  
Based  
Adaptation**

**6th International Conference  
16-22 April 2012  
Hanoi Vietnam**

**Conference proceedings**

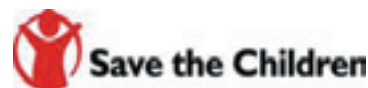
Edited by Hannah Reid



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## Sponsors



## **Introduction**

Community-based adaptation (CBA) has a growing group of interested supporters, researchers, practitioners, policy makers, donors and indeed local communities themselves who see it as a way to tackle some of the many challenges of a world altered by climate change. The sixth international CBA conference in 2012 was held in Hanoi, Vietnam from 16-22 April 2012 and reflects this growing interest in CBA with over 320 people registered to attend from 61 different countries, and many more attending the opening and closing sessions. Over 30 co-sponsors and other contributing organisations provided support. CBA6 follows previous CBA conferences held in vulnerable countries such as Bangladesh and Tanzania, each of which has experienced year-on-year increases in attendance.

The theme of CBA6 - communicating CBA - was addressed in dedicated communication-related sessions on blogging, working with the media, digital photo storytelling, using games to communicate risk, and methods and tools for working with children. Conference outreach was also dramatically improved compared to previous years. Live interviews were broadcast online each day and more than 50 interviews uploaded to YouTube. Delegates wrote nearly 30 blog posts and produced nearly 2000 tweets, using the Twitter hash tag #CBA6. The conference was also able to support several developing country journalists, which resulted in a number of published media articles throughout the world.

The conference poster competition received over 30 submissions, and discussion groups were set up and led by conference participants with a particular interest in certain issues, such as activities in Latin America and risk insurance. An evening film session showed a number of short films on CBA submitted by conference participants.

The conference was organised by the International Institute for Environment and Development in the UK, the Ministry of Agriculture and Rural Development (MARD) of Vietnam, the Ministry of Natural Resources and Environment (MONRE) of Vietnam and the Bangladesh Centre for Advanced Studies. It included three days of visits to eight communities across Vietnam that are already adapting to climatic changes. Conference delegates evaluated the different adaptation projects they visited and awarded a special "Solidarity Prize" of US\$5000 to the best one. This was a Save the Children project in the North of Vietnam in which children play a key role in disaster preparedness.

These field visits were followed by three and a half days of interactive discussions on different thematic areas in the Melia Hotel in Hanoi. These formal plenary and parallel sessions addressed the following themes: communicating climate change; children as drivers of change; inland water management and coastal areas; increasing community resilience; mainstreaming CBA into government policies and planning; gender; ecosystem-based approaches to adaptation; vulnerable and indigenous communities; economics of CBA; agriculture; disaster risk reduction; monitoring and evaluation; food security and nutrition; CBA in urban areas; health; participatory communication approaches for CBA; and, emerging challenges for CBA.



Nidhi Mittal (Save The Children): “The M&E discussions were extremely valuable and useful, the out of box session on games by Pablo was thrilling and the engagement of CBA6 participants in the child-centred toolkit sessions was highly reassuring!!”

Tom Crowley (Trocaire): “For me it was useful as a metric to see where other peer organisations are in relation to conceptualising and addressing adaptation in their work and how they articulated their work in this context. It was also useful to see where the recommendations emanating from our own research relate to those of the broader community.”

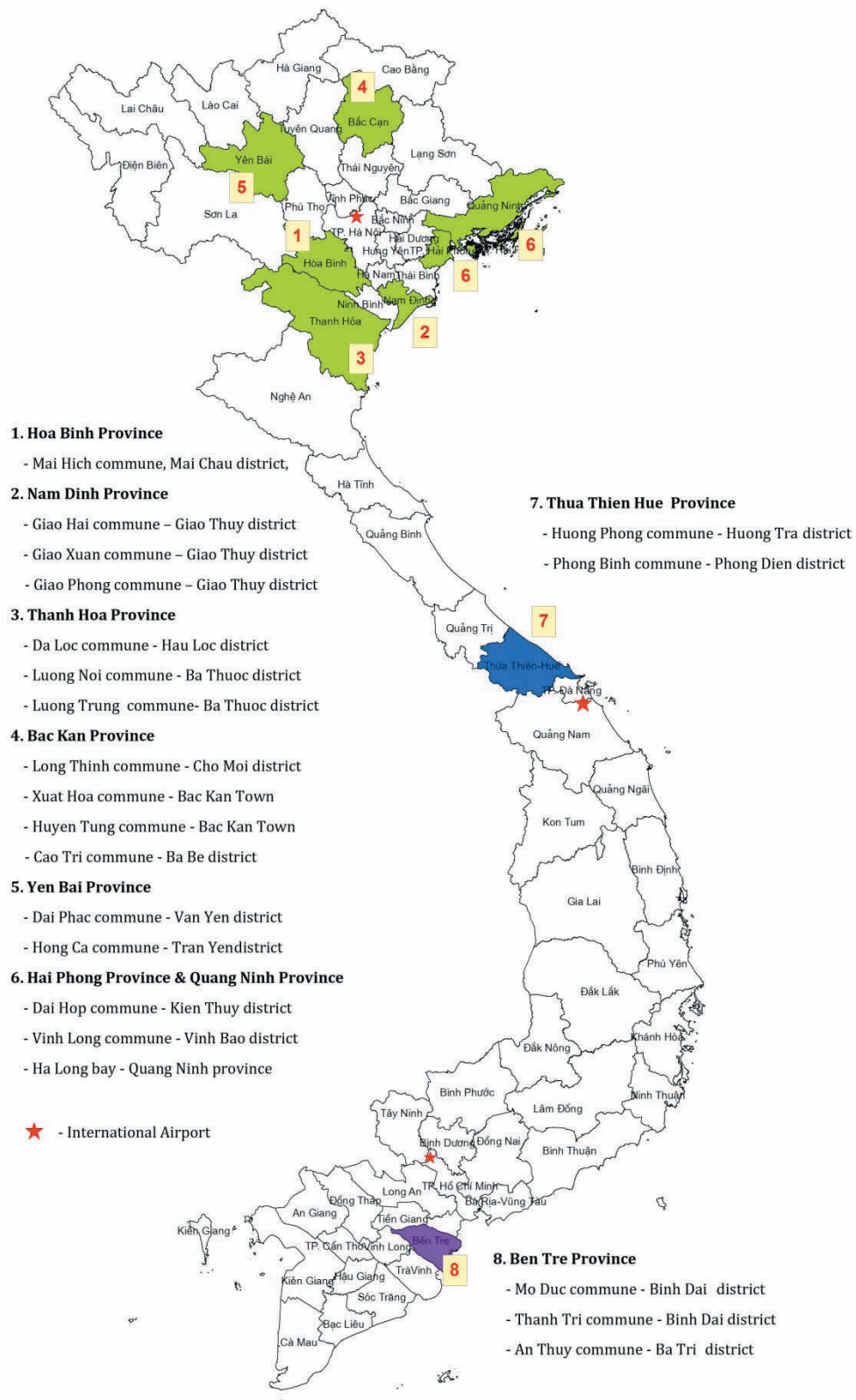
Fiona Percy (CARE): “The most challenging and exciting take away for me was the idea that adaptive human rights based governance is critical for adaptation and for enabling a continuum of responses to climate change impacts as they change and become more extreme over time. This is an idea we need to unpack and understand and build capacity for such new governance systems with communities and governments. Critical elements are systems for accessing climate information, understanding and communicating uncertainty (without creating panic), determining triggers so that decisions and actions can be timely and serious attention to monitoring – with analysis, sharing and communication of information generated”

Khadija Catherine Razavi (Cenesta, Iran): “This CBA6 was a very significant experience for me. I really congratulate you for having taken the issue of community based adaptation so seriously. Unfortunately, at the end of the day, all the mistakes done by industrialised countries in all arrogance are on the shoulders of the indigenous and local peoples. When I go through the UNFCCC articles and literature, I am so astonished when they express: “we have to train developing countries for climate change and global warming”. On the opposite, I think that we have to train the developed countries to stop their damage to us with the target to gain profit, and with no respect for the sustainable use of natural resources. Your process of CBA is one of the most important processes in relation to the Rio conventions.”

The seventh International Conference on Community Based Adaptation to Climate Change - CBA7 - will take place in April 2013, in Dhaka, Bangladesh. The conference theme will be ‘Mainstreaming CBA into Government.’



## Map of the eight CBA6 field visit sites in Vietnam



## The winner from the CBA6 poster competition

 Asian Cities Climate Change Resilience Network (ACCCRN)

### CLIMATE CHANGE RESILIENCE IN THE EYES OF YOUTH, VIETNAM

**The Challenge:** Youth are the primary stakeholders of the medium-term, 5-to-50-year future. They have a high motivation to both mitigate and adapt to climate change, they are willing to take risks, and are willing to lead community-based adaptation initiatives in their neighbourhoods. But they are currently marginalised from the official decision-making processes which respond to climate change.

**This Project:** harnesses the dynamic interest of Youth to adapt to climate change, and their high communications abilities. The project issues a **Call For Proposals** to Youth Groups, for their initiatives, of value USD 500 to USD 5,000. Projects may support their local neighbourhoods to adapt, or they may research or document and communicate a local adaptation issue, or they may add value to a local government initiative.

**Results:** A vision of what climate change resilience and adaptation look like **through the eyes of local youth**. Approximately 25 Youth Initiatives are supported. Youth communicate their initiatives and raise awareness of climate change adaptation through their existing networks, thereby improving local conditions for CBA. The Rights of Youth to participate in decisions relating to climate change are enhanced.

**Discussion:**

- What additional actions can be taken to empower Youth to have greater influence in current decisions on climate change?
- How can we harness Youth strengths?
- Is a 'rights-based approach' – recognizing the rights of Youth and future generations – a good way to initiate Youth empowerment?

contact Ms Vu My Hanh, Youth Programme Manager, Challenge to Change, [myhanh@challengetochange.org](mailto:myhanh@challengetochange.org)  
Produced for CBA 6, in Vietnam, 2012, Parallel Session 19, CBA in Urban Areas

Posters were judged according to the following three criteria:

1. How well does the poster address the issue of community-based adaptation?
2. How compelling and/or timely is the poster?
3. How original/innovative is the poster in terms of its message or production?



### **Plenary session 1: Conference opening**

Ms Nguyen Hong Hanh from the Ministry of Agriculture and Rural Development (MARD) in Vietnam chaired the session, which contained opening speeches from:

- Special Representative of the Secretary-General (SRSG) for Disaster Risk Reduction at UNISDR, Margareta Wahlström
- Minister of Ministry of Natural Resource and Environment (MONRE) in Vietnam, Mr Tran Hong Ha
- Minister of MARD, Mr Cao Duc Phat
- Ambassador of Denmark to Vietnam and Laos, Mr John Nielsen
- Senior Fellow at the International Institute for Environment and Development, UK, Dr Saleemul Huq
- Video address from Executive Secretary of the United Nations Framework Convention on Climate Change (UNFCCC), Christiana Figueres



## **Plenary session 2: Communicating climate change**

The first thematic session of the conference focused on communicating climate change, encouraging participants to think about how communication can contribute to learning particularly within our own organisation. Challenges of taking communication to scale, drawing on existing resources and social structures to listen better, and using appropriate platforms, methods and technologies were put forward as lenses through which to think about communications work.

Six presenters covered a range of communications issues focussed on getting it right – communicating the challenges of climate change across different groups and in different ways – emphasising honest communication, the importance of reflection and then action then reflection again.

Harjeet Singh of ActionAid urged us to think about how to use climate change communication to take adaptation to the next level and for that we need a two-way conversation between scientists and communities. We need to learn how to blend traditional and scientific knowledge.

Getting participatory learning right means really understanding the need for honest and open communication in the way we work with communities. Bettina Koelle of Indigo Development and Change gave us an interesting presentation of her work with communities in South Africa and demonstrated the importance of respecting local community knowledge.

Some nice practical examples of different communication methodologies used with great success in communicating CBA were presented. Shepard Zvigadza of ZERO in Zimbabwe told us of community newsletters that had been a very effective way of communicating needs to government officials and Awaiss Yahaya of CARE Niger shared his experience of traditional resilience based on the mobility of pastoralist communities.

Arame Tall, a consultant for climate change, disasters and development, reminded us that there are many barriers preventing communities from accessing and using information about climate change. These include geographical distance, language (scientific and linguistic), technical skills, trust and capacity. These barriers can be bridged if we plan the right approaches and resource them realistically.

The last speaker, Nidhi Mittal of the Save the Children spoke of effective programmes for livelihood and social protection that can increase resilience and address long-term hunger risks. She also spoke about the importance of good diffusion of knowledge, a robust evidence base and timely communication of early warning information to help protect the most vulnerable.

Lively discussion followed the presentations. The panel was asked to consider how to better communicate to children and whether we can propose social protection such as school meals to cope with issues related to food security. The panel felt it important to look at examples already out there and to think about how to measure their success in terms of the impact for children (see [www.savethechildren.org](http://www.savethechildren.org)).

A good discussion followed on ‘communicating it right’ to corporate organisations. Conference participants felt that this was more of a regulation issue and that communities need to communicate the impact climate change is having on them to government, as it was recognised that communities have little ability to deal with powerful corporations.

Further discussion on barriers to communication highlighted the barriers to communicating from the bottom up to policymakers, and the importance of scaling up some of the practical recommendations. For example, one idea is to host a national workshop to help build national and institutional frameworks to communicate and address community level needs. One key question was; what is the role of the community in creating a culture of resilience and how might this influence the communication process?

Other questions ranged from how we communicate to communities the need to address long-term change and reduce vulnerabilities? How do we bridge the gap between communities, practitioners and government if governance is weak? Do community leaders really represent communities especially in the representation of





women's needs? Do we understand the people we communicate with? What is the entry point for communicating with different audiences?

And so on – all challenging questions that exercised the panel and the audience. It was highlighted that some of the answers to these challenges lay in working with networks to integrate issues and develop holistic approaches. It remains important to strengthen governance and work with those who can build that capacity. It is vitally important to recognise the role that local organisations can play in providing the right entry points in building relationships and ensuring good communication.

This session provided some good questions and reflections through which to consider the rest of the presentations and ideas shared throughout the CBA6 sessions.

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### **Communicating it Right!!!**

By Harjeet Singh

Climate change science has grown at a rapid pace and churned out numerous adaptation concepts and theories. Over the last few years, the development community has been striving hard to bridge the divide between these adaptation concepts and their practical application in the field. However, it has been observed that climate change is perceived as yet another 'sector' that needs to be mainstreamed into development and this leads to the inadequate analysis of climate change threats.

Climate change has been able to attract the attention of media and the highest political echelons; however there is a lack of understanding of the issue both at government and civil society levels. It is vital that these concepts are demystified and communicated in a manner that deepens the analysis, informs development strategies and helps communities realise their right to resilient lives and livelihoods. Communication plays a key role in introducing the concept of climate change to vulnerable communities and helps them with the collective analysis of new challenges faced in their lives. Communication techniques must be based on the socio-cultural context of the communities, and they must mobilize and empower them to fight the unpredictable and unforeseen challenges posed by climate change.

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### **CBA enabling mobile pastoralists to communicate climate risks**

By Awaiss Yahaya

Successive climate related crises experienced in Niger since the late 1960s have led people to question of the traditional pastoralist strategies. The indigenous efforts of pastoralist communities to adapt to climate change and environmental systems that affect their lives are no longer sufficient to enable them to sustainably address the situation. In implementing CBA, communication of climate risks in Niger is a successful practice allowing mobile transhumant pastoralists to make important management decisions which enable them to adapt to climate change.

The presentation describes experiences of communicating climate information in pastoral areas in Niger which reveals how mobile pastoralists understand and use climate information to either direct their transhumant route or make decisions to destock to meet contingencies. Fulani and Tuareg herders' festivals are used to transmit weather information, climate risks and develop strategies to address them.

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### **Developing and communicating the role of social protection and resilient livelihoods in CBA to inform policy and practice**

By Nidhi Mittal

The world's hungry poor, especially women and children, are particularly vulnerable to climate change because they live in marginal environments in countries prone to weather and climate-related disasters that expose them to climate change impacts. They also rely on climate-sensitive natural resources for their food



and incomes, and they lack the assets that would enable them to cope with climate and disaster risks. This presentation pulls examples from Save the Children's work across Ethiopia, Bangladesh and Mozambique to discuss the role of social protection and resilient livelihoods in enabling conditions for CBA for the most vulnerable groups.

It provides rich evidence for the importance of effective engagement and two-way communication with communities on disaster and climate risks, and the role of participatory and empowering community-based planning processes. It also underscores the importance and integration of local and national policy, and effective communication to align policy and practice to enable longer-term transformative change for children and families.

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### **Participatory learning - crossing the sectoral and disciplinary divide for adaptation**

By Bettina Koelle

With increasing pressure for effective adaptation strategies on the ground, multiple frameworks for CBA have been promoted. These frameworks provide useful guidance but do not address the dilemma of implementation on the ground: the complexity of people's livelihoods requires the integration of disciplines and different types of knowledge in a meaningful and empowering way. It has been argued that learning should be a central activity in any adaptation process – to enhance the capacity of local people to anticipate and plan for adequate livelihoods resilient to shocks and stresses.

However in order to achieve this we have to deal with complexity on all levels of implementation: from the grassroots level, the level of the implementing agency, to the global level. In this context communication and learning in partnership become crucial for successful adaptation strategies. This presentation explores different creative ways of bridging this communication gap – using interactive learning events as a key component. The presentation also explores the limitations of these events and suggests a toolbox for creative interactive learning approaches for adaptation.

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### **Communicating CBA in relation to climate change in a developing country context: the Case for Africa**

By Shepard Zvigadza and Joan Karuiki Kungu

CBA is not all about action and activities; it entails changing of one's mind and how we do things. For this change to occur, communication as well as information on how this is done is essential. CBA communication comes in various ways. Examples include publications by implementing organisations, dramatization by communities and exchange visits between urban and rural communities as a way to enhance cross-learning. This paper draws on lessons from the pilot activities of eight African partners involved in a multi-country project called Community Based Adaptation in Africa (CBAA). This project began in 2008 with support from IDRC and IIED and aimed to help eight vulnerable African countries adapt to climate change and share lessons learned from project activities with key stakeholders at local, national, regional and international levels.

The main objective of communication under this project was to raise awareness and demonstrate that adaptation was really about to or is taking place. The presentation explains how communication was initiated and pursued across and among different stakeholders, including the methodology employed to achieve this. It also looks at how adaptation-based activities and lessons learnt from these were communicated for either replication or scaling up.

The presentation concludes by examining the ways in which the CBAA project has helped to inform and enhance communication in subsequent work, including the role of communication in ensuring that lessons from CBA practice are incorporated into national climate change policies. It also makes recommendations on more innovative ways of communicating CBA.

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### **Bridging the gap between climate scientists and communities at risk in Africa through early warning; early action workshops**



By Arame Tall

Recent experiences in West Africa with acting on forecasts by communities provide examples of how climate information can be linked to decisions and serve CBA in low-income regions. This presentation discusses the toll of Hydrometeorological Hazards, on the rise since the mid 1990s across Africa, on frontline communities and local capacities to cope. It describes how climate and weather forecasts have been utilized by communities at risk from climatic events, with examples from Senegal, Mozambique, Kenya and Uganda. Climate services can prove to be a useful aide to CBA, provided that the obstacles thwarting communities' access to and use of forecasts are clearly identified, and overcome.

#### Contacts

##### Plenary session 2: Communicating climate change

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### **Parallel session 3: Children as drivers of change**

This session focused on the needs and capacities of children for CBA. Children and young people are particularly vulnerable to the impacts of climate change. But their vulnerability is not the only, or even the most important, reason to make them a core part of CBA. The child-centred approach is anchored in the Convention on the Rights of the Child. In the context of CBA the approach means putting children at the heart of activities – recognising that children are effective communicators of risk and drivers of change in their communities. Advocating for a greater voice for children and young people in relevant decision making forms at local, national and international levels is key to ensuring their needs are met and their capacities recognised and utilised. The session was made up of four presentations accompanied by a video showing child-centred CBA in action.

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#### **Children's vulnerability to climate change and disaster impacts in East Asia and the Pacific**

By Jill Lawler

Though no one will be immune to the effects of climate change, children are particularly vulnerable. In 2011, UNICEF, with support from Reed Elsevier, commissioned field research in Indonesia, Kiribati, Mongolia, Philippines and Vanuatu to see if there were noticeable patterns and trends of climate change and disaster impacts on children. The studies also included interviews with children and youth to assess their perspectives on climate change. The regional report '*Children's Vulnerability to Climate Change and Disaster Impacts in East Asia and the Pacific*' summarizes key findings from the studies and brings together published evidence, along with the perspectives of children, on the potential impact of climate change on children over the course of this century. The regional report and country studies remind us of the connection between climate change and the other challenges confronting children. The impacts of climate change on the lives and well-being of children are real and the policies and decisions made today will set the tone for years to come (See: <http://www.unicef.org/eapro>).

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#### **From participation to politics: child-centred risk communication for building community resilience**

By Thomas Tanner

Much of the research and practice in CBA and disaster reduction still focuses on children's vulnerability as victims of climate change and disaster events. By contrast, examples from programmes with children and young people in the Philippines and El Salvador illustrate the value of child agency in adaptation and reducing disaster risks, and highlight the ways that risks are perceived differently by children and other groups. We need to recognise children as capable analysers and communicators of risk, mobilisers of action, constructors of social networks and implementers of action and learning. The processes of analysis, communication and action are socially constructed and politically mediated. CBA needs to understand the role of different interest groups at different scales who compete for control of resources and the distribution of resulting costs and benefits. CBA as a whole needs to engage children as agents of change with multiple modes of participation and to pay greater attention to the political processes that mediate community resilience from the household to international level.

See the video of the presentation here: <http://blip.tv/ids/children-cc-and-disasters-cba6-hanoi-2012-6084718>

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#### **Video Making: resilient children and community in motion**

By Ratih Widayanti

Indonesia is one of the most disaster-prone countries in the world, both climate and geological-related. Plan, as a child rights organisation, understands that children are particularly vulnerable to the long-term impacts of disasters and climate change. With the Child Centred Climate Change Adaptation (4CA) Program, Plan is working to improve the safety and resilience of communities in which children and young people contribute to managing and reducing the risks associated with changes in the climate. One of the Program's activities is participatory video; training children on documentation of climate risk through video documentary,



photography and report writing skills. Experience on participatory video supported by Force of Nature and Plan UK, shows that the process can build self-esteem and confidence as well as increase understanding of climate change. As shown in the video from the last project called "Our Climate, Our Future", children lead in story making, data collecting, interviewing and editing their videos. With the lesson learned, children in Kefa and Lembata districts have since been trained to use cameras to document climate change challenges in their villages so that they can raise their voice and monitor the project from beginning to end. The documentary is available online at <http://www.youtube.com/watch?v=Pd0JIQ-5hQ>. Participatory videos from children in Kefa and Lembata are now being produced and will be uploaded.

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### **A child centred approach to climate smart disaster risk management**

By Caroline Borchard and Ninh Nguyen Trong,

Children's health, protection, education, livelihood prospects and well-being are already being significantly affected by climate change. So it is imperative that the climate adaptation community provides greater support for increasing the knowledge and skills of young people to adapt to an uncertain future. The Child Centred Climate Smart Disaster Risk Management approach is one means of meeting this challenge. The approach seeks to enhance adaptive capacity by addressing the underlying causes of both poverty and vulnerability to climate extremes. It starts from a child rights perspective to engage children in exploring how these rights could be affected or made unattainable by disaster and climate change impacts and then identifies steps at the community, household and individual level to tackle changing risks, increase adaptive capacity and address underlying vulnerabilities by realizing the interconnectedness of development issues. Plan International's Child Centred Climate Change Adaptation (4CA) Program in Asia emphasises the importance of empowering children through appropriate child-friendly methodologies that ensure the transfer of climate adaptation knowledge and skills. The program also facilitates their role in assessing, planning and monitoring local climate smart solutions that are relevant to their lives and future, and advocates for change with their peers and wider community as well as to local and national government and policy makers.

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### **Child-centred CBA in the Horn of Africa**

By Johara Bellali

In July 2011, the Horn of Africa has faced another declared food crisis. Whilst responding to the emergency, the humanitarian and development community has been advocating for a shift in tackling the issue of slow-onset risks with the message: "it is not about rain". It is now more accepted by the humanitarian community that reducing risks and adapting to changes whilst responding to life-saving activities and promoting access to basic services would create more resilient systems. However, the Horn of Africa context is changing significantly as the climate shifts. More importantly, the socio-economic and environmental dynamics of climatic change in the Horn are not yet well understood. The risks of maladaptation are increasing as organisations and donors rush to respond to perceived impacts, often without thorough analysis of climate risk and adequate community engagement. Children and their communities can, and should, lead the process of scenario planning and integrating climate risks and adaptation into their development plans and activities. Save the Children is promoting resilience building in pastoralist communities and implementing child-centred risk reduction and adaptation in Somaliland and Kenya. Promoting the voice of children and youth can and does promote sustainable development.

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Discussions focused on the outcomes of the projects presented and their impact on the wider community. The importance of further analysis on power relations was highlighted, for example power relations between children and parents in different cultural contexts as well as gender concerns in terms of differences between boys and girls. The importance of avoiding stereotyping children as uniformly vulnerable was discussed as was the need to ensure that methods and tools for working with children are age and context appropriate. The challenge of jargon and terminology was particularly highlighted.



Participants outlined how elements of their work engage with children and shared ideas and tools for increasing the role of children in CBA. Participants recognized that children are a dynamic force and that we need to look at children as a force for social transformation.

## Contacts

### Parallel session 3: Children as drivers of change

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### **Parallel session: Methods and tools for working with children and youth on climate change and disaster risk**

Partners of the Children in a Changing Climate Coalition introduced participants in this session to tools and methods for working with children on climate change adaptation. Participants got to try fun games and interactive exercises that help children familiarize themselves with difficult terminology and complex ideas related to climate change – for example the difference between hazard, vulnerability and disaster. Plan International and Save the Children shared their Child-Centred Disaster Risk Reduction Toolkit and Practical Guide as well as useful child friendly publications on climate change, educational material and multi-media tools. Participants got to try an exercise that engages children in exploring how child rights could be affected or rendered unattainable by disasters and climate change impacts and then identify steps at the community, household and individual level to tackle the risk and underlying vulnerabilities. Other exercises such as child-led Climate Vulnerability and Capacity Analysis and scenario planning tools were also explained. Involving children and youth in advocacy was highlighted as a great tool for children to learn and share the adaptation message with their peers, communities and policy makers. The Children’s Charter on Disaster Risk Reduction was highlighted as a particularly successful example of children advocating for change at the national and international level.

When working with children it is very important is to ensure that several key principals are adhered to. These include:

- child protection (physically and emotionally safe, facilitation by trusted trainers and counsellors, parental consent, referral systems);
- child participation (space for sharing and respecting views, inclusion, confidentiality); and
- child engagement (fun, interactive, age-appropriate).

Further guidance can be accessed through the Children in a Changing Climate Coalition website:

[www.childreninachangingclimate.org](http://www.childreninachangingclimate.org)

#### **Contacts**

**Parallel session 3: Methods and tools for working with children and youth on climate change and disaster risk**

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## Parallel session 4: Inland water management and coastal areas

This session focused on a number of areas and key issues:

**Geographic water resources:** South American glaciers in the Peruvian Andes, Watersheds in Palau, Micronesia, Lake Titicaca and snow pack from the mountains surrounding La Paz in Bolivia, Choco Darien Eco Region in Columbia, coastal Vietnam, ponds in Bangladesh.

**Trending issues:** Glacial retreat through ice melting, flash floods, drought, landslides, shrinking ponds/reservoirs, unpredictable precipitation, intensified cyclones, salinization, degraded watersheds, rural to urban migration, health stresses, malnutrition, decreased productivity, changing demands on systems, increased uncertainty in systems.

**Useful approaches:** Risk assessments, building in uncertainty to scenario mapping, adaptation benefit models, watershed restoration, community action plans, defining damage costs and avoided costs, leveraging village leadership and regional commitments.

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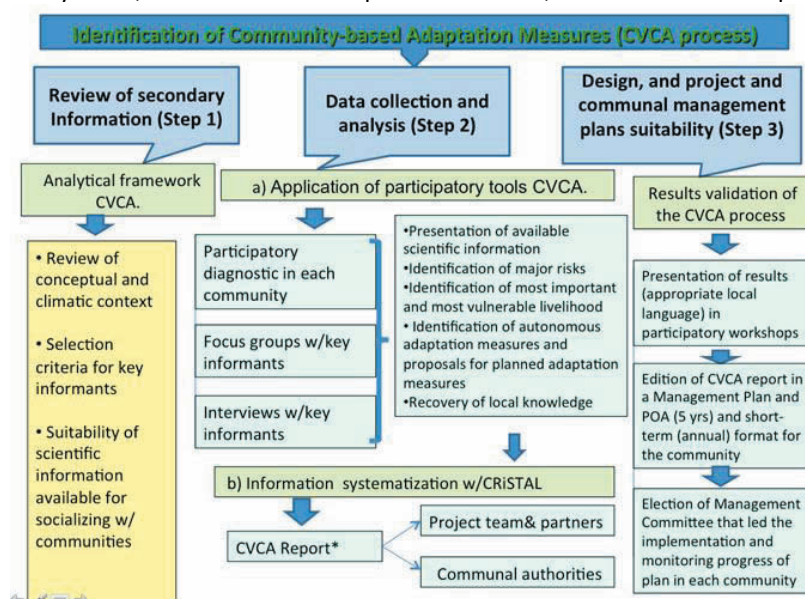
### **Adaptation measures related to climate change: lessons from the Andes**

By Carolina De La Rosa

Mountain ecosystems and the availability of glacier-fed water resources remain little studied despite the importance of these habitats to local communities and their relevance to the implementation of adaptation measures. Previous analyses in the region provide an overview of which adaptation activities address adverse climate change impacts and the role of these different adaptation strategies. This presentation provides insights into adaptation strategies in the management of hydro resources in basins with a glacier component under climate change conditions in the Andes.

CBA is examined through a case study of communities along the Salkantay and Huaytapallana in the Andes, Peru. An analysis of adaptation measure pilot projects in micro-basins provides the context for examining local arrangements and design of adaptation measures.

It is noticeable that glacier retreat in the tropical Andes is currently at 71 per cent. The identification of CBA measures (the CVCA process) is a three step process (see below) that has been applied to tackle this threat. Remaining key challenges include taking this work to scale, how to connect and integrate communities with ecosystems, how to monitor adaptation activities, and how to share experiences between countries.





## **The Community Climate Alliance to protect the upland watersheds of Babeldaob Island, Palau**

By Umiich Fleming Sengebau

The Republic of Palau comprises the western-most group of the Caroline Islands in Micronesia lying 800 kilometres equidistant from the Philippines to the west and Papua New Guinea to the south. There are 340 islands in Palau, of which Babeldaob is the largest. It has a total land area of approximately 300 square kilometres. Babeldaob watersheds and associated rivers and streams are an integral part of the island's biologically rich ecosystems and provide important services to the people of Babeldaob.

For generations, local communities have depended on the island's water systems for drinking and as a way to irrigate taro patches. However, in recent years inappropriate land use and severe weather patterns have begun to endanger major Babeldaob water sources. Deforestation of the area's upper watersheds and extremely heavy rainfall have led to catastrophic landslides, as well as increased runoff and heavier sediment loads in rivers and streams. The government agencies charged with environmental protection are often underfunded, understaffed or under political constraints thus limiting their effectiveness. Not willing to sit back and allow their resources to deteriorate further, the Babeldaob communities, through their traditional and elected leaderships, have united to form the Babeldaob Watershed Alliance (BWA). The traditional and elected leaders are unifying the island's communities and preparing them to meet the challenges of maintaining water quality and healthy habitats that is posed by climate change, population growth, continued development and increasing subsistence and commercial farming. The BWA has shown innovative ways of communicating their needs to Government, to partner communities, and to international audiences. For example, it has partnered with other agencies to develop Community Action Plans and Protected Area Networks with a view to effectively conserving at least 30 per cent of the near-shore marine resources and 20 per cent of the terrestrial resources by 2020 under the 'Micronesia Challenge'. Work has shown that it is vitally important to have an understanding of local culture for activities to be sustainable.

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## **Multi-stakeholder cost – benefit analysis of climate change adaptation measures**

### **Case Study: Water demands and glacier melting in the metropolitan area of La Paz – El Alto**

Javier Gonzales Iwanciw, Heidi Zalles and Yesmi Cabrera

Climate change is occurring rapidly in the South American Altiplano, temperatures are increasing and precipitation patterns are changing affecting different rural and urban activities. This presentation explores stakeholder consultations carried out in Bolivia to better understand the costs and benefits of a given adaptation measure in the context of glacier melting and water demands in the La Paz - El Alto area for different stakeholder groups. Climate change is a concern among the different stakeholders: the metropolitan area of La Paz - El Alto relies strongly on glaciers to address drinking water needs and demands, nevertheless important glaciers are melting rapidly and this will lead to 8 to 30 per cent reductions in water storage capacity (in the form of ice) for different city water systems. The rainy season is also getting shorter creating difficulties for local livelihoods and leading to increased migration to urban areas. It is estimated that by 2025, the contribution of glaciers to the water systems will be reduced by a range of 30 to 70 per cent. The need to satisfy water demands has been mobilizing social vulnerable groups, the water cooperatives, farmers and rural communities to address the issue and in some cases demand rapid solutions to their demands. The demands of stakeholders on local ecosystems are expected to change in the future increasing demand for water and other resources. The Bolivian government and the public company EPSAS have planned new investments to respond to the growing water demands of La Paz and El Alto, some of which have important social and environmental tradeoffs. Some of these expected adaptation activities are: climate proofing existing activities, water storage in the wet season, water management and conservation, and research, monitoring and risk management.

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## **Emerging ways of delivering adaptation benefits to communities: lesson from coastal protected areas in Colombia**

By Oscar Guevara

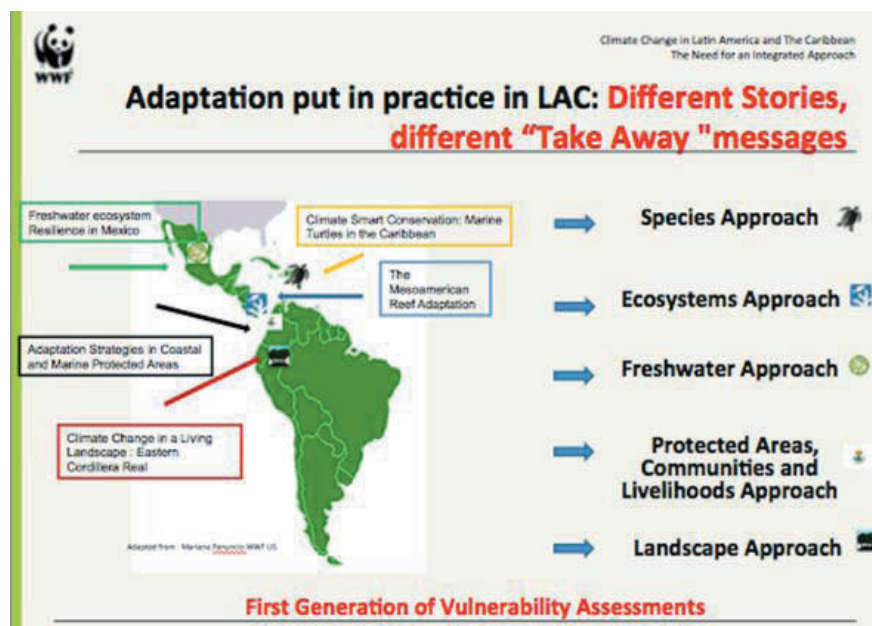


For the last few years, WWF has implemented different projects and initiatives in the Coastal and Marine Protected Areas in the South Pacific – Choco Darien Ecoregion (Ecuador, Colombia and Panama), with a particular emphasis on increasing the resilience of coastal and marine ecosystems to maintain the provision of environmental goods and services, and to benefit local communities in the face of different threats, including present and future climate conditions. Local conditions in the region are dominated by climate variability, and the costs of La Niña spiralled to US\$5,300 million in the 2010 season. It is important to learn how to avoid such damage.

So far, WWF has addressed different approaches related to environmental sustainability, in line with the development challenges that ultimately contribute to reducing the poverty of coastal communities. As a result, different local action plans based on, for example, the assessment of climate change vulnerability, have led to improved understanding and better capacity of local authorities and communities to adapt to climate change in coastal and island regions where people depend on natural resources for their livelihoods.

The presentation describes a series of project activities that focus on sharing experiences and lessons learnt between different projects implemented or under implementation in priority places and related to emblematic species, and the experience gained by WWF from these projects. This evidence can inform emerging ways of delivering adaptation and influence relevant local adaptation approaches, mechanisms and response measures. Activities used innovative approaches and built on the latest available knowledge and models for vulnerability assessments and can thus inform emerging vulnerability assessment methodologies.

In the short-term, it is very hard to work with vulnerability maps due to the multiple different stories (see below) projects use, so work has involved a move away from vulnerability assessments and towards climate risk assessments. ‘Adaptation benefits’ emerge as a result of avoiding risk, and multi-hazard analysis has helped combine different risks such as climate change and deforestation.



### Improving coastal communities’ adaptation and resilience through sustainable livelihood development and natural resource management

By Than Thi Hien, Tran Thi Hoa, Nguyen Thu Trang, Duong Ngoc Khanh

With about 25 per cent of the population depending largely on the coastal and marine resources and ecosystems, and over half of the population residing in lowland areas, Vietnam is considered one of the most vulnerable countries to climate change. The most significant impacts occur in coastal and delta regions. Studies show that a one metre rise in sea level could displace 22 million people, leading to a 10 per cent loss in GDP.



The sea level rise predicted may reach about 65 - 100 centimetres by 2100. Coastal zone communities are highly exposed to floods, typhoons and extreme events.

Realizing these impending threats, the Center for Marinelife Conservation and Community Development has initiated practical models to enhance the development of community livelihoods and coastal resource management in response to climate change in the Red River Delta and Cat Ba Biosphere Reserves. Participatory climate change vulnerability assessments, awareness raising campaigns, capacity building and knowledge dissemination have been conducted targeting the community and other stakeholders. CBA models were developed in selected communes, with the practice of sustainable aquaculture and the development of community-based ecotourism services.

The successes and lessons from these models are shared for possible replication and scaling up in order to increase the resilience of coastal communities. The Department of Agriculture and Rural Development and the Department of Natural Resources and Environment support the programme thus allowing for integration into local planning. Integrating community-based and ecological approaches to adaptation is recommended.

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### **Climate change implications on small wetland ecosystems (ponds): the challenges of communicating the vulnerability of poor coastal zone communities**

By Golam Rabbani and Syed Hafizur Rahman

The impacts of climate change on water resources are an increasing global concern. In Bangladesh, most climate-related hazards connect to water. Many people in both urban and rural areas struggle to secure safe water to meet their regular needs. Poor living standards in remote villages and areas that are hard to reach (especially along the coast) make securing safe water particularly problematic. Many poor communities in the coastal zone depend heavily on small isolated wetlands (ponds) for drinking water and other domestic requirements such as cooking, bathing and washing. It is also evident that the livelihoods (small scale irrigation for rice farming, vegetable farming and home gardening) of many poor households in these villages depend on these types of small wetlands or ponds. For example, most of the poor communities living in Munshiganj Union (the union is the lowest administrative unit) under Shyamnagar Upazilla (the sub-district) use pond water for vegetable farming or gardening in particular seasons. But these ponds are highly vulnerable to climate change induced hazards including floods, droughts, salinity intrusion, cyclones and storm surges, erratic rainfall behaviour and high pre-monsoon temperatures. Cyclone Sidr in 2007 and Cyclone Aila in 2009 inundated several thousand such ponds with saline water. This had huge implications for the availability of safe drinking water, and the health and hygiene practices and livelihoods of poor households.

Local responses include bank construction, rainwater harvesting to reduce the pressure on ponds, pond excavation for larger volumes of water storage, dredging or cleaning ponds annually, communicating better amongst key stakeholder groups, and ensuring committees remain representative of the key issues.

In coastal zones in Bangladesh, 98 per cent of people say the weather is changing. Communities face different types of challenges to communicate their vulnerability in order to ensure effective adaptation strategies at the local level. This presentation emphasizes observations of climate change impacts on small coastal area wetlands (ponds) and the challenges that poor communities here face with developing effective adaptation strategies.

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Discussion and a number of questions and answers followed the presentations above. Carolina De La Rosa and Umiich Fleming Sengebau were asked what kind of adoption of their approaches had they seen by other organisations, for example whether similar alliances had formed in other parts of Palau, or whether other organisations had expressed any interest in the work in Peru. Umiich described how the Community Climate Alliance was looking across to other islands in Micronesia, some of which have similar alliances, and was trying to create a Micronesia Association of Watershed Partnerships at a regional level. There are also similar alliances in Peru.



Responding to a question about possible CBA approaches to reduce landslides and social erosion, Umiich explained how the Community Climate Alliance is encouraging communities to limit deforestation. It understands that farming will happen, but there are agencies that provide information on best management practices, and communities are taking the issue of avoiding forest clearance to heart.

It was mentioned that dams can cause a lot of damage, so how could the work in La Paz and El Alto justify dam construction as an adaptation option? Javier Gonzales responded by explaining how stakeholders are managing this as one of the more serious options that the government is taking into consideration. Adaptation measures are being evaluated according to a cost-benefit analysis to highlight advantages and downsides. Dams are only one of the measures that are being evaluated.

A question about vulnerability assessments and whether those conducting them should consider nature, which cannot voice its own opinion, was raised. Oscar Guevara did not feel optimistic. He explained how there have been a lot of very negative impacts on nature. Some ecosystems will likely be replaced by something completely different so WWF's message to communities is that they need to be prepared for this. Umiich explained how he often finds himself 'preaching to the choir'. For example, in one meeting the decision-makers made their speeches and then left. Small islands are leading the way, however, and there is innovative work happening there. Javier Gonzales stressed that dialogue with nature was an important issue. In the Latin American context, this has been raised by indigenous communities that depend heavily on nature. Golam Rabbani concluded by describing the disadvantages and advantages of shrimp farming. It generates money, but significantly damages the environment. When policies are developed, it is important to question whether the communities who will be affected are really involved.

## Contacts

### Parallel session 4: Inland water management and coastal areas

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## **Parallel session 5: The dragons Den: from the climate change front lines to the newspaper front page**

This session focused on how CBA practitioners can do more to encourage media coverage of climate change stories if they understand what journalists need and how best to provide it to them. Two guest journalists - Imelda Abaño, President of the Philippine Network of Environmental Journalists and a reporter for Business Mirror, and Kate Sheppard from Mother Jones magazine in the United States - opened the session with their insiders' perspectives on what makes a story about climate change adaptation newsworthy.

Participants then split into four groups that each had to develop an idea for a story that they could propose to the journalists - the dragons - in just three minutes. They rose to the challenge and proposed stories about nomadic communities altering traditional water management practices; mangrove restoration efforts for disaster risk reduction; difficult decisions farmers faced due to seasonal variation; and how farmers are taking the initiative and developing new seed varieties.

In responses, dragon journalists emphasized the importance of using published reports and previous research to validate messages. They noted that it is important to distinguish the climate change element of a story from other compounding issues to avoid confusing media audiences. And they added that people proposing stories should emphasise what needs to happen next and who can make it happen because this can help journalists develop storylines over the longer term.

Their other top tips included the following:

- You need to understand what journalists mean by news. "Climate change is a problem" is not news. "Poor people are vulnerable" is not news. News needs to be unique, or extraordinary, or involve someone important or a scandal. Your story can become newsworthy if you can connect it to something else that is in the news – such as a political debate, an international conference or an ongoing policy process.
- When proposing a story you have to start with the most significant news. Your proposal should answer the 5Ws -- "Who? What? Why? When? Where?" of the story – but also the "So what?" question. Why does it matter to the media outlet's audience?
- Be aware that journalists, their editors and the public can suffer from climate change fatigue – they are bored of hearing the same old stories again and again.
- To really convince the journalist you need to do more than just send press releases and hope they will be used. Develop personal relationships with reporters. It needs to be clear to them why they should report on your story, rather than someone else.
- You need to "sell" the story to the reporter and arm them with enough information to craft a story and convince their editor it is important. This includes, providing data, reports, photographs and people to interview.
- Use simple language and avoid jargon. Remember journalists need to communicate in simple terms to their audiences. Allow journalists to ask questions that may seem obvious to you.
- Give journalists specific human characters with a human face that readers can relate to. Help their audiences connect to the character's every day experience. Provide hopeful stories, success stories. There are many stories throughout the world where people doing something interesting and unique. Show what is possible.

### **Contacts**

**Parallel session 5: The dragons Den: from the climate change front lines to the newspaper front page**

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## Plenary session 6: Increasing community resilience

This session provided diverse perspectives from donors, researchers and local practitioners, on the issue of increasing community resilience to the impacts of climate change. Robin Mearns from the World Bank highlighted the increasing focus for global donor funding on adaptation. For example, the World Bank and other government/donor support for climate resilience has tripled in the last decade. In his presentation, Robin outlined various mechanisms to promote household and community level resilience. These include community-driven development (CDD), social funds, livelihoods-support and related operational platforms such as access to micro-finance services including savings, micro-credit and insurance) needed to secure, build and diversify livelihoods in the face of climate-related and other shocks. Robin raised key questions around the need for institutional arrangements that link the community level of engagement to national level policies and stressed that multiple level approaches within nationally owned systems are crucial for sustaining community based adaptation at scale. His presentation promoted some controversy with session discussion time dominated by the debate on the ethics of loans for adaptation and the ability of the Bank to work at the community level and to promote synergies with civil society organisations and communities rather than competition.

Ciara Kirrane from Trocaire took us from the global scale to the two specific case studies of practice with her presentation. This research suggested that common and very important patterns exist despite differences in social and environmental contexts. They are:

- a few 'key limiting factors' typically form the main barriers to adaptation in all locations;
- external interventions to help livelihoods often undermine rather than support adaptation through poor targeting and lack of coherence across sectors;
- adaptation actions involve intra-annual and inter-annual trade-offs, this means that short-term coping can undermine longer term adaptive capacity; and,
- a variety of strategies are being promoted but there is evidence of tensions, trade-offs, and limitations in the outcomes. Communities appear to be very aware of these issues. For example, some crops in Bolivia had a high export value and could generate income, but were very dependent on irrigation.

Ciara concluded that, in order to improve responses to future climate change there is a need for more focus on responses that simultaneously addresses resource constraints and policy coherence across sectors otherwise much of the support may not be effective. Unfortunately, Ciara commented further that, in addition to Robin's concerns around lack of synergies, a lack of coherence in external support and policy limit the livelihood outcomes of vulnerable households.

Presentations by Hoang Thi Thanh Mai (Norwegian Church Aid / Nordic Assistance to Vietnam) and Nguyen Thi Kim Anh (GEF Small Grants Program Vietnam) outlined experience of lessons learned from CBA in Vietnam through projects focused on renewable energy, sustainable livelihoods and agriculture. As with Trocaire, the need for CBA to be considered in the context of wider development issues around building resilience to any shocks was highlighted. Once again, household responses to observed climate changes are shaped by multiple factors and stressors which need to be considered when developing CBA support. Both presenters highlighted the need to look at existing mechanisms for ongoing support for adaptation work and that community-led, demand driven initiatives that make a real difference should be prioritized.

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Antonio Oviedo's (WWF) presentation and the joint presentation by Tine Rossing (CARE International) and Sunil Regmi (Nepal Hariyo Ban) emphasised the importance of ecosystem based adaptation as a form of increasing community resilience, and of community-led ecosystem based learning and training as a tool to help this (for example, through the Ecosystems and Livelihoods Adaptation Network). Rural people living in fragile ecosystems in the developing world are particularly vulnerable to climate change as a result of their high dependence on natural resources for their livelihoods, higher exposure to climate shocks and stresses, and widespread poverty and marginalization. In response to these challenges, the Nepal Hariyo Ban Program is



assisting the Government of Nepal to build the necessary capacity among key local stakeholders to increase the resilience of both the vulnerable communities and their life-sustaining, but fragile ecosystems. Socio-ecological modelling has also outlined factors that may impede or assist the process of adaptation to climate change in community areas (including sustainable use protected areas) in the Brazilian Amazon. It was recognised that:

- Community resilience cannot occur without addressing ecosystem resilience which calls for an integrated approach to adaptation.
- The concept of ecosystem services is a difficult issue to ‘unpack’ and socio-ecological understanding of the issues is crucial.
- Often trainers are so accustomed to giving technical advice that they approach situations as if they are the ‘experts’ with all the answers rather than striving for joint learning.

In conclusion, this session highlighted that in order to improve the effectiveness of initiatives to increase community resilience to climate change we must:

- Consider CBA in the context of other development issues.
- Undertake an integrated approach that considers ecosystem resilience as well as community resilience.
- Increase efforts to ensure that CBA is truly meeting the needs of communities and not poorly designed, short-term and donor driven.
- Work to increase synergies between donors, governments, NGOs and local partners without ever losing sight of the overall goal of increasing resilience of those most vulnerable.

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### **Community-driven development and climate resilience: a stocktaking**

By Robin Mearns

Climate variability and hazards, including slow-onset drought and rapid-onset floods, cyclones and other storm events, are among the principal factors that prevent poor households from building up assets and consistently maintaining incomes at levels above the poverty line. When climate-related shocks are repeated over time, and combine with the effects of other shocks (e.g. illness or death of the main family breadwinner, staple food or energy price spikes), households exposed to these hazards may be forced into a downward spiral of deprivation, often triggering distress sales of land, livestock or other assets in order to make ends meet. While climate change is already changing patterns of climate variability, and is expected to lead to an increase in the frequency and severity of extreme climate events, its effects are already being felt by the millions of people throughout the developing world that live in hazardous, risk-prone environments and are dependent on natural resources for their livelihoods.

Community-driven development (CDD), social funds, livelihoods-support and related operational platforms can serve as useful vehicles for promoting household- and community-level resilience to climate risk. To varying degrees, such operations support demand-driven mechanisms for delivering both the public goods (e.g. protective and productive infrastructure, safety nets, public action for improved risk management through early warning and response systems, and the social and institutional capital needed for successful collective action) and private goods (e.g. access to micro-finance services including savings, micro-credit and insurance) needed to secure, build and diversify livelihoods in the face of climate-related and other shocks; and the enabling legislation, regulations and policies needed for such approaches to be sustained at country level. An increasing share of the already large portfolio of World Bank-supported CDD operations now pays explicit attention to helping to build climate resilience. A number of initiatives being supported under the Pilot Program for Climate Resilience (PPCR) in participating countries also build explicitly on some of these operational foundations (e.g. in Cambodia, Niger, Tajikistan, Yemen, Zambia and others).

This presentation takes stock of the lessons learned to date in building the resilience of vulnerable communities to climate risk through national-level CDD and related programs. It characterizes the forms of support that are provided, estimates the scale of support that has been provided over recent years, and gives an indication of emerging trends and challenges that remain to be addressed. Key questions concern the



institutional arrangements that link the community level of engagement to national level policies, and how they operate in practice. Attention to such cross-boundary institutions increases the likelihood that participatory, community-based processes of decision-making and resource allocation can be embedded within nationally owned systems that can be sustained over the longer term. Such programs and approaches, it is argued, hold significant promise for sustaining community based adaptation at scale.

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### **Societies in Transition: Lessons from two-year adaptation case studies in Africa and Latin America**

By Ciara Kirrane, Cliona Sharkey and Lars Otto Naess

Case studies of vulnerability and adaptation typically examine vulnerabilities in particular localities at particular times. Less attention has so far been paid to examining findings in different localities and over a time period spanning more than one season. Drawing on local level case studies conducted over two years in Africa (Kenya, Malawi) and Latin America (Bolivia, Honduras), this study aims to draw lessons across localities. Data was collected on actions taken by households to tackle climate and non-climate shocks and stressors, constraints and opportunities faced, and the impact of external support and regulations. Findings suggest that despite considerable differences in social and environmental contexts, there are common patterns in that (a) a few 'key limiting factors' typically form the main barriers to adaptation in all locations, (b) external interventions to help livelihoods often undermine rather than support adaptation through poor targeting and lack of coherence across sectors, and (c) adaptation actions involve intra-annual and inter-annual trade-offs; so that short-term coping can undermine longer term adaptive capacity. The presentation concludes that in order to improve responses to future climate change there is a need for more focus on responses that simultaneously addresses resource constraints and policy coherence across sectors.

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### **Strengthening local adaptive capacity: Lessons learned from CBA Vietnam**

By Nguyen Thi Kim Anh

The Global Environment Facility Small Grants Programme (GEF SGP) Vietnam was launched in 1999. It provides grants to local NGOs and community-based organisations (CBOs) to conduct projects and activities in areas of GEF concerns, including biodiversity conservation (BD), climate change (CC) mitigation, and combating land degradation and desertification (LD and D). Community-based approaches are adopted in all SGP projects. Since its launch, GEF SGP Vietnam has funded 165 projects, focusing on BD, CC and LD&D areas.

In recent years, GEF SGP Vietnam has participated in two CBA programmes, including UNDP GEF CBA and AusAID-funded Mekong and Pacific CBA (MAP CBA). Under these two programmes, there are 12 CBA projects, aiming to addressing CC impact to promote sustainable livelihoods in agriculture production by promoting environmental protection and sustainable use of natural resources. The presentation provides concrete examples of CBA projects implemented in Vietnam under these CBA programmes. It shares the results, challenges and lessons learned gained during the implementation of these CBA projects.

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### **Enhancing community resilience through participatory integrated ecosystems and community vulnerability analysis and local adaptation planning**

By Sunil Regmi, Tine Rossing and Dr Judy Oglethorpe

Rural people living in fragile ecosystems in the developing world are particularly vulnerable to climate change as a result of their high dependence on natural resources for their livelihoods, comparatively higher exposure to climate shocks and stresses, and widespread poverty and marginalization. In Nepal, mountain areas are becoming relative 'hotspots' of climate change. These changes have potentially serious consequences for both the mountain ecosystems and the people living in them, as well as for the areas downstream. At the same time, mountain social-ecological systems have great potential for adaptation.





In response to these challenges, the Nepal Hariyo Ban Program is assisting the Government of Nepal to build the necessary capacity among key local stakeholders to increase resilience of both the vulnerable communities and their life-sustaining, but fragile ecosystems. The program is developing an innovative Training of Trainers program in support of the Government's Local Adaptation Plans for Action (LAPA). The master trainers will train community members as local resource persons to undertake participatory vulnerability assessments and local adaptation planning. The training expands upon CARE's and WWF's lessons learned from prior work on participatory climate vulnerability, capacity assessment and ecosystems assessment work done elsewhere, by putting principles of an integrated ecosystems and community approach to climate change adaptation developed by the Ecosystems and Livelihoods Adaptation Network (ELAN) into practice. The promoted approach complements the LAPA by focusing on participatory development of community adaptation plans, which will feed into the LAPA process from the bottom-up. In addition, the approach stresses the importance of grounding community knowledge in a sound analysis of climate science to ensure that the adaptation planning fully considers not only present climate changes, but also future climate projections. Finally, a strong gender and social inclusion analysis is an integral part of this framework, as climate change results in differential vulnerability and causes shifts in existing gender and social dynamics. This presentation outlines the approach, results and lessons to date.

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### **Limitations to climate change adaptation**

By Antonio Oviedo

This presentation provides information on analytical modelling about limitations that may impede the process of adaptation to climate change in community areas (including sustainable use protected areas) in the Brazilian Amazon. The framework targets the process and limitations that reduce adaptation capacity. Three key components create the layers for the modelling analysis. The first is an analysis of the stages of the process of adaptation based on adaptive management method cycle. The second, a socio-ecological system includes ecosystems, resources, users and management forms. For each step we asked (i) which could impede the process of adaptation and (ii) how the users, ecosystem and the governance contribute to the limitation. To facilitate the diagnosis of the limitations we propose a set of guiding questions. A model provides a starting point to address issues such as how adaptation to climate change can be implemented at all levels of decision making and adaptive management steps.

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### **Renewable energy in rural areas**

By Hoang Thi Thanh Mai

Phong Binh and Vinh Hai are two target areas in Nordic Assistance to Vietnam (NAV)'s renewable energy pilot project, 2011-2012. Poor communities in Thua Thien Hue province are annually affected by typhoons and floods. The main livelihoods of local farmers are rice cultivation and animal husbandry. Traditional habits of burning agricultural waste after harvesting crops combined with poor waste management of animal manure, are contributing to increased greenhouse gas emissions and pollution of the environment. NAV's renewable energy project supports farmers with sustainable options, including:

- building single and multi-user biogas plants
- using efficient energy stoves
- producing organic fertilizer from agricultural waste
- exploring the production of bio energy from waste rice husk

Models of biogas plants and energy efficient stoves in these communities demonstrate alternative energy options. The pilot also transferred techniques of biogas building to local construction workers and, trained biogas beneficiaries on usage and maintenance. From July-December, 2011, results from the two communes include: 242 single-user biogas plants built, four multi-user biogas plants built and, 78 efficient stoves installed. Increasingly families, especially women, desire energy alternatives such as biogas and efficient stoves. The benefits of this renewable pilot project to date include:

- savings in money and cooking time, enabling women to focus on other household/income generating activities
- health improvements from reduced wood burning



- improved sanitation during winter with biogas fuelled hot water for washing/showering
- secured clean energy

An expansion phase of this pilot will be considered in 2013-2014.

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##### Plenary session 6: Increasing community resilience

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## **Plenary session 7: Mainstreaming CBA into government policies and planning**

This session focused on mainstreaming CBA into government policies and planning. The session included five presentations, three from government representatives (Vietnam, Ethiopia and Morocco), one by an inter-governmental body (the International Centre for Integrated Mountain Development) and one by an international NGO (CARE). The panel unpacked issues around mainstreaming CBA into government policies and planning by focusing on four themes. Several key points emerged from the presentations and discussions around these four themes:

1. Why is there a need to mainstream CBA into government policies and planning?
  - To ensure government policies and planning systems are robust in delivering climate resilient development outcomes.
  - To ensure better interaction/match between climate and development planning, as well as cross-sectoral and cross-scale planning.
  - Climate change impacts are local, so national planning needs to be informed by community driven priorities.
  - To ensure efficient use of resources
2. What does CBA get mainstreamed into? What types of 'government policies and planning systems' is CBA being mainstreamed into?
  - CBA is being mainstreamed into a diverse range of government policies. These include development policies, environmental policies and newly formulated national climate change policies.
3. How is CBA being mainstreamed into government policies and planning? What approaches and tools are being used to mainstream CBA into government policies and planning?
  - Key steps in the mainstreaming process involve raising awareness (as demonstrated by work in Indonesia), community vulnerability and adaptation assessments, and prioritisation.
  - Nepal's Local Adaptation Programme of Action (LAPA) framework includes a total of seven steps for integrating local adaptation priorities into the development planning process and outcomes.
  - Role of Institutions in mainstreaming was highlighted. Presentations from the International Centre for Integrated Mountain Development and Morocco highlighted the need to focus on institutional capacity and arrangements to get mainstreaming right.
  - All the panellists outlined the tools that were supporting the mainstreaming process. For example, participatory risk analysis and social accountability assessments were used in Ethiopia), and the International Centre for Integrated Mountain Development used institutional analysis.
4. What are the emerging challenges and opportunities in mainstreaming CBA into government policies and planning?
  - Mainstreaming into budgetary systems will be essential for successful outcomes in the mainstreaming process.
  - Ways to work on CBA with the private sector need to be explored and developed.
  - Capacity (especially at the local level), access to finances (project/proposal design is often a barrier to accessing finance), and a lack of monitoring and evaluation and knowledge management systems are barriers to the effective implementation of policies.
  - There are big gaps around information, science and policy. These gaps are often overlooked, but good, relevant scientific information, communicated and used in the right way, can be critical for ensuring the sustainability and flexibility of climate change development planning across scales.
  - A critical mass (of evidence and political will) is essential for up-scaling CBA.
  - Most local level adaptation is project-based: there is no follow-up to learn and take forward lessons. Government policy and budgetary support is required to support up-scaling.

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**Integrating community based disaster risk reduction and climate change adaptation into local development planning**

Mathewos Hunde



The Ethiopian Government launched its 'Climate Resilient Green Economy' vision in 2011 in Durban. A more detailed climate resilience strategy development process is now underway involving all sector line ministries. At the same time, the Disaster Risk Management and Food Security Sector has developed a 'Strategic Programme and Investment Framework' (SPIF) which aims to support the collection of Disaster Risk analysis, early warning information and ensure that Disaster Risk Management approaches can be mainstreamed into sector development plans. This shows how existing disaster risk management institutions can provide some of the required services detailed in the Ethiopian Programme for Adaptation to Climate Change (EPA-CC), such as early warning systems and vulnerability analyses.

There are two important programmes within the Disaster Risk Management SPIF which are relevant to this presentation, one is the Community Based Adaptation and Risk Reduction Planning process and the other is the Climate Change Adaptation – Disaster Risk Management Integration component.

Working jointly with the Disaster Risk Management and Food Security Sector, the Environmental Protection Authority and Bahir Dar University, the Africa Climate Change Resilience Alliance has supported the development of a participatory methodology to build the skills of local officials and to ensure that risk analysis is used in the production of development plans. Encouraging greater community participation and implementing social accountability approaches are being piloted to identify whether these planning approaches can improve the contribution of larger programmes such as 'the Productive Safety Net Programme' to disaster risk management.

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### **Southern Sulawesi, Indonesia: building coastal resilience to reduce climate change impact - how to engage local government in CBA planning**

By Leonardy Sambo

Climate change impacts will be felt at a local level. This is why communities and local government have to develop strategies to adapt to changing environmental conditions.

The first step to get communities and local governments involved is to help them understand climate change and get them interested in linking climate change with their own experiences (for example when traditional methods of weather forecasting are not applicable anymore).

The next step involves target group empowerment through training on climate change impact analysis in the community as well as on existing strategies to deal with these impacts (Climate Vulnerability and Capacity Analysis - CVCA).

After developing technical expertise, the question is where to begin with implementation if analyses reveal that a huge number of households are affected by climate change related environmental problems. To solve this problem the CARE project team invited local government members and civil society organisation representatives to develop criteria to select villages where the CVCA will be implemented. This participatory process led to strong government involvement and mutual trust, which is fundamental for building effective partnerships between CARE and local government.

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### **Capitalizing and communicating the lessons learned from local CBA initiatives for upscaling and mainstreaming CBA in national strategies and policies: sharing the experience of Morocco**

By Naima Oumoussa

One of the roles of governments in the field of adaptation is to encourage and facilitate up-scaling of CBA initiatives and to mainstream CBA into broader development strategies by building on the lessons learned



from local pilot projects. It is also the government's responsibility to mobilize funds to implement adaptation projects, and especially CBA projects, throughout the country.

In Morocco, the Ministry of Environment is in the process of designing a climate change response strategy, with a strong adaptation focus. This strategy builds on the lessons learned from a number of initiatives, including the pilot five-year United Nations Development Programme (UNDP) global initiative funded by the Global Environmental Facility (GEF) with the Small Grants Programme (SGP) as the delivery mechanism. The UN Volunteers (UNV) partners with UNDP and GEF/SGP to enhance community mobilization, recognize the contribution of volunteers, ensure inclusive project participation and facilitate capacity building of partner NGOs and community-based organisations. The UNDP-GEF CBA programme supports community-driven projects that pilot a range of climate risk management practices at the local level. The programme also seeks to encourage systemic change in national adaptation-related policy through evidence-based results from its portfolio of community-driven adaptation projects. Moreover, the programme promotes global learning by sharing lessons from a range of initiatives focusing on natural resource management.

The UNDP-GEF CBA programme field techniques and results have been fueling the national approach, through communication and promotion from local to national levels, alongside other civil society and development programmes (such as the GIZ adaptation programme, GIZ climate proofing, and National Initiative for Human Development).

This presentation highlights the process of mainstreaming CBA techniques into national strategies and policies, it shares ongoing work toward the concretization of Morocco's Climate Change strategy, development of a Climate Change Policy Development Matrix, and incorporation of climate change and adaptation concerns into the National and Regional Environment Observatories' prerogatives. The presentation essentially focuses on:

- Communication and sharing of best practices tested in the field: UNDP-GEF's Vulnerability Reduction Assessment, climate change awareness at the community level, promoting concrete community contributions, gender inclusion, rights-based approaches *et cetera*.
- Recognition and empowerment of community-based organisations and NGOs as partners for sustainable adaptation and implementation of national strategies.
- A subtle combination of bottom-up and top-down approaches being key to effective and equitable adaptation.
- The challenges inherent to communicating CBA for upscaling and mainstreaming (systemic, financial *et cetera*).

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### **Mainstreaming CBA into government policies and planning: CBA priority activities implemented in Ben Tre, pilot province under the NTP-RCC Vietnam**

By Tuan Thanh and Erik Keus

Under the National Target Programme to Respond to Climate Change, the Provincial People's Committee of Ben Tre Province has established a steering committee to select priority activities for climate change adaptation. Activities are proposed by provincial departments and district authorities and cover a wide range of sectors; community-based activities are usually related to water resources. A high priority is the construction of dams in brackish water channels to stop saline water intrusion. Drinking water supply is improved by constructing water treatment plants that use river water protected from saline water intrusion. Remote households are provided with rain water storage tanks and community groups are established to promote the use of new facilities. Coastal water availability is improved with the design of a channel that will bring freshwater from far inland. In a commune where there is no other option, a desalinisation installation using Reverse Osmosis will be installed. To adapt to saline water intrusion, new coastal farming systems will be identified in cooperation with coastal communities. Mangroves have been planted to protect the coast against storms, and will be managed by nearby communities. This presentation describes the initial impacts of these adaptation measures.

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### **Scoping for institutional adaptive capacities for bridging policy and practice**

By Rajan Kotru and Navraj Pradhan



Local level institutional capacities play a crucial role in shaping adaptation. In the past, local institutions have shaped how rural communities respond to environmental challenges. Strong institutional mechanisms will be crucial for adaptation, and the impacts of future external interventions. Adaptation to climate change will take place at local levels. It is therefore critical to understand the role of local institutions, and their levels of adaptive capacity, in dealing with climatic and non-climatic changes. It is also important to examine local governance structures, the interface of public, private and civic organisations, and their impacts on local livelihoods and coping strategies.

The Hindu Kush Himalayan nations have already adopted National Adaptation Programmes of Action (NAPA) to climate change, and in some countries Local Adaptation Programmes of Action (LAPA) are also being prepared. This presentation describes how climate change adaptation issues are poorly integrated into national development strategies, and sectoral policies and plans, and how there is an inadequate quality of service delivery on the ground. In other words, measuring the adaptive capacities of local institutions needs to be integrated for future investments and interventions for shaping adaptation, improving capacities of vulnerable and social groups, and linking them to sectoral and national plans. A review of case studies conducted by the International Centre for Integrated Mountain Development indicates the importance of institutional analysis and arrangements (adaptive capacity) at the local level, which is also the key to designing adaptation plans at various levels and sectors. Using criteria such as – i) Adaptation, Institutions and Livelihoods (AIL) frameworks; ii) Institutional Mapping and; iii) Assessment of adaptive capacity of local institutions (public, private and civic) bring few learning. Firstly, adaptation metrics contouring adaptive capacity gaps are important for assessing the status of institutions, and then designing a capacity package. Secondly, institutions are a bridge between policy and practice. Their convergent use must therefore be made to deliver climate resilience pathways on a continual basis.

Learning from these case studies and reviews is used to make recommendations, firstly, to assess the roles of local institutions, and secondly, to integrate NAPAs and LAPAs into national and local development strategies. Lastly, practical approaches and strategies which provide ‘no regrets’ adaptation solutions, increase developmental benefits, conserve biodiversity, and increase local adaptive capacities are recommended for communities, practitioners, planners and decision makers.

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## Discussion

The session chair, Nanki Kaur, reflected that climate change impacts will be felt locally so there is a need for bottom up planning, integration between local and national plans and coordination between different actors for more effective outcomes. She invited Margareta Wahlström to share some of her experiences regarding mainstreaming disaster risk reduction into plans and policies. Margareta Wahlström explained how this was chosen as a methodology because it was the answer of the time. Mainstreaming for disaster risk reduction is generally multi-sectoral. You cannot reduce risk by working with one sector. The Hyogo Framework has been quite effective in this respect. She explained how many conference participants have worked in mainstreaming in different areas and realise what the challenges are. One is that mainstreaming is not a substitute for priority setting. Very often when we think we have mainstreamed we cannot relax because we still need to advocate and drive the machine. Mainstreaming is a kind of blueprint but you need a clear risk assessment to guide what you are mainstreaming to as a matter of priority. Is it infrastructure? Or community services? ‘Mainstreaming’ can become so broad you do not have a sense of making progress. It can be effective when there is strong national policy and direction but when there is a lack of determination and policy direction it tends to be less satisfactory. National policy should also be coupled with priority-setting leadership. We need political leadership at the highest level. Mainstreaming is both vertical and horizontal. With reference to CBA, the community perspective can be a delivery methodology, not an objective in itself. Community participation is the political objective and CBA the delivery mechanism. We need to think about what we are advocating for mainstreaming. Mainstreaming without the commensurate budget allocation cannot be done. You cannot mainstream successfully without full engagement because you remain without local grounding. Community-based mainstreaming will be effective at the local government level if there is coordination and collaboration between different initiatives. There needs to be coherence amongst methodologies and approaches which will help the central government move on.



Conference participants then shared some of their experiences with mainstreaming CBA into government policies and planning. One described how one of the challenges for setting up an Adaptation Fund in Colombia was developing a national adaptation policy, which would set the principles to guide money use. It has proved challenging deciding whether or not a project is an adaptation, disaster risk reduction, development or planning project. Resource misallocation could result. Adaptation policies have not been developed because it is unclear how to make government agencies work together.

Another participant felt that CBA should be addressed all levels of government but that as we have seen with gender, mainstreaming is not always the best way to achieve this as in some instances it has got 'lost'. Rather, countries need to have complete national plans and policies in place and then CBA should be integrated into these. Then the budget for CBA will be available and responsibility can be transferred. One challenge, however, is that in many instances there is insufficient capacity for this at the local level. Capacity building needs to be an ongoing process.

One participant asked why we were only talking about the usual suspects but not the corporate sector. We need to work with them to show them the supply chain risks.

Nanki Kaur explained that there are many policies, programmes and existing indicator frameworks that now have climate change mainstreamed into them: environmental policies, development policies, stand-alone climate change policies *et cetera*. Those mainstreaming climate change into development policies will have to look at the broader socio-economic context. A few countries are now integrating climate change into their budgetary frameworks as well. Differences between countries mean that monitoring the integration process at so many different levels is challenging. Civil society has a role to play here.

Sectoral divisions are also important. For example, in some countries climate change is negotiated and addressed at the policy level along four themes: adaptation, mitigation, financing and capacity building. Government staff is divided accordingly but negotiation teams are structured differently, and when it comes to the local level the issues should be looked at in a more holistic way. How do we adopt a holistic analysis of climate risks so that mainstreaming at the local level is effective?

Climate change has already been integrated into national planning in Bangladesh, and the Bangladesh government supports mainstreaming because it has already been challenged by frequent disasters. Climate change affects 70 million people and almost 40 per cent of people are under the poverty line so the government of Bangladesh is mainstreaming climate change into local level planning.

It is also important to look at how to mainstream. Nanki Kaur explained how the presentations outlined steps such as climate vulnerability assessments and designing institutions to ensure coordination at different levels. Many countries are now preparing National Adaptation Plans and are trying to integrate climate change into environmental, social and economic policies. We need to consider the impacts and challenges of the fact that Ministries of Environment tend to lead these processes but other bodies are involved in implementing plans and policies. We need to explore the impacts and challenges of convening different ministries.

Ali Tauqeer Sheikh explained how there are many drivers of change; climate change is just one. We need to accept that a lot is happening in this world, at national, sub-national and local levels. The interface for mainstreaming needs to be broadened to include public-private partnerships in the adaptation context, insurance, housing and technologies for low-income groups. We need to go further than mainstreaming and embed our experiences in government systems, but we must remember that a lot is happening autonomously, for example by indigenous local communities. In India, the Climate & Development Knowledge Network (CDKN) is working with the state government to design housing for the poor. In Nepal, CDKN has been collecting data on food security and is working to link government departments together. In Pakistan, CDKN is working with the Provincial Disaster Management Agency to improve the design of community housing to increase climate change resilience. CDKN is looking at how the government of Pakistan can scale this up and how to include disaster risk reduction into policies and programmes in Pakistan. There is a plan underway to provide insurance to the most vulnerable. Ali Tauqeer Sheikh concluded with one parting thought on the need for evidence-based policymaking and the importance of bringing science to policymakers.



Saleemul Huq concluded the session by saying that mainstreaming takes time. It has been 20 years since the first Rio conference, and it took about 10 to 12 years for environmental policies to be adopted. Next year countries will create and implement National Adaptation Plans. These will be top-down but provide an opportunity to demonstrate that there is a huge amount of knowledge on the ground that can be integrated into these plans.

## Contacts

### Plenary session 7: Mainstreaming CBA into government policies and planning

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## **Parallel session 8: Gender**

Gender relations are power relationships with profound implications for how knowledge and information as key assets for climate change adaptation are generated, shared and valued. The implications of gender power relationships for CBA processes, however, and the potential of CBA processes to transform these, tend to be ignored in the planning and design of adaptation actions. The session explored how different communication processes in CBA can integrate and convey information on knowledge, needs and priorities in a more gender-inclusive way.

Moushumi Chaudhry presented findings from Climate Change Agriculture and Food Security (CAAFS)'s research in relation to gender in processes focusing on exchange and integration of climate information and scenarios in agriculture practices, such as 'climate analogues'. Lessons learned include the need for climate communication to use non-technical language, to frame farmer to farmer exchanges as positive learning opportunities, to understand and respond to factors restricting women's mobility and participation in such exchanges, and to understand what communication channels to use to disseminate and collect distinct types of information sought and provided by women, men and youth.

Mette Frost Bertelsen gave an overview of gender concerns important in context of natural disasters in South East Asia, which tend to have more negative impacts on women who also face entrenched barriers to participation in disaster risk management, which is considered 'men's business'. There are large gaps between policies on gender equality in disaster contexts and the implementation of these policies on the ground. The World Bank has been working on guidance notes on a variety of steps involved in integrating gender into disaster risk management, including on monitoring and evaluation, integrating gender in community-based disaster risk management, and into emergency recovery and reconstruction, with a focus on approaches to 'make women's voices count'.

Annisah Sapul outlined some of the challenges involved in bringing everyone to the table for climate-related information exchanges, and encouraging the free expression of views, preferences, knowledge *et cetera*. Due to gender roles, the inclusion of women in such processes has encountered challenges and resistance. The Nature Conservancy's work in the region has demonstrated how innovative mapping methods such as participatory 3D modelling, or the use of digital participatory video in Melanesia can work toward better inclusion of people who tend to get excluded from processes due to local power relations.

Dinanath Bhandari outlined why climate sensitivity and adaptive capacity vary between women and men in Nepal, but also showcased how the adoption of adaptation strategies depends to a large extent on livelihoods. Families from different castes or ethnic groups depending on the same or similar livelihoods have similar levels of vulnerability while those from the same caste with different livelihoods demonstrate divergent levels of vulnerability to climate. For livelihoods where gender norms play a strong role in determining who does what, capacity to adapt strongly varied by gender, but the livelihood matters first and foremost. Strong dependence on agriculture and wage labour is found to be a key factor contributing to vulnerability.

Looking across these presentations through 'communications spectacles', a few dimensions of more gender-equitable CBA become apparent: We need to recognise that a full understanding of a given local context for CBA relies on the knowledge and perspective of women, men and youth. We need appropriate styles, content and platforms for communication in order to bring diverse and complementary perspectives into CBA processes. It is important to choose communication channels and methods which enhance the agency of those who are less empowered to express their views and needs.

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### **Informing community-based participatory action research on gender and adaptation to climate variability**

By Moushumi Chaudhry

Climate change affects men and women differently with regards to responses to the impacts of climate change. There has been very little research conducted, however, on understanding different adaptive strategies that can benefit men and women. The CGIAR Research Program on Climate Change, Agriculture, and Food Security (CAAFS) has investigated the potential of implementing adaptive strategies in a gender sensitive manner. Among these strategies is developing climate analogues where farmers are encouraged to visit sites



that represent their future climates to learn about adaptive strategies. Another strategy is to provide climate information to farmers in the form of daily and seasonal forecasts so that farmers are able to make informed decisions on how to manage their crops. The extent to which these strategies could work, were tested in a joint initiative by CCAFS and the Food and Agriculture Organization in Bangladesh, Uganda, and Ghana. This presentation not only describes how using climate analogues and information could be important adaptive strategies, but also how the concept of climate analogues and information was communicated to farmers. The presentation shares lessons learned on how to better implement these strategies in order for men and women to benefit from them equally.

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### **Making women's voices count: integrating gender issues in disaster risk management**

Mette Frost Bertelsen

The East Asia region is highly prone to the impacts of natural disasters. Situated in the Ring of Fire, countries in the region are regularly hit by typhoons, earthquakes, floods and other events. Natural disasters can have major impacts on the social and economic welfare of a population, and often pose serious obstacles in the achievement of sustainable social and economic development. Moreover, impacts from disasters are not uniformly distributed within a population and tend to disproportionately affect the poorest and most marginalized groups.

Women are at a particular risk. Women often experience higher rates of mortality, morbidity and post-disaster diminishment in their livelihoods. Several underlying factors exacerbate women's vulnerability to the impacts of disasters, such as lack of means to recoup lost assets, limited livelihood options, restricted access to education and basic services, and in many cases, also socio-cultural norms.

There are costs in ignoring gender aspects in disaster recovery and risk management strategies. Failure to consider gender in Disaster Risk Management programs is likely to lead to overlooking the full range of damages and needs, which can hinder reconstruction, recovery and long-term development of countries that repeatedly suffer from disaster impacts. Research indicates that a gender-blind response to natural disasters can reinforce, perpetuate and increase existing gender inequality, making bad situations worse for women.

Grounded in extensive field work in Lao PDR and Vietnam, the World Bank has developed a series of Guidance Notes on Integrating Gender Issues in Disaster Risk Management (DRM). The notes address key issues and bottlenecks related to addressing gender issues into DRM projects, and are designed to help task teams design and implement gender dimensions into DRM work across the East Asia and Pacific Region. The presentation focuses on the key findings and the recommendations to help mainstream Gender issues into DRM, especially at the community level. A second phase of the program, funded by the Australian Agency for International Development (AusAID), will pilot the recommendations in select countries across the region, including Vietnam.

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### **Communicating the women's voice: gender equity and women's participation in CBA in Melanesia**

By Annisah Sapul

Traditionally, the primary role for women in Melanesian societies is to bear children and to ensure that there is food for the entire family. Our ancestors practiced this for many years. In our society this involves multiple tasks. A daily routine for the women typically includes fetching water, preparing breakfast, attending to the children, going to the gardens to bring back food or to the sea and mangroves to gather fish and shellfish for the evening meal.

Today, a woman's role is more than that! Women can see the impacts of climate change, as more variable weather patterns mean that food gardens are not producing quality crops, less rainfall has resulted in waterholes drying up, and the primary protein source - fish and shellfish - are increasingly scarce. Hence, as women are in the frontline of addressing these impacts, they must think of adaptable measures to keep food on the table, such as growing different crops or trees, and travelling large distances to find fish or shellfish. Women are the agents of change; they are already making adaptation plans, because they are the most



responsible for their family's welfare. Women also tend to think about today and the future, their children and their grandchildren. Therefore their participation is important in addressing CBA issues that will threaten the delivery of basic needs and services, that women typically feel responsible for.

Traditionally men lead decision making in the local villages and culturally this is still a part of all Melanesian societies, so to meaningfully include women in discussions one must consider a participatory approach.

Two very important tools have been used in engaging women in two Melanesian societies (Boe Boe, Solomon Islands and Manus, Papua New Guinea). Firstly, Participatory Mapping – referred to as Participatory 3-Dimensional Modelling, has enabled women to contribute with skills to developing the model, and then with adding of natural features to the model and telling their stories about their home and the impacts of issues including climate change. Secondly, conducting household interviews has enabled women to identify their concerns regarding issues that are affecting their livelihoods.

These tools have captured the voices of the women, so often drowned by the traditional norms of society, and enabled them to better contribute to decision making for the good of their household and society.

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### **Livelihood strategies and gender dimensions in differentiating vulnerability to climate change impacts**

By Dinanath Bhandari

There is broad consensus that women, indigenous and ethnic minorities are more vulnerable to climate change than men and ethnic majorities. This study tried to investigate whether gender and ethnicity or livelihood strategy is the dominant factor for differentiating vulnerability to climate change impacts, particularly hazards and stresses associated with weather and climate. It looked into what approach (livelihood or gender) is most appropriate for identifying differentiated vulnerability to hazard stresses and disasters. It also considered how vulnerability is affected if livelihoods are determined by gender and ethnicity.

The study was carried out on families with different castes and ethnicity living in rural and semi urban areas with different and similar livelihood strategies (agriculture including livestock, paid jobs, small businesses and foreign employment). The family's major dependency or major contribution to the family income was deemed the dominant family livelihood strategy. The roles of men and women in different livelihood strategies were considered to assess vulnerability differences. The study was carried out in the communities where hazards and stresses were more or less the same for all the families studied.

Initial findings suggest that family livelihood strategies are the dominant factor when it comes to differentiating vulnerability to climate change impacts, irrespective of gender and ethnicity. The vulnerability of families of the same caste and ethnicity were different if they had different livelihood strategies, and families from different castes and ethnicities were similarly vulnerable if they had similar livelihoods. Gender and ethnicity affected family vulnerability if family livelihood means and practices were determined by gender or ethnicity. Differences noted were because the sensitivity of livelihood strategies varied according to different weather conditions even though all livelihood strategies were exposed to the same environmental conditions. Gender- and ethnicity-based livelihood practices gradually changed in the communities studied: for example, people from one caste took up the roles of other castes. Livelihood strategies also factored in family exposure to climate change impacts.

The study suggests that measures of livelihood strategy are most useful in terms of segregating disparities in vulnerability, and that adaptation strategies under CBA must devise appropriate approaches accordingly.

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### **Key points from the questions and answers**

The challenge of gaining access to the most excluded women and men and ensuring their meaningful participation is not easily overcome. Often projects, in seeking to simply work 'with women', inadvertently work with some of the most powerful people in a community. Good facilitation and time to understand the context are key. It is important to include women and men at all levels. Achieving real transformation in



gender roles is a long-term process, with efforts to include women in public discussions and decision-making, and generating interest in sharing knowledge and perspectives between groups being merely a first step. It is often difficult for excluded people, for example poor women in Bangladesh, to overcome the barriers they face in expressing themselves freely and publicly.

Effective and inclusive communication channels at the household level, within and between communities could take significant advantage of the strengths that women, men and youth bring to bear due to their differentiated roles. In the processes around 'climate analogues' for example, we can see how communities can be more involved in managing various scenarios and play active roles in considering future impacts. These particularly focused on the family as the development unit in which gender considerations are most at play.

As practitioners and researchers we have our own role and face our own challenges in communication. We know it can be very tricky to communicate gender issues. Efforts to work toward more equitable gender relations are often perceived as an 'agenda of the West'. In Pakistan, positive experiences of communities with increasing equal participation in diverse processes are shared in order to demonstrate that it is not purely a concept of the West and works very well for and within an 'Eastern' context.

In communicating the importance of gender integration in disaster risk management and CBA, we often lack substantial gender-disaggregated data to demonstrate the scale of the gaps between women and men of climate change impacts we see on the ground.

## Contacts

### Parallel session 8: Gender

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## **Parallel session 9: Ecosystem-based approaches to adaptation**

This session covered ecosystem-based approaches to adaptation (EbA) and understanding how these relate to, intersect with and have tradeoffs with CBA. Session discussion centred around how these two themes can be incorporated into a more integrated approach to adaptation policy and planning, with a view towards understanding what the two approaches can learn from one another, their co-dependence and trade-offs. Presentations highlighted lessons learnt from EbA approaches adopted in the Ba Be province of northern Vietnam, in the forests Michigan, and the Himalayas of Nepal.

In recent years, interest in EbA has grown, however a strong scientific evidence base for EbA is still missing. Initiatives like the Ecosystem Livelihoods and Adaptation Network (ELAN), and a study by IIED, UNEP-WCMC and BirdLife reveal wide datasets of socio-economic and biophysical indicators that can inform CBA (and EbA) decision-makers and practitioners. There are also many existing tools upon which the climate adaptation community can draw.

As we go towards a 4-degree world there will be a number of tough choices ahead of us. It is important to make explicit the goals for which a project is developed (for example conservation, development or human adaptation), and to define the benchmarks for success. In some instances trade-offs will have to be made. In many instances, however, the goals of CBA and EbA activities may be mutually beneficial. Considering ecosystems is particularly important when assessing trade-offs along different temporal scales. For example, short-term adaptation benefits may be provided by a dam or sea-wall but at the cost of long-term adaptive capacity if the ecosystem services on which local human livelihoods depend are not protected.

A key consideration is that ecosystems function at different complex geographical scales. Policies should be designed at the appropriate level to accommodate the ecosystem processes and functions that need supporting. For example, they may need to operate at the watershed or landscape level, rather than levels dictated by social or political boundaries. The goal for which a given adaptation project is designed will determine the level at which the project is situated, but ecosystem-level boundaries should be incorporated where possible into this planning.

There is also a need to look at temporal scales. Looking at longer-term horizons will involve understanding ecosystem thresholds and how to manage them over time because ecosystem functioning and processes are non-linear and dynamic.

How we deal with the issue of co-dependence (of people and nature) and trade-offs between the two will depend on the context. We need to develop institutions that can understand the co-benefits of protecting ecosystems and eco-system services to support human adaptation, and mediate between different stakeholder interests. These institutions must be able to adapt themselves and have mechanisms built within them to support the transfer of skills and capacity to the next generation. This will build a proper foundation for the future and address the notion that adaptation is a continuous process and not a one-off occurrence.

In order to identify win-win opportunities, move away from environmental degradation and poverty alleviation, and capitalize on opportunities for both mitigation and adaptation, we need to support collaborative learning among different communities of practice. Joint learning processes on the ground will help identify opportunities for organisations to learn from each other and work together. We also need to capture local and indigenous knowledge and bring it into these learning processes.

Governments have a role to play in establishing appropriate funding mechanisms, making information available, and supporting the building of local institutional capacity. How communities manage and control their resources and make decisions regarding their use is often a political issue.

In concluding the session, the issue was raised of how to get EbA to the next level and move beyond scattered project based activities. We need to consider adaptation not only with a focus on a few institutions or agencies, but in the context of mainstreaming adaptation strategies into national planning. Mainstreaming requires improving the science, but also involves adequate communication – both within organisations, institutions or agencies, and between organisations.



## **Towards an integrated approach to ecosystem and community-based adaptation**

By Pascal Giroit

This paper seeks to address ways to better integrate two approaches to adaptation which have been often seen as separate and even antagonistic: CBA and Ecosystem-based Adaptation (EbA). It explores the two approaches from a practical perspective, aiming to improve understanding of their core principles and identify potential synergies between them. It argues for an interdependent, scaled approach that reconciles apparent differences between CBA and EBA. Towards this end, the paper provides a conceptual framework for such a symbiotic approach, which is applicable to all types and levels of climate change adaptation. It also underlines the need to focus on building resilience and promoting adaptation of natural systems by conserving and restoring ecosystems while at the same time assessing and addressing the differential vulnerabilities and adaptation needs of people whose livelihoods depend directly of the resources provided by these ecosystems. This reinforces the need for community-based conservation and rural development efforts, thus providing livelihood opportunities that work to minimize new pressures on ecosystems and reduce existing ones in an effort to cope with advancing climate change.

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## **Community forestry as an adaptation strategy**

By Gernot Brodnig and Pete Newton

While community forestry is increasingly being considered as an important contribution to the climate change mitigation agenda, its role in generating adaptation co-benefits has been less investigated. There is, however, mounting evidence that appropriate community approaches can have significant impacts on the adaptive capacity and resilience of forest communities. These opportunities range from improved environmental services to diversified economic livelihoods and improvements in social capital. This presentation will explore these and other co-benefits by drawing on the data sets from the International Forestry Resources and Institutions (IFRI) network, which has documented environmental and socio-economic outcomes in over 250 community forestry sites in some 15 countries. The presentation will focus on the enabling and constraining conditions that shape these adaptation opportunities (and risks), with an emphasis on institutional factors, and propose a typology to provide policy guidance for adaptation planners and project implementers.

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## **Lakeside livelihoods and adaptation strategies in Ba Be National Park, Vietnam**

By Robert Nurick

The establishment of Ba Be National Park in 1992 as part of the Government of Vietnam's goal of biodiversity conservation has resulted in significant institutional and environmental change for lakeside communities residing within the park. Households have adapted their livelihood strategies in response to: the prohibition of access and use of upland areas, the introduction of high yield varieties of maize and rice, and incentives to diversify into off-farm income earning activities.

Residents have experienced greater environmental hazards over recent years, in particular an increasing incidence and severity of flooding. This has been attributed to the extensive deforestation in upland areas around Ba Be Lake that continues in the hills immediately adjacent to the National Park. Flooding has destroyed crops and increased sedimentation and turbidity in Ba Be Lake, disrupting fish breeding cycles. Households have adapted livelihood strategies, altering cropping cycles and fishing strategies.

Overlaying the dynamics of environmental and institutional change, and livelihood adaptation strategies, is the additional layer of vulnerability resulting from local perceptions of climate change. Changing rainfall patterns and greater intensity of weather phenomena (drought, wind, cold and hail) have compounded the pressure on local people to adapt their livelihoods.

Biodiversity conservation in Ba Be National Park depends on successful adaptation to environmental and climate change by lakeside communities. The experience from Ba Be and the international evidence, points to the need for much greater involvement of the lakeside communities in decision-making and management of



the national park and its natural resources. Whilst the principle of community involvement is reflected in recent legislation in Vietnam, much work is needed to develop appropriate and effective engagement strategies and representation of local people in management structures.

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### **Vulnerability of people and ecosystems to climate change in the Himalayan region of Bhutan - a case of Wangchuck Centennial Park (WCP)**

By Phurba Lhendup, Eric Wikramanayake, Sarah Freeman, Nikolai Sindorf, Kinley Gyeltshen and Jessica Forrest

People, water resources and biodiversity are vulnerable to climate change in many Himalayan ecosystems. This presentation reviews vulnerabilities in selected mountain ecosystems in Bhutan, presenting the results of scientific studies and vulnerability assessments by WWF and partners that examined direct and indirect climate impacts and their interaction with other stresses on socio-economic and ecological systems.

Specifically the focus is on a selection of case studies in Wangchuck Centennial Park (WCP), Bhutan, where a vulnerability assessment indicated risk to alpine habitat from forest intrusion, impacting alpine species, while forest-dwelling species such as tigers could benefit from habitat expansion. Community vulnerability is reviewed, including impacts on agriculture and pastoralism, and potential future impacts on water supplies. Local communities' coping strategies and alternative livelihood development were reviewed, including specific challenges for some of the most vulnerable people and communities. Possible earlier and increased snow melt could have implications for hydroelectric projects planned downstream of WCP. Based on these vulnerabilities, several climate-integrated management recommendations are made at the park and sub-river basin scale.

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### **A participatory landscape approach to CBA planning**

By Morten Fauerby Thomsen and Nguyen Thi Yen

To address community vulnerabilities to climate variability and change a more integrated approach is often required that considers environmental services and their unique contribution to CBA, communicates this to communities and local government stakeholders, and also seeks to integrate adaptation plans into relevant government planning processes and thereby scale up CBA. This presentation is based on experiences from Thanh Hoa province in Vietnam where a Visioning Approach has been used for participatory watershed planning. The visioning approach takes a landscape view in trying to address climate and environmental risks that affect communities in the watershed. It is participatory and involves all communities in the given landscape, and also helps them to understand how the problems they face are often inter-linked, which in the case of Thanh Hoa, instigated inter-village cooperation agreements between downstream and up-stream villages. The approach involves local government in the whole process, and watershed plans were subsequently integrated with local government plans and budgets. Based on the plans, specific activities in the watershed have included forest planting and enrichment, sloping agriculture techniques, improved water management, diversified livelihood options and, climate change and disaster risk reduction capacity building.

### **Contacts**

<b>Parallel session 9: Ecosystem-based approaches to adaptation</b>
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### **Parallel session 10: Participatory games**

Well-designed games - just like CBA - involve decisions with consequences. In this intensely participatory session we played one of the games designed by the Red Cross / Red Crescent Climate Centre to test and experience this serious, fun way to learn about the complex trade-offs, feedbacks, delays and thresholds affecting humanitarian decisions in a changing climate.

Organized in teams, participants collaborated while also competing for individual and collective prizes. Each person received a budget of ten beans and had to make investment decisions involving disaster response (pay four beans after the flood to help those in need) versus disaster preparedness (pay one bean to reduce suffering if a flood materializes). The rains were represented by a roll of the dice. Players were then given the opportunity to bid for regional forecasts to help inform their decision, allowing them to see the regional rainfall in advance (i.e. the first throw of the dice). The game reflected the tough choices faced by decision makers and helped players to understand the benefit of forecast information. After the game, participants realized the need for our organisations to invest more in accessing, and understanding probabilistic forecasts (early warnings at different time scales), and use them through predefined, forecast-based plans and standard operating procedures (early action).

The animated discussion made it clear that games can support effective learning and dialogue. Gameplay can help us inhabit complex dynamic systems involving natural hazards, people, and the relationships between choices and possible outcomes. They can help us to take a longer view, understand risk, and examine multiple strategies aimed at managing changing risks.

<b>Parallel session 10: Participatory games</b>
<b>Chair: Pablo Suarez (Red Cross/Red Crescent Climate Centre) - <a href="mailto:suarez@climatecentre.org">suarez@climatecentre.org</a></b>



### **Parallel session 11: Community-based adaptation of indigenous and vulnerable communities: issues, challenges and good practices**

Climate change uncertainties and unpredictability have drastically increased the risks and vulnerabilities of poor people in the developing world. Indigenous peoples, being one of the most impoverished vulnerable groups, are badly affected by climate change impacts. Most of them are poor, live in marginal and ecologically fragile areas and have low adaptive capacities. They are amongst the worst victims of climate change, though they have minimum ecological footprints and have contributed least to the climate crisis. However, they are attempting to cope and adapt to these climate change externalities with their traditional knowledge and practices. They are also known as 'native and aboriginal people', 'ethnic minorities', 'hill tribes', 'tribal peoples', 'nomadic tribes', 'adibasi and janjaties', 'mountainous peoples' in different parts of the world.

This is the first time a separate session on indigenous peoples' issues, concerns and adaptation strategies and practices has been included in the conference. Many researchers and studies have shown that these communities are trying to deal with the changing climate despite their low capacities. They have limited access to information and resources; they lack state recognition of their need for full and effective participation in climate change responses; and, they lack sustainable livelihood diversification options and often suffer from reduced access to natural resources. In many cases, national governments have bulldozing over their rights, needs and priorities.

Altogether, there were six presentations in this session - one regional presentation from Asia Indigenous Peoples Pact (AIPP) and five country specific presentations (two from Vietnam, one each from the Solomon Islands, Malawi and Iran). Presentations focused on the issues and challenges faced by vulnerable communities, indigenous peoples, ethnic minorities, and nomadic tribes in relation to climate change impacts, and on adaptation initiatives in their respective areas and recommendations.

Panellists shared how diverse and innovative methods and approaches were adopted for generating climatic data and information on the ground such as awareness raising and capacity building, climate change vulnerability and impact assessments, focus group discussions, field observations, in-depth stakeholder interviews, case studies, resource monitoring, 3D modelling, participatory conservation planning, and crop production model development. Some of these methodologies were common to most of the climate change studies described while some were innovative such as the resource monitoring, 3D modelling and conservation planning conducted in the Solomon Islands.

#### **Indigenous communities in the study areas**

AIPP conducts regional participatory research and its members and partners cover diverse indigenous communities such as Karen, Hmong, Lisu, Lahu, Lua, Kadazandusun, Ikalahan-Kalanguya and Haruku. Other country specific communities discussed in the presentations include Tay, Dao, Hmong and Nung in Vietnam. Presentations from the Solomon Islands, Malawi and Iran focused on overall indigenous peoples/ethnic minorities and nomadic tribes.

#### **Climate change issues and hazards for indigenous peoples in the areas described**

Almost all presentations focused on certain climate change impacts on the livelihoods and wellbeing of indigenous peoples/ethnic minorities and vulnerable communities. Though the severity and magnitude of impacts differed between communities living in different parts of the world, the climatic hazards and issues faced were more or less similar. Based on the presentations these were as follows:

- Extreme weather and climatic patterns leading to devastating floods and prolonged droughts
- Erosion leading to a reduction in cultivable lands and land degradation especially in Vietnam
- Severe melting of glaciers and permanent snow cover, especially in Iran
- Unprecedented regional dust-storms in forests and rangelands in Iran
- Sea level rise in the case of the Solomon Islands and Vietnam



Besides these direct climate change hazards and impacts, ignoring indigenous peoples' issues, concerns and rights in local, national and international climate change related policies and mechanisms, such as National Adaptation Programmes of Action (NAPAs), were also highlighted as a serious concerns. In many countries, Indigenous Knowledge Systems (IKS) and adaptation strategies are ignored by research and academic institutions and also national level development plans. The current lack of youth involvement in IKS is eroding existing knowledge forever. There is therefore an urgent need to promote, replicate and improve indigenous adaptation strategies by linking up with research institutions and all development initiatives.

### **Indigenous adaptation strategies and plans**

Indigenous people around the world have their own coping and adaptation techniques, strategies, plans and knowledge systems, which are specific to the climatic hazards and contexts of their particular area. Their strong relationship with ecosystems makes them more resilient compared to the other societies, despite their high vulnerability to the changing climate. However, their existing resilience and knowledge systems are being affected both by climate change directly and by some of the responses to climate change in which their participation is not ensured.

Conference presentations highlighted some of the important adaptation strategies specific to the study areas. For instance, the Solomon Islands has 80 per cent of its land owned by tribal people, and these people are using innovative tools such as resource monitoring, 3D modelling and participatory conservation planning for better communication around CBA. Similarly, ethnic minorities - which is the term used instead of indigenous peoples in Vietnam - have been adapting to climate change with support from the agricultural university by developing crop models including cold resistant potato varieties, drought resistant bean varieties and agro-forestry with banana and ginger.

In addition, ethnic minority farmers in Vietnam themselves have developed their own crop production models with mixed cropping and intercropping of different species on the same piece of land for more efficient and effective use of the available nutrients per unit area. Similar cases have been found in indigenous territories in Malaysia. In some study sites here, indigenous people and ethnic minorities have their own weather forecasting systems, which use their indigenous knowledge systems. These are being used to develop cropping calendars to deal with climatic uncertainties.

Indigenous people are also integrating livelihood diversification options like fish ponds into their farming activities. In Malaysia, this has provided better options for nutrition and at the same time helped generate income. Most of the indigenous communities described have focused on mapping and zoning their land and territories using community mapping or 3D mapping to delineate their territories, and this has also contributed to their adaptation strategies.

In the case of nomadic tribes in Iran, the best adaptation option has proved to be changing the time of migration based on climatic forecasting. Pastoralists are also focusing on intensive learning, planting crops and using crop residues to reduce the pressure of livestock on diminishing grazing resources. They now regularly adopt alternative livelihoods like agro-silvo-pastoral activities, which are also an adaptation strategy. Nomadic tribes in Iran have also strengthened the concept of indigenous community conservation areas (ICCA), which include buffer zone areas for conservation and livelihood activities in times of drought.

### **Discussion**

All presentations were specific to the local climatic context, innovative and pioneering. Indigenous people at the grassroots level are not sitting idle; instead they are dealing with climate change in an impressive manner and using their own indigenous and traditional knowledge to drive their own adaptation. Indigenous people are coping with and adapting to climate change hazards and impacts, but it is important to differentiate between adaptation and coping strategies. Adaptation is something that is planned in advance to absorb climatic shocks and stresses, but coping strategies merely help communities survive a crisis by either selling their assets or labour at a lower price or migrating to unsafe situations for alternative livelihoods. Participants discussed how to develop, scale-up and mainstream these adaptation strategies.



Indigenous people and ethnic minorities face many challenges, such as increasing alienation from their land, territories and resources. Their rights to self-determination, full and effective participation, and free, prior and informed consent (FPIC) often pass unacknowledged or are violated by most national governments and private corporations. In addition, there are huge communication gaps both at vertical and horizontal levels, and powerful community communication systems such as storytelling are fading away. It is important to strengthen traditional communication systems in addition to bringing in new communication methods that have been accepted by indigenous people, like community radio or mobile texting for providing early warnings to deal with climate change externalities.

Working with indigenous youth was one of the key session highlights. Participants acknowledged the need to incorporate IKS into academic, research and development sectors and facilitate the participation of indigenous youths and communities at all levels. For instance, the presentation from Malawi highlighted how IKS have not been documented in Malawi, although some initiatives were taken by youth researchers to mainstream IKS into policies and planning in South Africa. More field-based research and documentation of IKS, and more validation of indigenous knowledge and practices alongside modern science is needed. IKS tends to be more informal, whereas youth know more about modern science. It would therefore be good to find ways to involve indigenous youth in IKS by integrating IKS into modern science.

Apart from direct climate change related hazards and impacts, indigenous people are facing other issues such as land grabbing, reduced access to and control over natural resources, and human rights abuses, which further marginalize them and make them more vulnerable to climate change. The studies documented these issues in South East Asian countries like Thailand, Malaysia, Cambodia, Vietnam and Laos. Although indigenous people have their own customary laws and practices, and in theory many indigenous people and ethnic minorities have control over their lands and territories, in practice many governments do not respect or enforce these customary laws and rights. Indigenous peoples' networks and coalitions have been consolidating their efforts to raise and deal with these issues at national, regional and international levels.

## Recommendations

Based on the presentations from all panellists and the discussions that followed, the following recommendations have been drawn up to protect and promote the rights of indigenous people and vulnerable communities:

- Indigenous people have their own coping and adaptation strategies to deal with climatic hazards and impacts. Since climatic uncertainties and unpredictability have increased over the years, their capacities need to be strengthened with enabling and empowering policies and programmes at all levels.
- Indigenous knowledge and practices in general, and particularly those dealing with climate change impacts, need to be documented. Further research and validation with scientific methodologies must be conducted to recognize this and attract youths, researchers and policymakers to utilize this knowledge. For instance, joint research with indigenous peoples and public research institutions could be conducted. In addition, validation processes should be 'indigenous people friendly' and specific to national and local contexts and situations.
- The value of indigenous peoples' knowledge and adaptation practices has been proven through generations of use. Research and academic institutions must recognize this and intellectual property rights must be respected.
- Participation of indigenous people and vulnerable communities must be enhanced to exchange experiences and learning, build the capacities of indigenous people and ethnic minorities and influence policymaking.
- National, regional and international networks of indigenous peoples and ethnic minorities need to be strengthened to conduct awareness raising, capacity building, and policy advocacy at all levels.
- Indigenous peoples' issues and concerns related to climate change should be addressed by national governments, and their knowledge and practices should be integrated into National Adaptation Programmes of Actions (NAPAs) and national adaptation plans.
- Respecting their right to free, prior and informed consent (FPIC), indigenous people and ethnic minorities should be consulted before any adaptation, mitigation and development projects are implemented in their territories.



- Indigenous peoples' representatives should be represented on the committees and mechanisms related to climate change adaptation and mitigation at all levels.
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## Presentation highlights

### **Climate risks, vulnerabilities and climate change adaptation practices in selected communities of indigenous people in Asia**

By Nasiri Sabiah

- Mapping of indigenous/tribal peoples in the study sites
- Indigenous peoples' issues and concerns relating to climate change adaptation
- Indigenous peoples' adaptation measures and practices
- Recommendations

### **Building resilience to climate change impacts for ethnic communities of Backan province base on their indigenous knowledge and experiences in agricultural production**

Le Thi Hoa Sen

- Climate change impacts on ethnic minorities in Vietnam
- Roles and approaches of indigenous knowledge in agricultural development and adaptation
- Adaptation strategies including crop production models suggested by local people
- Lessons learned and recommendations

### **Indigenous knowledge and practices in agriculture production of ethnic minorities adapted to climate change in Bac Kan province, Vietnam**

By Tran Van Dien

- Rationale of indigenous knowledge practices to deal with climate change
- Development of crop models for climate change adaptation (especially based on cold resistant, drought resistant and agro-forestry models)

### **The use of information and communications technology for CBA in the Pacific: experience with tools that help plan and implement CBA at the local level, and communicate lessons and experiences between communities and amongst decision-makers.**

By William Tabuabe Atu

- CBA communication methods
- Resource monitoring
- 3D modelling
- Participatory conservation mapping integrating local knowledge and GIS data, which increases the capacity of local stakeholders, and supports community rights

### **Driving the interface through renewed climate change adaptation research: youths and indigenous knowledge systems in Malawi**

By Maxwell Mkondiwa

- Country context relating to climate change policies and programmes in Malawi
- Status of research on climate change and indigenous knowledge systems
- Youth perspectives in climate change research
- Ways forward

### **Climate change adaptation and resilience by nomadic tribes in Iran**

By M Taghi Farvar, Khadija Catherine Razavi and Mahmoud Bahadori

- Brief highlights on nomads
- Reasons for seasonal migration
- Climate change impacts on nomads
- Mechanisms by which nomadic tribes in Iran are adapting to climate change

## Contacts



**Parallel session 11: Vulnerable and indigenous communities**

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## **Parallel session 12: Economics of CBA**

The main areas presented in this session on the economics of CBA were stakeholder focused cost-benefit analysis, insurance premiums and evaluating the impact of climate change using Computable General Equilibrium models (CGEs). The stakeholder focused cost-benefit analysis is a bottom-up methodology estimating the costs and benefits of climate change adaptation. The first presentation focused on the steps this methodology uses and how they can be applied to climate change adaptation. The second and third presentations described case studies from Malawi and Nepal based on this stakeholder focused cost-benefit methodology. This provided a very good flow of presentations. The fourth presentation dwelt on financing and insurance for climate change adaptation and the fifth presentation provided an alternative methodology for evaluating climate change impacts using (top-down) CGEs. The last presentation was a case study of a weaving factory in Bangladesh that has changed its technologies to adapt to climate change impacts.

### **Unlocking the power of local knowledge to cost climate change adaptation: a novel framework for costing CBA**

By Abrar Chaudhury

Adaptation to climate change has become a key theme in the strategy, planning and policy of global institutions, governments and NGOs across the world. Costing adaptation is a complex process involving multiple actors with differing value systems and a spectrum of possible adaptation strategies and pathways. Current top-down costing approaches can lead to misallocation, with global funds not always reaching where they are most needed by vulnerable communities. This presentation introduces a new analytical costing framework called Participatory Social Return on Investment (PSROI). PSROI provides a structured framework for multi-stakeholder adaptation planning, and the subsequent selection and valuation of appropriate adaptation strategies. The broader social, economic and ecological impacts of these interventions are explored and valued in participatory processes. The approach taken is strength-based, building local capacity and generating stakeholder buy-in. The financial valuation which PSROI can generate provides communities with an additional tool for examining and prioritising adaptation actions, and provides policy makers with valuable local contextual information to direct funding to initiatives identified and valued by local communities. This PSROI framework has been successfully applied in subsistence farming communities in East and West Africa. Its appropriateness, robustness and transferability has been tested through application in multiple, varied contexts.

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### **Multiple stakeholders' economic analysis in climate change adaptation. Case study of Lake Chilwa Catchment in Malawi**

By Rodney Witman Lunduka

Lake Chilwa basin is a very important catchment that is providing livelihoods to more than 77,000 people living in the wetland. The basin is endowed with a number of resources ranging from fish, birds building materials (for houses and boats, mats, fish traps, bird traps and baskets). Water is used for irrigation, transport and domestic purposes. Different stakeholders therefore utilize and manage the catchment, some of whom have different objectives that conflict with each other. Due to increased drought incidences as a result of climate change, irrigation is being promoted resulting in more land clearance in the catchment and the diversion of water from rivers flowing into the lake. This has increased soil erosion causing siltation in the lake thereby reducing fish populations and also reduced water flowing into the lake hence contributing to lower lake levels. A multi-stakeholder analysis was conducted in the catchment to evaluate the economics of climate change adaptation. Results show that irrigation objectives of increasing rice and maize outputs are reducing fish populations and hence affecting fishing communities along the lake. To adapt to falling lake levels and fish stocks in Lake Chilwa, fishermen have begun hunting birds and doing craftwork with lake reeds to supplement their incomes. Exploitation of these natural resources puts pressure on the lake's ecosystem services and biodiversity. Planning for climate change adaptation in this catchment area therefore needs a thorough assessment of environmental and policy issues and all actors' needs and livelihood strategies. All user groups need to be involved to ensure that plans include all stakeholders interests.



## **Economics of climate change adaptation: case study of Rupa Lake Watershed in Nepal**

By Arjun Dhakal

The livelihoods of people sharing the same watershed are highly interlinked. If climate change effects appear in the watershed, it affects the whole livelihood system of people of that area. The costs and benefits of any adaptation interventions are also common amongst the stakeholders. This study analyses the issues of adaptation in Rupa watershed, identifies potential needs and benefits, including mechanisms for sharing costs and benefits amongst different stakeholders using the stakeholders focused approach (SFA). The livelihoods of the residents of this watershed area are based on agriculture, which is likely to suffer from extreme weather conditions such as heavy rainfall, landslides and increased siltation. Downstream from the lake communities are also earning from lake fisheries through local cooperatives and also sharing benefits with communities upstream from the lake. This presentation analyses the monetized and non-monetized costs and benefits of adaptation to extreme weather conditions and recommends project specific investments for cost sharing and sharing responsibilities. It also analyses the social, economic and ecological impacts of proposed adaptation measures. Beyond financing, this work provides guidelines to local level planners and tools for examining and prioritizing adaptation actions in the context of managing the entire watershed.

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## **Insuring community based resilience?**

Margaret Arnold

With the promise of strengthening the resilience of the poor, index insurance and other market-based risk financing mechanisms have received a great deal of attention for their potential role in supporting community level adaptation to climate change. With little access to formal insurance mechanisms, poor households make use of other consumption-smoothing and risk management strategies such as taking out high-interest loans or defaulting on existing loans, selling assets and livestock, or engaging in low-risk, low-yield farming to lessen their exposure to extreme events. These sub-optimal coping strategies often leave poor households locked into the poverty cycle. Community support measures can break down in times of disaster, which affect entire communities. Reliance on government or donor assistance is often inadequate, as this support can be *ad hoc*, poorly targeted and slow in disbursing. Insurance and other market-based risk financing instruments may help to break this cycle by providing low-income households, farmers and businesses with rapid access to post-disaster liquidity, thus protecting their livelihoods and providing for recovery.

Market-based risk financing instruments, such as index insurance, promise to help reduce poverty and build climate resilience by: (i) enabling productive investment; (ii) protecting the livelihoods and assets of the poor; and (iii) promoting investment in risk reduction. Yet there are still significant unanswered questions about balancing affordability and utility for households struggling to meet daily needs and maintaining the long-term viability of these programs especially in the face of increasing losses due to climate and disaster risks. This presentation describes an ongoing initiative to evaluate experience to date with market-based risk financing instruments that aim to target poor households in support of CBA. Case studies include Ethiopia, India, Mexico and Mongolia.

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## **Implications of climate change for economic growth and development in Vietnam:**

By Vu Xuan Nguyet Hong

Like many countries, Vietnam is concerned about the potential implications of climate change for economic growth and development. This presentation provides a highly comprehensive analysis of climate change impacts for Vietnam. It focuses on implications for economic growth and development up to 2050. Three elements of the analysis merit special mention. First, a bottom-up structural approach is employed. The analysis relies upon a series of structural models that link climate outcomes to biophysical and eventually economic outcomes. Second, relative to most impact analyses, the approach is highly comprehensive incorporating six important impact channels: crop yields, irrigation water availability, hydropower production, road infrastructure, sea level rise and cyclone strikes. Finally, the analysis incorporates climate projections from 56 General Circulation Model (GCM) runs employed for the Fourth Assessment Report of the





Intergovernmental Panel on Climate Change. The combination of these three elements is unique and affords a very detailed examination of the implications of climate change for Vietnam.

The research comes up with the following climate effects likely to be observed up until 2050. Temperature rises of about 1-2 degrees centigrade are expected. There will be relatively mild effects on precipitation and evapo-transpiration. The combination of a light decrease in rainfall and a slight increase in evapo-transpiration will lead to a mild 'drying' of a wet climate. Expected changes in runoff are also mild and about as likely to be positive as negative (median slightly negative). These changes are typically not sufficient to generate large declines in agricultural production nor are they projected to generate (in most instances) very large increases in events, such as inland flooding, that would threaten infrastructure. In addition, hydropower production will likely be negatively affected but not to such a degree that a major brake on economic growth will be observed.

Sea level rise delivers some of the largest predicted effects, especially when the level is high and in combination with cyclone strikes. The Mekong River delta is particularly vulnerable with significant areas submerged by 2050 under the high sea level rise scenario.

Overall, climate change worsens the economic growth prospects of Vietnam up to 2050. Nevertheless, in a macroeconomic sense, the effects, up to about 2040, are not particularly large. Other factors are likely to be more important determinants of growth rates over at least the next few decades.

As the net present value numbers indicate, the effects of climate change are appreciable and adaptation policies are merited. This adaptation agenda includes:

- investment in information systems to monitor climate change impacts including improved geographic information systems with emphasis on elevation data for low lying provinces, river flow, and close following of global sea level rise projections;
- development of heat resistant crop varieties;
- improved efficiency of water use; and,
- changes in design standards for infrastructure such as roads to handle a warmer and more variable climate.

The most serious policy choices concern the implications of sea level rise combined with cyclone strikes. There are essentially two pro-active options. First, the government of Vietnam could incrementally channel economic activity towards higher ground. Second, the government could invest in protective infrastructure. These are not mutually exclusive options and decisions in response to climate change do not need to be made immediately. Nevertheless, while more research is required, the available evidence indicates that a gradual channelling of activity to higher ground is more likely to be economically efficient and is certainly less risky. A major detractor to protective infrastructure investments is that they raise the stakes. Both the costs of protective coastal infrastructure and the capital that will inevitably be placed in the shadow of that protection are vulnerable to cyclone strikes of sufficient magnitude. Hence, with a protective strategy, there is always the possibility that one will lose a great deal alongside the certain costs of building the protective infrastructure. The incremental strategy is gradual and hence efficient, so channelling economic activity to higher ground should probably begin soon, certainly within the next ten years or so, especially if the higher sea level rise projections are to be realized.

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### **A climate resilient handloom factory: a weaver community adaptation initiative in climate disturbed Bangladesh**

By A M Nasir Uddin

Weavers make up one of the major occupational populations of Bangladesh. One million weavers (50 per cent female) use their creative skills in more than 0.30 million active handlooms to produce 63 per cent of total fabric production, meeting 40 per cent of local fabric demands. Another half a million people are indirectly engaged in this industry. It contributes more than 10 billion taka every year.



Most of these weaving industries developed in highly disaster prone areas. Erratic and intensified disasters like floods, heavy fog and drought-like situations compel handloom factories to remain closed for around four months a year. To meet this loss some able owners are converting their handlooms into power looms. This trend contributes to carbon emissions owing to its fuel-based electricity production and consumption. It also means job cuts for wage weavers as it is less labour intensive. On the other hand, increasing lean periods are pushing poor weavers out of this labour-intensive and eco-friendly industry and inducing migration.

Poor weavers in Sirajganj have come up with an innovative architectural solution to keep the handloom sector functional all year round. It is simultaneously low-cost, user-friendly and replicable. It provides a low-carbon development pathway and livelihood security for climate vulnerable communities.

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## Discussion

Session participants asked Vu Xuan Nguyet Hong questions about the choice between investing in protective measures versus moving things inland, and how to address the difficult communication issue of telling people they need to leave places they have lived for a long time. Ms Hong responded that protective measures are very costly, and it is not certain that they would work in more extreme cases of climate change. There may not be one right answer regarding whether it is better to protect or move, and more cost-benefit work may be needed to help compare options. Another session participant queried why the estimate of climate change effects on GDP was so low and whether the estimate included landslide risks, which could have a significant negative impact on GDP. Ms Hong responded by saying that whilst the impact of climate change is very large, the impact on economic growth is very small. Economic growth is measured by a change in GDP from year to year. Every year there are some sorts of negative climate change impacts, so if you compare year by year, GDP will not change by a lot each year.

Margaret Arnold was asked who would pay the premiums for the insurance proposed. It was suggested that it shouldn't be poor people. She was also asked how to ensure that the use of insurance promotes good behaviour and not mal-adaptation. She responded by saying that these issues illustrate why we want to really examine whether risk insurance schemes actually help. In some cases, donors subsidize the premium, but some insurance experts strongly discourage this since it incentivizes risky behaviour. In some cases, people have shown a willingness to buy premiums.

In a comment on the methodology of stakeholder focused cost-benefit analysis, one session participant agreed with issues raised in the presentation about how previous studies underestimate costs since they leave out things such as ecosystem services and residual damages. The challenge is that often what is measurable is not important, and what is important is not measurable. Abrar Chaudhury responded that the stakeholder focused cost-benefit analysis does not necessarily try to come up with a definite figure of costs, but that the exercise can help with prioritization of the costs and benefits of adaptation as it combines both measurable (monetary) and non-measurable (non-monetary) issues. It is easy to estimate financial losses but much harder to estimate the emotional losses from disasters. Mr Chaudhury added that this is a key motivation for the work they are doing. Further work is underway to use the methodology to try to tease out some of the softer costs and capture these other values.

In conclusion, the session chair said that the next step is to test these various cost-benefit analysis methodologies to see how robust they are and try them out on other adaptation strategies and under different climate change impacts and geographical areas.

## Contacts

<b>Parallel session 12: Economics of CBA</b>
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### **Parallel session 13: Gender and adaptation insights through participatory digital photo storytelling**

Participatory Digital Photo Storytelling is a process where those engaged make videos to be used for greater awareness-raising and advocacy. This session taught how to use the software, and more importantly highlighted the importance of using visual tools with the same rigour as the projects in which they are embedded. The session highlighted the importance of whose story is being told to ensure that the most vulnerable people's voices are considered and heard. Addressing the gender dimension of climate change is particularly important when considering the uneven distribution of climate change impacts, in part due to differing roles and expectations created through power relations and rights issues. Furthermore, communities are heterogeneous entities, and the individual stories illustrated through storytelling can help create a larger picture of how communities are being adversely affected and are tackling the impacts of climate change.

This method has also been useful in linking journalists, who are good at the technical aspects of storytelling, with CARE staff, who are good at participatory methods, to help communities identify problems in a participatory manner. However, it should be noted that photo digital storytelling is only one process in wider efforts towards gender equality, and not an end in itself. Nevertheless, this method does contribute to raising awareness of climate change and equips people with the necessary skills to make their own stories after training. This approach is also useful for monitoring and evaluation as it logs where communities have come from, where they have moved to, and where to go next. Faith in conventional printed media may not be the best solution in many cases, and digital photo storytelling is a useful alternative form of communication that recognises that people respond in different ways to various media.

One participant's comments that she found the session useful and was impressed with how easy and accessible the software is for communities to use and how she will use it in her future work. For example see [www.careclimatechange.org/videos/africaalp](http://www.careclimatechange.org/videos/africaalp)

#### **Contacts**

<b>Plenary session 13: Gender and adaptation insights through participatory digital photo storytelling</b>
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## **Plenary session 14: Agriculture**

This plenary session highlighted how adaptation should not only be considered in relation to agricultural production, but also in relation to other dimensions of food security and how to enhance system efficiency - such as addressing issues of nutrition, waste and transport. Moreover, adapting to climate change cannot be seen in isolation. Climate change is a compounding factor which interacts with a number of other stresses faced by farmers, such as informal land tenure, low levels of technology, and farm size. There is a need to draw from the lessons learnt in development over the last few decades in order to understand what can enhance the socio-ecological resilience of communities. Adaptation within the agricultural context should also be considered in conjunction with mitigation.

Presentations provided examples of CBA agricultural programmes in Vietnam and Ethiopia. For example, in the northern mountainous regions of Vietnam, the Food and Agriculture Organization of the UN and the Northern Mountainous Agriculture and Forestry Science Institute is supporting on-farm rice seed production, with a view to reducing labour inputs, and ensuring that varieties used are affordable and suitable for the local context. In the Mekong Delta, the International Fund for Agriculture and Development (IFAD) has recognized the implications of a minimum 30cm sea level increase by 2050, which would result in the loss of 30 per cent of the land under rice cultivation due to seawater intrusion. Adaptation strategies to address this involve working along the salinity gradient to shift adaptation strategies. IFAD plans to introduce a saltwater tolerant catfish so livelihoods are not lost.

A presentation from Ethiopia provided examples of community-based coping mechanisms and adaptation to drought in pastoral areas. This stressed the importance of collaboration between relevant stakeholders and local people and described opportunities to build adaptation interventions on existing traditional knowledge about weather. This traditional knowledge should be integrated into modern weather forecasting systems to meet communities' weather information needs. Vulnerable groups like women have to be given special attention when promoting community-based coping and adaptation strategies.

Discussion highlighted the importance of diversification in relation to CBA and agriculture. That is, diversification of crop varieties, livelihoods (on- and off-farm activities), nutritional intake, technologies and communication strategies – as described below. Research into diversification can help address existing limits to knowledge.

Diversification takes shape in the form of different crops being cultivated to counteract the limits of mono-cultural production, which has been emphasized historically. It was highlighted that 90 per cent of funding in agricultural research and development has gone into a few crop types, such as rice, potatoes, grains and yams. Researchers and practitioners must look at a wider range of crops. And for rice, for example, it is important to look at cultivars other than those that are drought tolerant.

In some cases, diversification may mean a shift to completely different livelihood practices rather than a move to other crops or cultivars. This involves considering factors such as the availability of technology and management practices, cultural appropriateness of the alternative livelihood, and land tenure. Terry Cannon discussed diversification out of farming in the rural non-farm economy (RNFE), which in the city is often called the informal economy. He estimated approximately 30-40 per cent of the rural economy is based on non-farm activities. Further research on opportunities for non-farm activities is needed.

Diversification is also related to the nutritional component of food security. Climate smart agriculture must address the lack of dietary diversity at the household level, tackling deeper issues of malnourishment and stunting. Organisations such as Save the Children are supporting diversification of nutritional intake, by promoting kitchen gardening initiatives in homesteads and schools. A representative from this organisation highlighted how nutritional intake is also affected by changes in household wealth. When considering livelihood diversification we need to consider how food preferences change with changes in household income.

Finally, diversification also needs to occur at the level of communication both between (and within) the scientific and policy sectors. The question was raised of how best to translate scientific knowledge, and how (and when it is appropriate) to combine this with local traditional knowledge. There is much value in building



on the existing knowledge and experience embedded in communities when it comes to developing adaptation plans, but there is also a need to be cautious at times when the situation faced by farmers is fundamentally different to past situations. Diversified means of communication are needed so that information can influence policy processes better. This communication must also be ongoing in order to incorporate new management approaches and technologies.

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### **Rural livelihood diversification and adaptation to climate change**

By Terry Cannon

A significant share of the thinking and ideas on adaptation for the rural economy (including in CBA) is defined in the context of continued (adapted) agriculture. Ideas are framed around different varieties of crops (temperature, drought, saline tolerant) and cropping systems. Little attention is paid to the problem (especially in much of South Asia) to the land tenure systems and power structures that determine access to land (and water). As a result, there is potentially a serious gap in understanding whether existing systems are viable (in terms of access to land, continuing livelihoods, current indebtedness, landlessness – the usual problems of rural poverty and development, some of which lead to distress migration) even without the context of climate change. It calls into question the validity (and fairness) of pretending to assist the adaptation of rural economies that are already in crisis.

There are two potential alternative approaches that need to be explored. The first is whether rural livelihoods can be diversified sufficiently to enable adaptation *in situ* (i.e. within the rural economy) through the diversification of crops and extension to non-farming livelihoods. The second is the need to recognise that in some locations and circumstances, rural agriculture and its livelihoods may become impossible, requiring retreat or abandonment of some areas. This requires exploration of ideas around supported migration, in which adaptation investments are made into support for new livelihoods (available both for the migrants and host communities, for example in small and medium size towns). This presentation focuses on the first of these issues (although acknowledging that it may need to be linked to the second). In particular it explores existing knowledge on the rural non-farm economy (RNFE – also labelled the off-farm economy, income generating activities) as a way to reduce climate dependency of significant numbers of (especially poor) rural people. It will also need to examine the potential for alternative organisational systems for access to land, the use of different forms of employment (e.g. to deal with the needs of landless peasants). This will be assessed and analysed generically, but with reference to the context of Bangladesh and South Asia generally.

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### **Potential commune-based technical options to respond to climate change in Vietnamese agriculture**

By Pham Quang Ha and Nguyen Van Bo

Agriculture plays a very important role in the economy of Vietnam engaging more than 70 per cent of the population and with a total GDP contribution of 20-24 per cent. Scientists, local authorities and farmers alike have all identified signs that climate change is affecting agricultural production and farmer income. As part of a commune-based solution to climate change there are many promising adaptation and mitigation crop production options worth considering, such as: integrated pest management; integrated cropping management; system rice intensification and related techniques; minimum tillage; upland soil erosion control; crop residue re-use; mixed cropping in crop production and livestock sectors such as biogas and animal food production and breeding. This presentation provides an overview of survey results on farmer and community-based experiences and options for responding to climate change in Vietnam. These options can lead to sustainable agricultural productivity and also help mitigate climate change. There is a great potential for scaling up these techniques. Extending the reach of technical options proposed can occur with the use of participatory community approaches selected according to local conditions and the differing agro-ecological regions of Vietnam.

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### **Community-based rice seed production and supply: an approach for climatic change adaptation in the northern mountainous region of Vietnam**



By Le Quoc Doanh and Pham Thi Sen

Agriculture in Vietnam in general, and in its northern mountainous region (NMR) in particular, is facing an increasing risk of climate impacts. More frequent and unpredictable droughts, typhoons and floods cause low and unstable crop yields. In this context, with support from FAO, especially under the project entitled “Strengthening Capacities to Enhance Coordinated and Integrated Disaster Risk Reduction Actions and Adaptation to Climate Change in Agriculture in the Northern Mountain Regions of Vietnam”, the Northern Mountainous Agriculture and Forestry Science Institute (NOMAFSI) has facilitated a community-based rice seed production and supply system in the NMR.

Findings from a baseline study reveal that farming communities currently depend on external suppliers for rice seeds, and thus often face problems caused by poor seed quality and untimely seed supply, especially when extra volumes are required for restoring production after natural disasters. The study also shows that there are valuable traditional agricultural practices for recovering crop production after disasters and for adapting to climate change, for example using diverse pureline rice varieties with good adaptability to local conditions, and the practice of on-farm production, storage and distribution of rice seeds.

Thus, in order to promote CBA in agriculture, NOMAFSI has developed an advanced technology for on-farm rice seed production and supply using Rice Integrated Crop Management. Together with field demonstrations, training sessions were organized for over 500 farmers in 12 communes in Phu Tho, Lao Cai, Yen Bai, Cao Bang, Dien Bien, Bac Kan and Ha Giang provinces. In each of these communes, a farmers' rice seed group was formed with around 20 members. With technical support from NOMAFSI scientists and FAO consultants, some of the farmers' groups successfully developed adequate management and functioning rules. Their capacity on various issues, namely quality rice production and storage, access to production inputs, marketing and developing links with formal crop seed suppliers, planning and making decisions, has also been developed. Consequently, with the goodwill and commitment of farmers, strong support from local authorities, technical assistance from scientists, and collaboration from formal seed suppliers, models of community-based rice seed production and supply have been developed and are now helping to close the gap in rice seed supply and demand in some communes.

This presentation explains attempts to develop sustainable functioning community-based rice seed production and supply as an option for climate change adaptation in the northern mountainous region of Vietnam.

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### **Strengthening adaptation to climate change in Vietnam’s agriculture and rural development sector: making IFAD’s country strategy for Vietnam climate smart**

By Roshan Cooke and Triệu Văn Hùng

**Overview:** due to high population concentrations in the Mekong and Red River Deltas, the Intergovernmental Panel on Climate Change Fourth Assessment Report characterized Vietnam as a “hotspot of key future climate impacts and vulnerabilities in Asia”. Agriculture has made a central contribution to Vietnam’s economic transformation into an emerging market economy of lower middle-income country status, with rising productivity contributing to improved rural incomes, labour release to the non-agriculture sector and export growth. Despite these economic shifts, however, 70 per cent of the population continue to live in rural areas and derive their livelihood from agriculture, which remains an important source of job creation for the large rural labour force. Climate change threatens these hard fought gains and in particular the chances of the poorest to escape and remain out of poverty. Adaptation to climate change is a relatively new area for the International Fund for Agricultural Development (IFAD) in Vietnam, and as such a concerted effort was needed to make IFAD’s US\$120 million Country Strategic Opportunities Program (COSOP) 2012 – 2017 for Vietnam “climate smart”.

**Methods:** Over the past year, through work undertaken in partnership with the Climate Change Adaptation and Disaster Management Unit of Kyoto University under the aegis of the Ministry of Agriculture and Rural Development (MARD) with key national research institutes working on climate change and environment related issues, NGOs, ministry of environment and bilateral and multilateral donors and through field visits and work with communities, an in depth analysis of climate change impacts on the agriculture and rural development sector was undertaken and possible areas of intervention identified.



**Results:** an important innovation in the COSOP is the inclusion of climate change risks in the implementation of the IFAD-supported country programme. The following three strategic objectives were defined:

1. Accelerate transition in the rural sector toward sustainable market-led development in poor provinces and associated regions;
2. Substantially improve poor rural women's income from commodity and labour markets;
3. Enhance the resilience of poor rural households' natural resource and economic asset bases to climate change.

A pipeline of four projects was developed worth approximately US\$120 million with three of them pursuing different aspects of adaptation and one of them specifically addressing adaptation issues in the Mekong Delta (to be financed from IFAD's Adaptation Programme for Smallholder Farmers – ASAP). Of importance also is the strengthening of MARD's Office for Climate Change Adaptation and Mitigation (OCCA) for undertaking the following:

- (i) Foster an effective policy dialogue mechanism on climate change in agriculture and rural development among technical departments within MARD and MARD's Leaders; provincial authorities and MARD technical departments/Leaders (policy making bodies); NGOs and research institutes and MARD's technical departments (policy-making bodies); and MARD and international community (development partners); and
- (ii) Review MARD's key climate change documents, particularly, the Ministry's Action Plan for Climate Change and the key policy options, strategies, its financing mechanisms for implementation, including public and external financial support and identify focus areas of action as well as prioritized projects.

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### **Community based coping mechanisms and adaptations to droughts in the Borana pastoral area of Southern Ethiopia**

By Dejene Negassa Debsu

This presentation is based on field research conducted in the Borana area of Southern Ethiopia during April to June 2011 and addresses interactions between droughts, pastoralism and indigenous institutions. The research looked at the role that local institutions play in helping communities manage climate variability, particularly drought, and the way external interventions interact with local institutions to build adaptive capacity. The Borana live in one of the most drought prone areas of the country and they combine pastoralism with farming for their subsistence. The research methodology consisted of a literature review as well as participatory field research, focus group meetings, in-depth interviews and life histories. Key findings of the research show that: (1) there is both perceived and observed climate variability in the study area (2) external interventions affect local institutions in a complex way, by strengthening some coping mechanisms and adaptations and weakening others (3) and new adaptations are taking place in pastoral areas, some of them through external interventions and others through local innovations. In general, while indigenous institutions play a crucial role in climate change adaptation, more collaboration between relevant stakeholders and the local people is needed to enhance their adaptive capacity.

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### **Parallel session: Information exchange between Vietnamese journalists and climate adaptation experts**

To strengthen the flow of information about climate change at CBA6 in Vietnam, this session brought together seven national journalists and seven climate change specialists. The purpose was to hold a roundtable dialogue where individuals provided their points of view regarding communicating CBA in Vietnam. They discussed barriers to better communication about CBA and pledged to work together more closely in the future.

The experts agreed that a major challenge was that people had little awareness of climate change and little access to information. Gaps between data-rich scientific language and the way normal people communicate exacerbated this challenge. While formal education has a role to play for young people, participants felt that informal extra-curricular activities might be more effective. Choosing the appropriate approach needs careful planning, however, in order to equip youth and children with information, knowledge and life skills so that they can become more adaptive in the medium and long-term future.

Some local researchers and practitioners emphasized the importance of community participation. Community members have been naturally adapting to changes in order to survive, so indigenous knowledge should be shared and integrated into all replicable adaptation models. Vietnam's marginalised ethnic minorities who live in remote highland areas are even less informed about climate change than urban citizens. They speak their own languages, which makes it hard for experts and journalists to communicate with them. One proposed solution is to disseminate successful adaptation models in ethnic languages and to use local communicators such as youth and local NGO staff.

One participant mentioned the hidden risks in vulnerable sectors such as health that have been not communicated properly. It is also challenging to communicate the implications of climate change policies to public audiences. The journalists pointed out that existing mechanisms for scientists, government and NGOs to share information with the media were weak. Some ministries publish information online but it is not up-to-date. Meanwhile journalists are rarely invited to attend and report on meetings about climate change. The journalists stressed that each media outlet has its own priorities, such as economics or rural affairs, and that these do not always fit with the kinds of information NGOs or policymakers want the media to cover. Reporting can be difficult as climate change-related information is not usually breaking news.

Another challenge for journalists following this topic is the uncertainty of climate change. Scientists still hesitate to announce up-to-date hypotheses or findings about climate change, because decision making based on uncertainty is risky, both at individual or national levels.

The roundtable discussion covered two main issues relating to communicating CBA in Vietnam: what and how. For 'what', media needs to be frequently fed sources of information from practitioners and helped to choose which models to introduce into their articles. For 'how', it is now time to change the way both NGOs and the media tell stories about climate change. Stories and issues should be closer to people's interests and concerns, with reasonable numbers, factsheets and other kinds of relevant data. There should be mechanisms to convey the reactions and responses of audiences to communicators. Participants mentioned the limited awareness and capacity of NGOs on climate change communication and the media. Even if NGOs provide information – through newsletters or personal contact with journalists – the journalists cannot usually afford to travel to follow up the story. One solution, they said, would be for NGOs to include funding to support media reporting when they design their projects.

Some communication officers at NGOs also shared their experiences and success stories regarding involving media in project implementation, by preparing good documents to inform journalists about their ongoing projects and pointing out the most innovative aspects of activities so that media can more easily add value from a communication perspective. Session participants proposed several actions to bridge the gaps they had identified. Firstly, NGOs should set up a blog to share information with journalists more effectively. Secondly, the Climate Change Working Group – which gathers staff from across a number of civil society organisations in Vietnam – should hold brief informal meetings with Vietnamese journalists every two months to explain what work they are doing and discuss emerging issues. And thirdly, the NGOs should hold workshops, talks and field trips to further expose journalists to climate change and how communities in Vietnam can adapt.



## Contacts

**Plenary session 14: Information exchange between Vietnamese journalists and climate adaptation experts**

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## Plenary session 15: Disaster risk reduction

The session on disaster risk reduction was divided into two sections. The first contained three presentations focusing on country-specific issues in Vietnam and Mozambique. Luong Quang Huy explained how scientists are in part to blame for the confusion resulting from a profusion of different terms and names, which makes life difficult for policymakers in Vietnam. For example, 'growing to be green' and 'making our growth green' are two different processes. When we put community needs as the centre of CBA, it leads us to activities that are essentially in the 'growth first, green later' category, which confuses policymakers even more. There are also differences between disaster risk reduction and CBA, but this presents opportunities to learn from prior experiences.

Dulce Chilundo described how the major disasters over the last 30 years in Mozambique have been droughts and floods and how the work of the Mozambican government has focused on the community level and included teaching, training and empowerment. Government officials sit with the communities, discuss their problems, and help them to solve them.

Session participants raised a number of issues in response to the first three presentations. One felt it should not be a question of top-down or bottom-up and that each approach has value and should complement the other. Over the last five years or so, humanitarian organisations have become increasingly involved in development and *vice versa*. The same thing is happening in policy and government. In relation to climate change, one participant said it was not clear who was primarily in charge of the issue. Community-based disaster risk reduction activities have been occurring in Pakistan since 1998, and one participant wanted to know if there were any good examples of sustaining a programme for at least five or ten years.

In response to a question about how CBA programmes are coordinated between the two relevant ministries in Vietnam, the reply was that there is definite difficulty with coordination. Disaster risk reduction involves short-term objectives, but for climate change, these may be longer term. The ministries have to work together to understand what they are dealing with. Both are working quite well together on capacity building and raising awareness. Things are well-coordinated at the central level but not the local level.

The second part of the session involved two presentations on enhancing community adaptive capacity and assessing the disaster preparedness of Vietnamese small and medium enterprises. Bruce Ravesloot stressed that often what is important is not what is said but how it is communicated. Within CARE where he works, there was resistance from disaster risk reduction colleagues when they were told to do things they had been engaged with for a long time differently. The 'Do it Yourself' approach - retaining all expertise 'in-house' in an organisation - is problematic. We must not forget about the value of partnerships. Adaptation involves a great deal of conceptual work, while disaster risk reduction is more practical and rooted in on-the-ground experience in CARE. This can lead to misunderstandings when the two groups try to work together. CARE is looking to shift from projects to programmes and is working to integrate learning into institutions and plans. We need to quickly go past the conceptual underpinnings and get to actual practical issues.

Thanh Nguyen Tri explained how small and medium enterprises get badly impacted by natural disasters, but that most climate change adaptation and disaster risk reduction projects still do not engage them. Many businesses are not taking adequate measures to prepare for disasters.

Discussion following the second part of this session revolved around two key issues. Responding to a query about whether disaster risk reduction is separate from climate change adaptation or whether it should be integrated into adaptation activities, Bruce explained that it could be argued both ways. Experience in CARE suggests that if you want to integrate, you need to find a starting point. Perhaps integrating climate adaptation into disaster risk reduction, where there is already a lot of existing work, is better than the other way around.

In response to a question about whether the actual financial losses per year had been calculated over time for small and medium enterprises, Thanh Nguyen Tri explained how her research sent questionnaires to businesses, but not all answered. Before the assessment, she worked with various stakeholders and local partners to choose what questions should be given and set up indicators to assess losses from natural disasters.



## **Opportunities and challenges in formulating policies for CBA in Vietnam**

By Luong Quang Huy

Vietnam is globally recognized as one of the most disaster-prone countries in the world. Climate change has amplified and altered the frequency and magnitude of extreme events throughout the country, making Vietnam highly vulnerable to both disasters and climate change impacts. The Government of Vietnam has integrated community-based disaster risk management into its socio-economic development plan. Climate change adaptation, however, remains a challenge to deal with from central to local levels.

The presentation discusses opportunities and challenges for formulating CBA policies in Vietnam from the perspectives of scientists and policy makers but also communities. Findings from various studies throughout the country are described to explain the implications of adopting CBA, from planning through to implementation processes. The presentation then explores opportunities for formulating effective policies to support CBA in some of the major economic sectors and regions of Vietnam as well as the challenges this would impose on the process of implementing adaptation measures at grass-root levels. The need for capacity building and further research to support the evolution of policies over the years to come is also analysed and discussed.

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## **Community-based disaster risk management in Vietnam: some lessons learnt on communicating disaster risk reduction and climate change adaptation**

By Dang Quang Minh

The Government of Vietnam has long recognized the crucial importance of community based approaches to addressing disaster risk. Since the late nineties, lessons have been learnt from numerous activities conducted by international organisations and the Red Cross in many parts of the country.

In 2009, in the context of the increasingly adverse trend of natural hazards and climate change and the urgent need to raise awareness about disaster risk at all levels of management and for the local people, the Government issued Decision 1002 for the implementation of the program: 'Community awareness raising and community-based disaster risk management (CBDRM)'. The program to 2020 has a total budget of US\$53.5 million, of which 55 per cent is from the State, 40 per cent is expected from international organisations and five per cent from the people.

With activities to be conducted in the coming years, the State will facilitate and co-operate with international organisations to support community awareness-raising and the effective coordination and organisation of CBDRM. In particular, the focus is on: education, training, skills training for government officials at all levels and of local people; gradually developing and supporting the use of a range of disaster management tools - including risk maps, community-level early warning systems, community planning for disaster response, etc. - to strengthen and build community initiatives in disaster risk reduction (DRR) and climate change adaptation (CCA).

After nearly three years of implementation, the initial results achieved include:

- National implementation guidelines
- A five year implementation plan
- Comprehensive DRR/CCA training materials
- Over 50 trained trainers from national and sub-national levels
- Awareness raising of government officials at the provincial and lower levels in ten provinces
- The development of training materials for people in the communes and villages
- Monitoring and evaluation guidelines and framework
- The initial formation of technical working groups to direct implementation in some provinces.

The programme has benefitted from a close working relationship with the UNDP, INGOs and the Red Cross under the CBDRM Technical Working Group (co-chaired by the Disaster Management Centre and UNDP).



Already much has been learnt and the government has faced a number of challenges, many of which we consider to be relevant to DRR/CCA stakeholders including:

- **Ambitious nature** – need competent, experienced human resources at all levels to implement the programme
- I/NGOs and Red Cross societies have **tremendous experience** – how best to capitalize on this?
- **Coordination** – many players, differing approaches, established relationships – coordination mechanisms remain unclear
- **Standardized approaches** – yet designed to fit local context
- **Timeframes** - of different projects – government of Vietnam, I/NGOs, Red Cross programmes will be starting/on-going at different times
- A **massive task** in providing local officials with CBDRM, DRR and CCA skills in a short period – community based approaches take time!
- **Leadership** from the government of Vietnam – necessary to coordinate different initiatives on a nationwide basis if scaling up is to be achieved
- **Active involvement** of related Ministries – is necessary as CBDRM, DRR and CCA requires a multi-sectoral approach
- **Gender equality and culturally appropriate issues** - need to be mainstreamed in community-based disaster risk management, DRR and CCA
- Ability to **respond** to emerging priorities – necessary in a complex and dynamic global and national context
- Long-term **impact and sustainability** of the results – yet to be seen and requires a comprehensive monitoring and evaluation framework and well understand guidance to ensure that lessons are learnt and programmatic changes made as such lessons and practices are important for the effective implementation of the program throughout the 6,000 communes around the country.

The integration of DRR and CCA is important:

- The National Platform for DRR and CCA that the government will establish later this year will provide opportunities for regular *consultative group meetings to share good practice*.
- The Socio-Economic Development Plans at national and sub-national levels need to ensure that DRR and CCA are incorporated and *driven by local level risk assessment and planning*, in addition
- A more holistic approach to risk reduction and adaptation for the construction of large scale infrastructure development, e.g. dykes, residential clusters is required *through participation of local people in decision making process*.

Overall, through its initial experiences, the government recognizes the vital importance of sharing learning and good practice amongst DRR and CCA practitioners that has informed the CBDRM programme to date. Much has already been achieved in Vietnam and while much remains to be undertaken, this is best done through communicating effectively our challenges and successes in the implementation of DRR and CCA.

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### **The Mozambican Government: toward interventions that support CBA**

By Dulce Chilundo

Over 80 per cent of Mozambique's population depends on small-scale, rain-fed agriculture. The best soils are located in the country's extensive network of low-lying floodplains. Mozambique is subject to frequent drought periods, particularly in the internal southern and central regions, while cyclones regularly strike coastal districts in the summer. In 2000 widespread flooding in southern regions of the country resulted in 700 deaths, 491,000 displaced people and a million dollars worth of damage.

The National Institute for Disaster Management (Portuguese: Instituto Nacional de Gestão de Calamidades - INGC) was the initial response of the Mozambican Government to mitigate the vulnerability of people directly affected by climate extremes. The uncertainty that comes with climate change requires that INGC efforts go beyond humanitarian responses and this presentation will cover the interventions under INGC leadership that are improving community capacity to respond to climate variation and change.



The presentation will cover:

- The INGC role as a national coordinator, pooling together government institutions, INGOs and donors to ensure timely and effective responses to natural disasters through the National Centre of Operations. This includes the development of community committees for disaster management.
- The INGC responsibility for developing interventions that interact directly with communities, providing new ways to generate income based on local knowledge and skills and making use of the best natural resources management possible.
- The INGC commitment to partner with organisations to do community level research to better understand adaptive capacity and develop processes and tools to ensure that national and local level planning processes consider the need to create a positive environment based on adaptive capacity. The Africa Climate Change Resilience Alliance (ACCRA) has partnered with INGC, focusing support on informing decision making and planning.

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### **Enhancing community adaptive capacity through innovative capacity strengthening on climate-smart disaster risk reduction**

By Bruce Ravesloot

Despite significant investment in disaster risk reduction in many countries in Asia and the Pacific, there remain many challenges in developing community resilience to disasters and increasing community adaptive capacity to longer term climatic change. In many countries, poor linkages between institutional arrangements persist. Roles and responsibilities between national and local government, within local government, and between local government and communities are not clear. Moreover, the many different approaches used by local level actors and the lack of standard operating procedures are confusing and make it frustrating for local government officials to engage. The lack of clear models for multi-sectoral partnership has resulted in a low level of awareness and common understanding of concepts, and often leaves local officials, community leaders and volunteers unclear as to what their roles and responsibilities should be in tailoring disaster and local adaptation plans to the differential needs of vulnerable communities and households. In most cases preparedness and response strategies as well as local development policies do not yet include a focus on climate change impacts, and most disaster risk reduction (DRR) interventions are by design not resilient to climate change.

Capacity development of local response actors to address these challenges is severely hindered by the lack of quality technical and capacity building material in the local language. This prevents access to essential information and experience at the local government and community practitioner levels where English-language skills are limited. Furthermore, translation is only a first step. The resources must be reviewed by national stakeholders at all levels and adapted into appropriate training material and tools. To meet the current lack in culturally and linguistically appropriate, comprehensive and coherent climate-smart DRR materials, CARE International developed an innovative regional capacity building program on climate-smart DRR. This program applies an innovative combination of low-bandwidth e-learning modules with face-to-face scenario-based training, with follow up support for development of key materials in local languages. This process, which started in 2009, currently covers 14 countries in Asia and the Pacific, and has established cross-learning with CARE programs in East Africa and Latin America. The program has already secured funding for expansion with key humanitarian and development partners in the region up until 2013. This presentation will focus on successes, challenges and key lessons learned that will allow session participants to apply and improve on the CARE innovations for local capacity development, and scale out CARE's current efforts.

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### **An assessment of the disaster preparedness of Vietnamese small and medium enterprises**

By Thanh Nguyen Tri

Vietnam suffers every year from many types of natural disasters, most notably from floods and storms, with average annual losses estimated at up to 1.5 per cent of GDP. The country is amongst those most impacted by climate change, and natural disasters are increasingly more intense, frequent and unpredictable. This poses greater risks to people, communities and businesses.



Over the past few years, there has been a substantial increase in new initiatives in Vietnam focusing on local capacity building and community-based response to disasters. Such efforts, however, have not effectively engaged local businesses in disaster preparedness and response, whether as an integral part of community resilience or as a key resource for disaster relief. Given that community resilience depends greatly on the ability of the private sector to bounce back, re-establish production and continue to provide employment to local workers in the aftermath of disasters, business disaster preparedness and response is critical. Most small and medium enterprises (SMEs), however, do not have adequate information or contingency plans for risks associated with natural disasters.

There is currently no program or project on disaster risk management (DRM) for businesses in Vietnam. In response, with funding from the United States Agency for International Development (USAID), The Asia Foundation (TAF) partnered with the Vietnam Chamber of Commerce and Industry (VCCI) and the Center for Education and Development (CED) to carry out a DRM assessment of SMEs in 2011 in the three provinces of Nghe An, Da Nang and Khanh Hoa. The main objective was to capture strengths, weaknesses and challenges for SMEs in DRM, determine the training necessary to improve internal governance and capacity of SMEs in DRM, and identify training beneficiaries. This presentation highlights the key findings from this assessment, grouped into three main parts:

1. Risks faced by SMEs in selected flood and storm affected areas: the survey assessed the type of disasters that frequently cause damage to businesses and the different types and causes of damage to businesses such as the interruption to supply of materials and the disruption of production among others.
2. The status of DRM in SMEs: the survey assessed the organisational structure, personnel, knowledge and understanding of DRM and DRM-related government regulations for businesses, mechanisms for sharing DRM information within and outside the enterprise, and experience in the mitigation of natural disasters.
3. DRM training needs.

## Contacts

### Plenary session 15: Disaster risk reduction

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### Parallel session 16: Monitoring and evaluation

Developmental practitioners have been monitoring and evaluating (M&E) developmental interventions using a diverse set of participatory tools and concepts since time immemorial. Oftentimes it is done by comparing outputs and outcomes with the objectives and targets set by the project in a participatory manner which was successful in the well-understood field of development where boundaries are well defined and baselines stay static for all practical purposes. However, the concept of climate change adaptation is not as mature as that of development, neither are the boundaries as clear, nor are the diverse players involved as fully in agreement on the terms of engagement as those in development. This brings us to a set of challenges for climate change adaptation M&E. These include uncertainty in the nature of impacts over time and at geographical scales, which makes it difficult to pinpoint baselines which are not as static as they would be in a stable climate. The climate change adaptation benefits accrued from adaptation projects are long-term, while most projects are planned and implemented over relatively short periods, and there are different opinions, concepts, contexts and scales in which adaptation takes place.





The overarching questions for M&E of CBA are how far can we use traditional/existing M&E tools for adaptation and what additional concepts/tools are needed for the M&E of adaptation. More specific questions are who decides what should be monitored and evaluated, how this should be conducted, whether different stakeholder expectations of adaptation mean different M&E frameworks/concepts/tools should be used, and how to communicate and ensure that M&E doesn't become a burden on resources.

Session discussion revealed that the same participatory tools that have been engaged in developmental planning could well be used for climate change adaptation M&E. Tools that better integrate different actors and also time and three-dimensional space appear to have greater value for understanding vulnerability and resilience and will be able to capture the most significant changes brought about by a project best. However, we need a stronger conceptual framework within which these tools can be applied and used to communicate the right messages from the evaluation outcomes.

The session clearly showed that conceptual frameworks are better when developed using bottom-up processes, using inductive rather than deductive means, and distilling experiences and messages from the M&E of on-the-ground projects. The primary purpose of CBA M&E should be to support adaptation decision-making by vulnerable communities and their representatives on the ground. But at the same time, information and lessons learned from local projects may be of interest to the wider CBA community of practice including practitioners and donors.

To meet the multiple demands of different information users, some innovative local CBA programmes such as Action Research for Community Adaptation in Bangladesh (ARCAB) and Local Adaptation Plans of Action in Nepal are developing a 'twin track' approach to M&E. This includes both participatory monitoring and evaluation for reflection and learning at the community level, as well as the aggregation of local level information across communities and seeking of common baseline indicators to try and draw more general lessons for informing the wider community of practice on how to best support CBA.

One major limitation of M&E frameworks and approaches appears to be approaching resilience and adaptation *ex ante*, in other words informing project planners what would and would not work with reasonable confidence before the project is designed and implemented. Frameworks/tools developed based only on 'common elements' tend to miss important differences and the reasons behind these differences. However, the Climate Change and Environmental Degradation Risk and Adaptation assessment (CEDRA) pilot programme appears to have overcome this limitation to a certain extent by putting emphasis on participative processes leading to adaptation action identification. This programme also recognizes the fact that communities are not just facing climate change but many other issues and it means to address all these issues in the M&E framework.

The Participatory Monitoring, Evaluation, Reflection and Learning Manual developed by CARE and the International Institute for Environment and Development addresses this challenge by emphasizing the need to include climate risk tracking that incorporates both past and anticipated climate trends as part of any M&E framework. In doing so, it is hoped that both highly adaptive and also maladaptive investments can be recognized earlier and resources allocated accordingly.

The session clarified that communities have to be the ones who determine what needs to be measured and evaluated. However, it was observed that communities usually tend to focus on immediate responses and that participatory adaptation interventions should help them see that such short-term responses will not help much for climate change adaptation.

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### **Enhancing adaptive capacity through participatory monitoring, evaluation, reflection and learning (MERL) for CBA**

By Jessica Ayers and Tine Rossing

Despite the increase in attention to and practice of CBA, there remains a lack of participatory, practical, replicable and relevant methodologies for measuring, monitoring and evaluating changes in vulnerability and adaptive capacity to generate evidence of successful CBA. In response to this gap, an Experts Working Group



was convened by CARE in partnership with IIED in February 2011, to develop a participatory monitoring and evaluation (PM&E) framework for local CBA. This framework is intended to be an open-source PM&E methodology that can be used for and by vulnerable communities, supported by planners, practitioners and policymakers across the field, to inform their adaptation planning and implementation.

The resulting framework is a Monitoring, Evaluation, Reflection & Learning (MERL) tool primarily intended to support adaptive decision-making in vulnerable communities. The framework presents a participatory methodology for developing and monitoring against CBA indicators, and in doing so provides a new platform for local stakeholders to articulate their own needs, which is a fundamental part of building adaptive capacity. The dual learning and downward-accountability functions of the MERL framework for CBA present an opportunity for building and measuring changes in local adaptive capacity and for facilitating the measurement of 'effective adaptation' that can inform the monitoring and reporting needs of stakeholders across scales. The framework also responds to the need for continuous feedback and joint learning and communication in order for CBA to be flexible in light of the challenge of uncertainty. When M&E is carried out in a participatory fashion it enables an ongoing dialogue with and within communities as part of the promoted continuous learning and reflection process.

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### **Adaptive resilient development - learning from CEDRA Climate Risk Assessment pilot programme**

By Mike Wiggins

Tearfund UK have completed piloting their Climate Change and Environmental Degradation Risk and Adaptation assessment (CEDRA) across ten countries over three continents. This presentation describes learning from their evaluation assessment of seven of these countries (link: <http://tilz.tearfund.org/Topics/Environmental+Sustainability/Learning+and+Evaluation.htm>), which demonstrates that local climate change adaptation cannot be undertaken independently of local development or disaster risk reduction programmes. Successful adaptation must be integrated into local development plans for success. The presentation gives an overview of where the CEDRA process has been piloted and presents key learning that has been integrated into the updated version of CEDRA, launched in April 2012.

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### **Challenges and ways forward for researching CBA: ARCAB experiences**

By Nazmul Huq and Sumana Tanchangya

The presentation discusses the fundamental challenges of defining and delivering CBA learnt from an innovative long-term action research project called Action Research for Community Adaptation in Bangladesh (ARCAB). ARCAB aims to generate scientific evidence for CBA with the involvement of several local, national and international partners. It focuses on five major ecosystems in Bangladesh in order to promote sustainable CBA mechanisms. It engages different partners, such as international NGOs as action partners, national and international research organisations as research partners, and capacity development partners. Most partners are defining and implementing CBA in their own way and there are significant conceptual and methodological differences in their CBA concepts. Furthermore, none of the organisations deploy monitoring measures for measuring and monitoring CBA delivery. ARCAB finds these conceptual, methodological and implementation distortions a major constraint for defining a widely acceptable definition of CBA and associated methodologies. On the positive side, however, the differences and commonalities have provided fertile ground for crystallising a M&E framework that eventually emerged as the ARCAB M&E Framework. The presentation introduces a roadmap for the ARCAB approach, which aims to reduce the conceptual gaps amongst implementing organisations in order to deliver sustainable CBA actions and interventions.

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### **Building the resilience of communities and ecosystems to the impacts of climate change in the Pacific: lessons from a project partnership**

By Robyn James

Many CBA activities are initiated and implemented through projects, and facilitated by NGOs and development agencies, with various partners, contractors and collaborators. Many aid projects typically have a short



timeframe (less than three years), require a detailed upfront logframe, and operate using fixed budgets, schedules, and compliance and reporting requirements. All of these characteristics can be constraints when addressing long-term and very real issues for communities in the countries where The Nature Conservancy works.

In 2010, The Nature Conservancy-led AusAID funded project 'building the resilience of communities and their ecosystems to the impacts of climate change in the Pacific' commenced, with a short first phase timeframe of less than two years. This first project phase, which ran until March 2012, was useful in highlighting the key successes and shortcomings of a project-based approach to CBA in Pacific Island countries. Successes included:

- Concerted partnership efforts
- Willingness of partners and the donor to work at the pace and capacity of communities and local civil society groups
- Flexibility in direction and prioritisation/weighting of project interventions
- Focus on participatory tools and evaluation of each stage of CBA planning and implementation
- Focus on supporting capacity and motivating local action, rather than outputs and achieving short-term outcomes
- Connection to governance structures, policy and government planning processes at local, sub-national and national levels
- Organic communications and networking structure based on strengthening local voices and exploring information and communications technology to help broadcast lessons and messages.

Lessons included:

- Over-ambitious design and complex structure of the project proposal
- Some level of assumption that external technologies and science would provide answers and solve problems
- Project timeframes are rarely appropriate to 'implement' CBA

Through participatory evaluation, project partners and AusAID's International Climate Change Adaptation Initiative are working on a six-month design phase to ensure continuation of the project taking lessons and experiences into account in Phase II.

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## **Parallel session 17: Food security and nutrition**

This session aimed to highlight some aspects of an often-overlooked issue: the linkages between climate change and food and nutrition security. While the previous session on agriculture addressed one component of food security in detail, this session took a broader approach by exploring how climate change affects all dimensions of food security, including availability and stability of supplies, economic and physical access to food, and nutrition. The session also underlined that climate change acts in conjunction with many other, non-climate-related factors that impact communities' food and nutrition security and their ability to manage risks and adapt to change – for example, poverty, equity, gender issues, migration patterns *et cetera*. This complexity calls for integrated approaches to building communities' food and nutrition security and resilience, which in turn requires the ability of a broad range of actors – from different disciplines and levels – to communicate effectively with communities and with each other, in order to address communities' needs and priorities in a coordinated and complementary manner, and to ensure that communities' realities are reflected in the national and global policy agenda.

To kick-off the session, the facilitator, Catherine Zanev, introduced participants to the nutrition security framework and asked Morten Fauerby Thomsen (CARE) to share a few observations from a study on nutrition that CARE had done in one of the field sites visited in Vietnam. In that area, the problem is not so much the availability of food but more often access and nutrition: diets are too reliant on rice and not very diverse; the local indigenous communities also rely heavily on forest resources for a nutritious diet, which is being affected by forest degradation; another challenge to nutrition is that most women do not follow the World Health Organisation standard of six months exclusive breastfeeding and have difficulties in providing the right food for their children in the critical first two years.

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### **Impacts of climate change on fisheries: Implications for food security in Sub-Saharan Africa**

By Essam Yassin Mohammed and Zenebe Bashaw Uruguchi

According to the Intergovernmental Panel on Climate Change, climate change will exacerbate existing physical, ecological, biological, and socioeconomic stresses on the African coastal zone. Climate change poses significant and long-term risks to fisheries in many tropical developing countries in general and Sub-Saharan African countries in particular. The benefits gained from fisheries development are significant. From local to global levels, fisheries and aquaculture play important roles for food supply, food security and income generation. Some 43.5 million people work directly in the sector, with the great majority in developing countries. Adding those who work in associated processing, marketing, distribution and supply industries, the sector supports nearly 200 million livelihoods. Fisheries is a source of employment for around ten million people and the main or only source of animal protein for 20 per cent of inhabitants in Sub-Saharan Africa. Thus the sector plays a significant role in boosting the availability of food, thereby tackling risks to food security in several agrarian and highly food-insecure countries in the continent. Moreover, fish is one of the most traded food commodities in the region. Fish trade supports economic growth processes in developing countries by providing an important source of cash revenue to service international debt, fund the operations of national governments, and import food for domestic consumption, thus contributing to national food security and diversification of diets. There is also growing evidence that fisheries could play a significant role in enhancing the resilience of livestock-dependent populations, by supplementing the supply of animal protein during lean years.

While the importance of fisheries and aquaculture is often understated, the implications of climate change for these sectors and for coastal and riparian communities in general are difficult to ignore. Climate change poses a significant threat to fisheries on top of the many concurrent pressures such as overfishing, habitat degradation, pollution, introduction of new species and so on. Changes in biophysical characteristics of the aquatic environment and the frequent occurrence of extreme events will have significant effects on the ecosystems that support fish. This will affect food security in multiple ways.

Firstly extinction of some fish species means lower fish production for local consumption. Secondly, migration of many fish species to aquatic environments with optimal climatic condition will have a tremendous effect on fishers who are not able to follow fish due to political (borders) and economic reasons. Finally, reduced fish



production for export means lower earnings from fish export and consequently lower capacity to import food therefore exacerbating threats to national food security.

This presentation explores the potential impacts of climate change on fisheries and their implications for food security in Sub-Saharan Africa. Sub-Saharan Africa is given more attention in this presentation because (1) the region is home to more than 380 million people who live under poverty line and is projected to be inhabited by half of the world's poor by 2020; (2) there is very limited literature on the potential impacts of climate change on fisheries in the region; (3) existing economic problems limit the capacity of the countries in the region to adapt to or insulate themselves from the impacts of climate change; and (4) most of the poor rely on fisheries for their livelihoods thereby contributing to food security of the countries. Nonetheless, fisheries continue to get minor attention by policy makers. This is reflected in the development policy documents of the countries. According to an African Development Bank study, fisheries was mentioned in only three poverty reduction strategy papers prepared by the countries in Sub-Saharan Africa. In this presentation, we highlight the contribution of fisheries to poverty reduction and food security and portray the potential impacts of climate change on the already strained resource.

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### **The impact of rainfall variability on food security and human mobility: implications for CBA and policy interventions**

By Selim Reza Hasan - presented by Bruce Ravesloot

Climate change is threatening rural livelihoods in northern Bangladesh and impacting on food security, social equity, gender disparity and human mobility. 'Where the rain falls' - a study undertaken in Bangladesh as part of a larger eight-country research project - revealed changes in weather pattern and rainfall variability and a discernible shift in seasonal timings. A reduction in seasonal rainfall, compounded by a shift in timing, is affecting agricultural productivity and income and employment opportunities for the poor and the marginalized. Agricultural practices are being transformed (for example, high yielding varieties are being planted, and more irrigation in rain-fed cropping areas) but these new practices are yet to be adopted by poor small-scale farmers. Poor people, those who sell labor in agriculture and/or depend on natural resources are barely able to manage their household economy and migration has become a viable option to help them secure their livelihoods. However, this incurs a huge social cost.

Understanding the links between food security, climate variability and migration is not easy. One problem is that indicators for food security and coping strategies are measured in the short-term, while migration is usually not captured by these indexes. It is also hard to directly link climate variability to mobility: there are many other reasons why people move, and climate may not be the most important one. For example, a CARE study found that while agricultural productivity has increased significantly over the last decades, so have the production costs, while opportunities for agricultural day labour have decreased, which could be a major driver of migration. The study also found that the costs of migration are often too high to make it a viable coping strategy for the poorest and those who need it most.

Eating fewer meals, consuming lesser quality food and high interest loans are some of the negative coping mechanisms used by poor families putting them further at risk. There are social implications of such poverty and vulnerability such as increased violence against women and early marriage for adolescent girls. Such early marriages are leading to a quick rotation of generations in Bangladesh that significantly contributes to population growth. The study suggests CBA initiatives need to be carefully designed and that immediate policy interventions in relation to social safety net measures in rainfall-affected poverty stricken areas are needed.

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### **More equal – more resilient: gender dimensions of food and nutrition security in a changing climate**

By Agnes Otzelberger

It is increasingly recognised that climate variability and change have impacts on all dimensions of food and nutrition security. It is equally recognised but less well understood how gender relations, in turn, direct and



amplify these impacts. They are decisive for the often highly differentiated roles in food production, access and utilisation women and men adopt in different contexts, and they also determine the level of access to assets for and control over decisions on household strategies to address food insecurity.

Without recognising and responding to inequalities, women's and men's distinct roles, and their complementary skills, needs and priorities, only fragments of resilience can be captured. Key issues are left out. For example, no one understands the impact of climatic variability on nutrition better than those who are responsible for food processing and child feeding practices – in most cases women. Where women have less voice than men in planning processes and their concerns are not communicated or given less priority, nutrition and health impacts of climatic and other hazards are unlikely to be adequately captured and addressed. Poor nutrition and health, in turn, undermine resilience to shocks and stressors both in the short and the long run.

Bringing together different stakeholders well versed with issues such as food production and access, nutrition and health, climate science or the social determinants of climate vulnerability and adaptive capacity, the emerging quest for a more integrated resilience approach requires effective communication of communities' complex realities. Based on examples from South Asia and Sub-Saharan Africa, this presentation illustrates how a gender lens contributes towards this, and how greater gender equality leads to greater resilience. For example, the SHOUHARDO project in Bangladesh has shown that women's empowerment played a crucial role in reducing stunting.

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### **Farmers piloting the system of rice seed intensification (SRI) for climate change adaptation in BacKan Province, Vietnam**

By Truong Quoc Can *et al.*

Vietnam produces about 20 per cent of rice globally and 16 per cent of total rice export. Thus, Vietnamese rice plays an important role in global food security. Rice production is and will be affected by changes in the climate. Irregular rainfall, drier spells in the wet season (damaging young plants), drought and floods are all having an effect on yields. New techniques are therefore required in order to cope with and respond to climate change and to stabilize the productivity of rice. The Centre for Sustainable Rural Development is helping to test the system of rice seed intensification (SRI) as a climate change adaptation strategy based on the six-year successful project to strengthen and develop farmer rice seed systems in BacKan province.

The outputs of SRI are very promising in terms of effectiveness as well as sustainability. Key findings include an increase in outputs and reduction of inputs such as seeds, chemical fertilizer, pesticides and irrigation water, enabling communities to adapt to climate change and reduce their vulnerability. Capacity building of local staff and key villagers, especially women and men from the Thai ethnic minority group, are strengthened by participatory planning and household farm management.

SRI maintains soil quality, increases food productivity, protects the environment from pollution, reduces greenhouse gas emissions and enhances national food security. It is expected that the economic, social and environmental effectiveness of SRI will be recognized by the local farmers and authorities and thus motivating the application of this approach in other parts of the province. SRI is not trying to compete with other approaches but rather to complement them.

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### **Discussion**

The discussion focused on how communication influences actions, policies and decisions, and can thereby enable or hamper increased food and nutrition security and resilience. Picking up Essam's call for more recognition from policymakers of the relevance of fisheries, the question was how this can be achieved. He explained that from an economic viewpoint, a lack of communication leads to a lack of information, which leads to market failure. We therefore need to communicate through various different channels or tools, in this



case using language and highlighting aspects of the problem that make it understandable and relevant in economic terms for decision makers.

The issue of relevance is also key for communicating with communities. As Bruce had stressed in his presentation, climate change is often not the main issue communities are concerned with. So how can we design programmes to better incorporate community perceptions? On that, Bruce pointed out that practitioners need to understand that adaptation is part of a continuum that starts with coping in order to meet immediate needs. There is a dialogue that says coping is bad, short-term and not sustainable. But the reality is that for communities the cost of adaptation may be higher than they are willing or able to pay. They may prefer to cope now rather than make changes for the future. We need to understand their perspective.

Referring to Can's presentation, given the very positive results achieved through SRI, one would assume everyone is doing it. Can answered that indeed around one million out of four million farmers in Vietnam are applying SRI, although they may not be applying all five principles. Asked about criticisms relating to the lack of scientific evidence on SRI and whether there is a need for more research in order to communicate the benefits of SRI to farmers, Can explained that in some studies comparing SRI to other intensive practices, yield differences were not statistically significant. But the fact that SRI brings yields similar to more intensive best practices makes it very relevant and convincing especially for poor farmers who cannot afford intensive inputs.

On the issue of gender and food security, one participant highlighted the need to understand the way male and female roles are divided. A study in Zambia finds that labour allocation is about 50/50. If we have the wrong figures, we will have the wrong interventions. There are also some unintended consequences to just focusing on women. In some cases there has been an increase in domestic violence because we are only targeting women in interventions. Agnes agreed that labour division in food production is very high, and we need to be nuanced in talking about this. There are differences in who produces the staple crops and who produces the cash crops. But we also need to be very careful in discussing the issue of gender equality. The fact is that gender inequality primarily affects women, and engaging men is about reducing those inequalities.

Other issues raised by participants included the need to consider the fact that increasing amounts of food are being produced in the suburbs of cities; the need to recognize the importance of equity, given that neo-liberal economic policies are an important driver of communities' vulnerability, marginalization and disempowerment; and the question of the best way to navigate through all this complexity.

In concluding, the panellists made the following remarks: Bruce stated a key issue to think about was the impact of land tenure arrangements on nutrition and the need for governance structures to deal with increasing conflict around natural resources. A big problem is scale: how do we take pilot projects to scale? Essam agreed that we need to think more about cities and appreciated that the issue of equity was mentioned, stressing that economics should just be a tool, and we must acknowledge that it doesn't solve all problems. Agnes pointed out that a key challenge is the fact that communicating effectively and challenging power relationships takes a lot of time and effort. Lastly, Can reminded us that what matters to farmers are very simple things like eating, so let's start from those very basic levels. We tend to bring professional knowledge to analyse their issues, but instead we should look through the eyes of the community.

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### Parallel session 17: Food security and nutrition

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## **Parallel session 18: The blog room: an interactive writeshop to reveal blogging tips and develop CBA6 blogs**

This interactive session provided practical information on the potential benefits of blogging, and practical tips for writing a good climate change adaptation blog. Participants were also provided with the opportunity to start writing a blog.

The session began with questions to the audience on whether they read blogs or blogged themselves and what participants gained from blogging if they did. Next the facilitator discussed the potential benefits of blogging. This is a brief overview of some of the points covered. Blogs:

- Allow you to bypass the media and editors not interested in publishing your story;
- Are good for promoting research. Melissa Terras, Reader in Electronic Communication in the Department of Information Studies, University of College London writes about this in more detail here: <http://melissaterras.blogspot.co.uk/2012/04/is-blogging-and-tweeting-about-research.html>
- Are good at communicating personal stories. Climate change adaptation practitioners are constantly meeting people affected by and adapting to climate change. These stories could form the basis of great blogs that could share examples of the great working being done.
- Provide a different way to share knowledge and experience of community-based climate change adaptation and personal insights
- Are interactive and conversational forms of communication. They don't follow a dissemination model, like TV or radio. As such, blogs can be a good way of judging audience reaction to your ideas and can serve as a useful feedback mechanism, but bloggers need to be prepared for criticism as well. Because of this interactive form of communication, a blog could create an online space for people working on climate change adaptation.

A PowerPoint of different blog formats that can be used was presented and then participants were encouraged to write their own blog.

The exercise: imagine you're writing a letter home. Tell them something you've learned at the CBA6 conference, why it's relevant and what's next. Suzanne randomly chose members of the audience to share the first paragraph of their blog with others.

### **Further information**

Storify is a method for compiling and sharing social media content. A participant at the workshop did this with the tweets from the workshop. The number of tweets of the session shows how many practitioners have embraced social media with open arms: [http://storify.com/LuciaMHNass/cba6-blog-tips-and-exercise-from-suzanne-fisher-mu?awesm=sfy.co\\_pgF&utm\\_campaign=&utm\\_medium=sfy.co-twitter&utm\\_source=t.co&utm\\_content=storify-pingback](http://storify.com/LuciaMHNass/cba6-blog-tips-and-exercise-from-suzanne-fisher-mu?awesm=sfy.co_pgF&utm_campaign=&utm_medium=sfy.co-twitter&utm_source=t.co&utm_content=storify-pingback)

For further information on the session read the tweets on the session in this blog, which provides an overview of many of the tweets of CBA6: <http://www.iied.org/cba6-tweet-by-tweet-and-blog-by-blog>

### **Contacts**

<p><b>Parallel session 18: The blog room: an interactive writeshop to reveal blogging tips and develop CBA6 blogs</b> <b>Chair: Suzanne Fisher (International Institute for Environment and Development) - <a href="mailto:Suzanne.fisher@iied.org">Suzanne.fisher@iied.org</a></b></p>
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## **Parallel session 19: CBA in urban areas**

Urban centres in low- and middle-income countries present a particular set of challenges to the process of CBA. These towns and cities host a rapidly growing share of the world's population, and this situation is expected to become even more pronounced in coming years and decades. They already face substantial challenges in relation to the lack of basic services and risk-reducing infrastructure; and growing populations mean that spatial expansion into areas exposed to climate-related hazards is inevitable. Towns and cities are complex systems in themselves, and also function in a vast number of complex and inter-related systems that cross rural-urban and national borders. CBA in urban areas therefore needs to address issues of participation and governance – both within and outside city borders.

The five papers in this session addressed these issues in the context of African, Indian, and Vietnamese cities. George Kasali examined the drivers of Climate Vulnerability in the slums of Kitwe (Zambia), concluding that education is a key determinant of vulnerability and that weak institutional space is a significant barrier to adaptation. Jessica Thorn investigated community responses to urban flooding in Mathare Valley Slums (Nairobi, Kenya), comparing autonomous and planned adaptation activities and exploring the linkages between communities and different types of institutions that can support this process. The final three papers drew on lessons from the Asian Cities Climate Change Resilience Network (ACCCRN), a programme of resilience planning and practice in ten mid-sized Asian cities. Shiraz Wajih looked at the case of ward level resilience planning in Gorakhpur (India), identifying the ways in which good institutions can enhance adaptive capacity. Trang Van Giai Phong explained the way in which an access rights framework has been used to promote participatory planning in climate change with a focus on information, participation in decision making process and remedies in Vietnam. Finally, Vu Thi My Hanh looked at the special case of youth participation in adaptation to climate change in Vietnam, explaining the way in which a Youth Initiatives Programme has implemented specific projects and encouraged collaboration between youth and decision makers.

The chair identified four thematic areas arising from the presentations, and from broader engagement with communities in addressing adaptation in urban areas:

1. The nature of vulnerability in urban areas
2. The nature of communities in urban areas
3. Linkages and networks (rural-urban international)
4. Participation, rights and urban governance

The discussion further highlighted the challenges of engaging with communities in urban settings. These included time considerations (the need to work in the evenings when people have returned from work or education); the difficulties in obtaining local-level climate projections to inform action; the role of government; the challenges of incorporating cross-boundary concerns (both social and environmental linkages), and the relationship between urban development (including infrastructural development) and climate change adaptation.

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### **Drivers of climate vulnerability in slums in Zambia**

By George Kasali

This presentation describes a study employing the livelihood vulnerability index methodology to assess the risks which are being and would be experienced from climate variability and change by slum dwellers living in four shanty settlements of the City of Kitwe in Zambia. The overall composite index was determined based on indices derived from data on indicators for vulnerability factors which were categorised into the sub-components of socio-demographics, income-expenditure patterns, social networks, health, food, water and sanitation, climate hazards and waste management practices. The sub-component indices were finally rearranged to enable the assessment of exposure, sensitivity and adaptive capacity of slum dwellers to climate variability.

The study identified that the main climate risks faced by slum dwellers are those associated with flooding, leading to the collapsing of houses and sanitation infrastructure and contamination of water supply sources. Households suffer damages and losses of assets and food reserves, while for those who normally sleep on the



floor, drowning of infants, the severely ill and drunkards does occur. Outbreaks of cholera, dysentery and typhoid are also rife. When roads and bridges get flooded or damaged, there is loss of income as workplaces become inaccessible.

The main drivers of this climate vulnerability include low incomes, poor housing, water supply, drainage and sanitation infrastructure. The slums are also overcrowded and lack controlled solid waste disposal facilities. Most importantly, most of these slums are located within the flood zone of Kafue River. Consequently, the study has developed a climate change adaptation plan for the four slum areas with interventions subdivided into those to be implemented by households, communities, local government and central government. Prioritisation of interventions has been based on comparisons of the livelihood vulnerability indices obtained for the respective slum settlements.

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### **Urban youth (16-25) climate change adaptation initiatives**

By Vu My Hanh

Global youth are vital stakeholders of the medium-term future when climate change will have its greatest impacts. But they have little or no current power over adaptation strategy and programming.

AYIP (the Asian Cities Climate Change Resilience Network - ACCCRN - Youth Initiatives Program) is funded by the Rockefeller Foundation. It is implemented by Challenge to Change (CtC) and the Vietnam Youth Union in three cities – Quy Nhon, Da Nang and Can Tho. It enables urban youth aged 16 to 25 to implement their own climate change adaptation/resilience initiatives. Between 20 and 30 youth groups are supported to implement initiatives of value between US\$500 and US\$5,000, from April 2012 until July 2013. Initiatives include:

- Neighbourhood-level initiatives proposed and led by local neighbourhood youth
- Initiatives which add value to existing larger-scale adaptation projects
- Youth-led research and documentation of existing ways communities are adapting to climate change

Youth unions make video-documentation of initiatives. Key outcomes are the enhancement of youth rights; an understanding of urban climate change resilience through the eyes of youth; and the spread of climate change awareness through existing youth networks. The program takes advantage of youth characteristics such as being good change agents and trend-setters who are highly communicative.

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### **The role of communities in urban planning for climate adaptation: experiences from Vietnam**

By Nguyen Phuc Hoa, Tran Van Giai Phong and Sarah Reed

A wide body of research and literature on urban climate adaptation highlights the need to integrate climate change into urban planning and for community participation in this process. While there is a wealth of experience engaging local communities in identifying vulnerabilities and responses to address disasters and climate change, there is limited analysis of how these community driven processes can contribute meaningfully to urban planning processes in specific contexts. This is by no means self-evident: these processes are often complex, murky, and can be poorly understood even by the planners themselves, much less by climate adaptation practitioners or communities.

Through the Asian Cities Climate Change Resilience Network, Challenge to Change with support from the Institute for Social and Environmental Transition (ISET) and the National Institute for Science and Technology Policy and Strategy Studies (NISTPASS) is working with city governments and communities to build capacity for, and institutionalize, a process of participatory planning for climate resilience in three cities. A key challenge in this work is identifying the appropriate entry points through which community priorities can be integrated into the city Socioeconomic Development Plan (SEDP). These examples are highly context specific, but provide useful models of the kinds of questions and analysis required in other cities and countries. This presentation will share ongoing experience from the processes, including new insights, challenges and remaining questions.

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## **Rooting urban climate resilience through bottom-up approaches: the case of ward level micro resilience planning**

By Shiraz Wajih

Urban climate change resilience planning is closely linked to urban development processes. In cities like Gorakhpur, situated in the flood prone foothills of the Nepal Himalayas, the key systems, agents and institutions that relate to enhancing the risks of climate change impacts are linked to natural settings, behavioural patterns and weak governance. Top-down planning processes without citizen participation largely ignore the local situation and the capacity development needed at the city level. The large scale influx of rural migrants to urban areas adds new challenges to those faced by municipalities already struggling with limited resources and abilities to provide basic services to citizens. The City Resilience Strategy advocates a bottom-up approach to planning and service delivery.

The 73<sup>rd</sup> constitutional amendment in India has provided ample scope for decentralized planning and governance in rural areas and there are a range of encouraging results. However, the corresponding 74<sup>th</sup> constitutional amendment meant for urban areas has been not taken up with similar political will. The non-operationalization of this provision has limited adoption of appropriate methodologies and people-led disaster management and climate adaptation processes. It has also affected transparency and participatory governance.

This presentation describes attempts to address these challenges through an innovative decentralized urban management solution using bottom-up approaches initiated in Mahewa ward, in Gorakhpur city under the auspices of the Asian Cities Climate Change Resilience Network (ACCCRN) programme supported by the Rockefeller Foundation. The process is helping develop thematic community institutions, ward level micro-planning and implementation of activities prioritized by local communities - especially the poor and marginalized. It also links various relevant programmes together. Recommendations from the initiative can guide policy makers, urban planners and citizens associations.

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## **Adapting to rising waters: participatory investigation into community responses to urban flooding in Mathare Valley Slums**

By Jessica Thorn

The confluence of unprecedented rates of urbanization, global environmental change, the economic pressures of globalization and population growth means that people are streaming into cities at rates beyond their capacity to integrate. In burgeoning poor urban settlements autonomous adaptation strategies are often the only measures to cope with and build resilience to increasing climatic and non-climatic drivers of vulnerability. Yet, in both literature and practice there is a lack of understanding of the dynamics of adaptation and risk reduction at the community level, particularly in urban slums. Residents in poor urban settlements like Mathare Valley Slums in Nairobi, Kenya, are already exposed to regular flood risks – likely to be exacerbated by predictions of long-term wetting due to climate change in East Africa. Using mixed qualitative methods, this research applies Thornton and Manafsi's meta-language of adaptation pathways to investigate autonomous adaptation strategies and how they intersect with planned policy and interventions to reduce risk at broader spatial levels. Results show that residents of Mathare Valley Slums have developed innovative means to reduce risk, indicating signs of revitalization and building of a culture of resilience. However, such strategies are not incorporated into planned interventions, and while progressive policies designed to support local adaptive capacity exist, they fail to benefit the residents of Mathare. This case illustrates the need to incorporate the wealth of knowledge and experience extant at the community level in the development of adaptation planning, with opportunities in investing in informal institutions such as youth groups, and disseminating early warnings through existing infrastructure such as community-based radio stations. Future research may consider the strengths and weaknesses of supporting informal institutions' adaptation strategies.

### **Contacts**

Parallel session 19: CBA in urban areas



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## **Parallel session 20: Health**

In 2004, the World Health Organisation estimated that global warming had caused approximately 140,000 excess deaths since the 1970s. This number must surely be higher now, and will grow dramatically without substantial mitigation efforts and effective adaptation on a large scale.

In this session, the chairs began by asking the audience what they thought the key issues that needed thinking about in terms of climate change impacts on health were. Was it the quantity of disease (skin diseases, dengue fever, malaria *et cetera*), was it water borne diseases, diarrhoea and access to freshwater, was it food resources and nutrition, was it the spread of certain diseases into areas they did not exist before or was it reduced access to safe drinking water?

Climate change affects a broad range of health issues. More attention, funding and programming is needed in this area. The 17<sup>th</sup> Conference of Parties to the United Nations Framework Convention on Climate Change (COP17) was the first COP with substantial attention paid to climate change and health, and this session at CBA6 will also help communicate this important message.

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### **Health and natural disasters: response plans at different authority levels in Vietnam**

By Pham Thi Hong

Climate change has led to an increase in the number and intensity of natural disasters. This is causing an increase in the occurrence of vector-borne, water-borne and other infectious diseases. Natural disasters can also significantly affect food production which affects nutrition, and they influence both the accessibility and availability of health services when people in disaster areas need healthcare the most. Communities lack awareness about climate change and health issues, capacity, funding for simulations and equipment, and early warning and communication systems.

The impact of natural disasters on human health can be significantly reduced if response plans are more effective. This presentation describes a literature review aiming to identify health-related prevention activities that have been implemented at national, provincial and community levels in Vietnam in order to prepare and respond to natural disasters. It also draws on international examples to identify learning for Vietnam.

Drawing on existing disaster management literature, the review shows that Vietnam has a range of disaster management activities at different authority levels. Activities are undertaken in preparation for, during, and after natural disasters. These activities, however, lack a strong focus on health issues and effective implementation of healthcare related to natural disasters. Communication between different levels affects improvements in health outcomes after natural disasters. More health-specific guidance and preparations for the impacts of climate change are needed.

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### **Climate and health mitigation and adaptation in Zambia**

By Evans Tembo

The health of the world's population is at risk. Climate change impacts on health include higher levels of certain air pollutants, increased transmission of diseases from poor water quality, increased vector-borne diseases, disruption of health services, and mass casualties and death in developing countries. The situation in Africa is worsened because of its ill-preparedness to cope with the adverse impacts of climate change, particularly on health, because of weak and already over-stretched health systems. For instance, about 1.2 million people die annually from causes attributable to urban air pollution, 2.2 million from diarrhoea largely resulting from lack of access to clean water and sanitation, and from poor hygiene, 3.5 million from malnutrition and approximately 60,000 from natural disasters.

More frequent droughts result in crop failures and water scarcity leading to increased malnutrition and diarrhoeal diseases in Zambia. On the other hand, more cases of malaria and major epidemics of cholera and other water-borne diseases are associated with floods and increased temperature regimes. In Zambia, malaria



is the leading killer disease, responsible for four million cases and 50,000 deaths annually. Other climate-sensitive diseases such as dysentery, cholera, respiratory infections and malnutrition are more pronounced in the central, southern, eastern, Lusaka and western provinces of Zambia. Zambia's National Adaptation Programme of Action recognizes the health impacts of climate change and states that climate change may hinder the nation's ability to meet its Millennium Development Goals. Groups that are specifically vulnerable to climate change and health include: indigenous populations, elderly people, children, chronically ill people, people with a low income and homeless people.

For this reason, the Ministry of Health has decided to prioritise the health impacts of climate change including in its plans a baseline risk and capacity assessment survey; capacity building in climate change resilience of environmental health personnel; drinking water quality surveillance; and, undertaking awareness raising and social mobilization, generating and disseminating knowledge on appropriate local communities.

Proposed activities to enhance community-based mitigation and adaptation to climate change will include community trainings in: household water treatment and storage methods (solar disinfection, chlorination and biosand filtration); the use of sustainable sanitation facilities and hygiene education; and, effective surface water management in a quest to reduce malaria and improve waste management. Local communities will also be engaged with planting fruit trees in their yards. In this respect, a model has been developed which will ultimately reduce the impact of climate-sensitive diseases in Zambia.

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### **Reduction of climate risk on health – the case of community-based dengue fever prevention in Vietnam**

By Thuan Thi Nguyen

Among the vector-borne diseases that are sensitive to climatic and weather conditions, dengue fever is seen as an increasing problem for many urban and rural communities in Vietnam. To address this, the Vietnam Red Cross has been implementing a 2.5-year operational research project in the Mekong on a health risk management model. This project is supported by the Climate Centre through the International Federation of Red Cross and Red Crescent Societies and funded by the Rockefeller Foundation. The prevention of dengue fever has to focus on the elimination of mosquito breeding sites. Early warning mechanisms for epidemics at the community level are also lacking.

The research assesses local community understanding of climate change and its possible effects on health, as well as community knowledge, attitude and practices regarding dengue fever, before and after interventions. Community level actions were implemented to communicate information about climate change and behaviour changes needed to tackle dengue fever to vulnerable families. These were linked to the results of the baseline study. Contingency planning efforts have further guided campaign implementation, and house-to-house education has helped to reduce the further spread of dengue fever and strengthen existing partnerships between the Red Cross and local health authorities. The term climate change is very difficult for communities to understand. This makes good communication even more important. After the project, however, more people said that they thought climate change would affect their health. The lessons learned from using good practices and community-based models for early prevention and community level action to reduce preventable deaths and sickness in Vietnam are also used to inform global health programmes under the Red Cross.

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### **Using Information and Communications Technologies (ICTs) and innovative communication programming to assist pandemic preparedness at the community level**

Cecile Lantican (FHI 360, Laos)

This presentation discusses how the innovative application of ICTs coupled with communication, public education and social marketing approaches can be used to effectively support emergency and disaster risk



management efforts attributable to severe climatic events and other shocks to rural communities while helping to improve community safety and resilience as well as ensure access to essential services, such as food, health, safe water and hygiene. The presentation explores the means to solicit and gain early local engagement and buy-in to enhance programme sustainability and acceptance. Examples from Laos and other Southeast Asian countries are presented. Lessons include the need for funds to mobilize communities, the importance of engaging community leaders and influential people, and the need to use networks to build support. A key question to consider is how to use the power of communication to make people understand that their health and personal well-being are at risk due to climate change and weather? How can communication influence decision making to change behaviour?

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## Discussion

Following a question on the link between natural disasters and mental health and what types of mental health issues Pham Thi Hong was referring to, Pham explained that these included the psychological effects on victims due to loss of homes and lives. The chair commented that there has not been much research on this and more is needed. The stress of disasters as well as the long-term stress caused by drought, lack of access to clean water, food insecurity *et cetera* could be important.

Thuan Thi Nguyen was asked whether any link between dengue fever and climate change had been found. Nguyen responded by explaining that their research focused on the knowledge and practice of community members. One literature review had found links between rainfall and temperature and mosquitoes, but the research presented here aimed to complement existing research and provide knowledge from community members rather than investigating specific links.

Cecile Lantican was asked whether SMS was the only technology she had explored, whether it was possible to send out images and whether or not literacy was a challenge. She explained that the project did not only use SMS to raise awareness. It also worked with the government to track things like dead poultry and identify possible outbreak areas. In terms of literacy, translators were used and training modules were designed in appropriate dialects.

One participant asked why there was so little attention from donors and governments on the link between health and climate change, and was this because of a lack of scientific evidence. Evans Tembo replied that since the Cancun COP, the issue of climate change and health has been talked about more seriously. The session chair then explained that there are two main issues here. The first relates to insufficient communication about the extent to which climate change impacts health; virtually every area of climate change impact has some connection to health. The second relates to funding streams. Donors tend to be sector-specific, making it difficult to coordinate across different issues, and implementing organisations often organize themselves around donor streams. Donors and implementers should consider health a cross-cutting issue.

The session chair concluded by explaining that climate change is cross-cutting issue and that health impacts will increase dramatically without action. Adaptation programming needs to consider health impacts, and we need to focus more government, donor and implementing organisation attention on the links between climate change and health.

## Contacts

### Parallel session 20: Health

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### **Parallel session 21: Exploring limits and barriers to adaptation**

We all face constraints and limits in our work due to our institutional identity. These can act as barriers to what we can achieve if not acknowledged and addressed. For this session, the audience was asked to shed their institutional identities from the start, encouraging people to step out of their comfort zone while creating an environment where all individuals could contribute on a level footing. A number of exercises followed that provoked people into reflecting on their individual roles in dynamic group situations.

First, the audience formed a circle and juggled an increasing number of balls both personally and between each other, illustrating the multiple stressor and response challenges faced in CBA work. Secondly, volunteers from the audience were asked to grasp one piece of string from a marker pen attached to ten other pieces of string. The task set was to complete an adaptation maze, and then to draw a beneficiary of adaptation work. This task emphasised the importance of team work, having a joint goal and how a sense of ownership and being involved can be fun for those involved. For the third exercise each member of the audience enacted robots programmed to walk in a straight line and could only change direction when instructed by a mechanic, highlighting the dangers of blinkered and one dimensional thinking we sometimes adopt from our institutional identity. Bearing this in mind, the audience was then split into four groups and given the task of creating a role-play to think about, reflect on and illustrate how important communication and understanding is between the various stakeholders involved in adaptation actions.

Reflecting on the session as a whole, the importance of understanding group dynamics, your own role within that dynamic, and how to create a safe environment to allow all involved to express themselves were the key messages. Blane Harvey from the Institute of Development Studies commented that the session was valuable for understanding the interpersonal challenges that are rarely discussed in reports, while providing a great opportunity to step outside our institutional mindsets.

### **Contacts**

<b>Parallel session 21: Exploring limits and barriers to adaptation</b>
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## Plenary session 22: Practical communication approaches for CBA

The chair opened this plenary session with a brief yet interactive question and answer period in an effort to help CBA practitioners re-think the role and importance of communication in their work. He used an example far afield from CBA, taking a case of communication and advertising from the consumer products industry: Coca-Cola. The chair pitched the following questions (and answers) to the audience:

- If Coca-Cola is the most recognizable product in the world, and has been in business for more than 120 years, why do they place so much annual effort on advertising? This is because of competition with other brands. People have a myriad choices of what they can listen to, watch or read, and so on.
- What is Coca Cola really selling? Happiness, lifestyle, pleasure? What do we as CBA practitioners offer or communicate to our audiences when addressing climate change?
- Coca-Cola really focuses on knowing its consumer and doing sound, thorough research on them. It knows that consumers are diverse and that a single message or marketing approach will not reach all target audiences. Coca-Cola conducts rigorous research, and divides its audiences, communicating different messages to different audiences. It provides information to different audiences in the manner and format they want. Do we do the same as CBA practitioners?
- Do the people you are trying to reach through communication approaches and messages about CBA want to 'buy' (or accept) what you are 'selling' (offering) them? And more importantly, do they understand what you are trying to communicate to them?
- Does anyone know the size of Coca-Cola's advertising/marketing budget for the past two years? US\$11billion, yet it claims its advertisements are less successful in reaching target audiences. How many of us have communication budgets even 1/100th size of this?
- Now turning to a key word in the session's title, what does the word 'participatory' imply or mean to you? For some, it means simple, practical, cheap or inexpensive. So the challenge is recognizing that we typically must compete for people's attention (capturing their eyes, ears and minds) with limited resources. This is doubly challenging given the complexity of communicating CBA-related issues. Ironically, Coca-Cola is something that people want, but don't need, whereas climate adaptation is something people need but don't want.

The challenge then for CBA practitioners is how to compete successfully with the development projects of government, NGOs, the private sector and others to get audiences – who can choose what they tune in or tune out to – to both receive and act on our very important messages. There are solutions. To start with, CBA practitioners, to the extent possible should consider: hiring professional communicators; thinking of audiences as consumers (who have choices); that communication is not just an art, it is a science, so using rigorous communication approaches like those applied by the commercial sector could be beneficial; that communication is not a one-time event, it must be continuous and messages need to change over time; sending messages that are fun, easy and popular; and that raising awareness alone does not change behaviour. Donors too should rebalance budgets to put more emphasis on communication.

These introductory remarks were followed by a number of panellists who shared practical, participatory communication approaches and techniques.

First up was Patrick Papania who presented on 'connecting the dots – global climate change preparedness and adaptation.' He began by using an example from Hurricane Katrina in the United States, where communities were not prepared to respond to this massive climatic event. People were not connected in the ways needed. It was a broken system and communications did not function well at all in terms of preparing people for what to do before, during and after the hurricane. Also lacking was social capital among all the people. Having set the stage with that powerful example, he provided a brief overview of a participatory approach that builds social capital among stakeholder groups within a human system and uses communication as the glue to accelerate and sustain local involvement. The approach (System-wide Collaborative Action for Livelihood and the Environment - SCALE), was pioneered together with USAID over the past ten years. Central to the effort was providing real-time, accurate and constant information flow to all stakeholders. More importantly, the same information was communicated to all, not just a few, making for an open, highly transparent process in which programme communications staff become highly trusted as neutral information brokers. The central premise of SCALE for CBA practitioners is that when communicating difficult messages, you must "make it



rain” the idea: in other words, get people to hear it from multiple, trusted and reliable outlets, not just a single source. In so doing, programme reach will be extended, human, capital and financial resources will go further, and programme sustainability will be enhanced as stakeholders become drivers of change, rather than passive observers.

Kat Gawlik then presented on story-telling and the use of participatory video for communicating CBA within and between communities, and influencing policy decisions in Pacific island countries. Using a clip from recent work in Papua New Guinea and the Solomon Islands, Kat posited that video can be a useful tool in helping to break down language barriers and reach a multitude of people in ways traditional development approaches cannot. Participatory video puts the tools in the hands of the community and provides a way for community members to communicate with one another as well as with government and decision-makers. Moreover, video is an empowering medium and can be used to stimulate discussion and dialogue amongst divergent interests at the community level. To be successful, however, it must be recognized that the process is as important as the product. Kat indicated that in the Solomon Islands, one community wanted to use video as a means to communicate to other communities the need to protect their reef, whereas another community wanted to communicate their needs relating to sea level rise to their provincial government. The video's message proved effective, as it resulted in a representative from the United Nations Right to Development Forum in Switzerland visiting the community after seeing the video on YouTube. It also helped raise community-level climate change issues with the Manus provincial government. A follow-up visit to each of the communities will be made to provide local participants with cameras to keep and use on their own.

Gabriel Kulwaum presented on communicating CBA in Manus province, Papua New Guinea, and scaling-up community-led action to set the agenda for government development planning and policy. Gabriel opened by outlining three major objectives of the Climate Change Project: understanding climate impact and effects; demonstrating the vulnerability of climate change affecting coastal villages; and, linking the first two objectives to leadership, planning and decision-making. Central to the project's mission was the use of an innovative tool (participatory 3D modelling) to engage community members in making a map of Manus and then use this to reinforce and illustrate key community concerns about land use planning, protected area management, ecosystem services, and climate-related impacts to Manus Provincial Government officials and leaders. The 3D map of the island was highly effective in bringing together large numbers of community members and provincial leaders. In so doing, it helped improve decision making regarding future provincial development initiatives. It also allowed all parties to become better acquainted with and oriented to their unique landscape, and gave voice to community members, allowing them to actively participate in local and provincial-level planning processes.

Charles Chikapa addressed the impact of radio, cinema and vernacular publications in enhancing CBA. Setting the context, Charles indicated that media coverage of climate change in Malawi is still very limited and traditional media remains very expensive. Consequently, popular radio, community-video and print materials remain highly effective in reaching large numbers of rural Malawians, given the high illiteracy rates. Charles indicated that from experience, broadcasting in local languages is effective, but the messages delivered must not appear to be top-down (from government), otherwise, people tend to tune out. Community-based radio, in which community members themselves decide on actual programme content, can greatly improve message delivery and acceptance of the information shared. These types of radio programmes may be funded by donors or others who might provide equipment, capacity building, and other forms of support. Charles indicated that one such ongoing project is designed to translate technical scientific or climate-related terminology and jargon and make it readily understandable to rural listeners. This has proved to be helpful in making the information provided useful and actionable.

The final panellist, Maurine Kasuvu Ambani, discussed climate information and communication in CBA. Maurine started by describing how workshops are used to bring together groups of community representatives and experts (such as meteorologists) to both share and combine their knowledge of the changing climate and impacts on livelihoods and the environment. For community members, having an opportunity to voice their opinions of the kind of specific climate-related information they need was crucial to project participation. Further, specific actions must be translated into clear messages before they can be sent out to communities so that individuals can understand and then take action. Journalists can play important roles in helping communities clearly understand climate change adaptation issues and readily facilitate communicating these issues to communities, although additional capacity building is needed. Similarly,



communities need to have continuous access to climate change information for use in planning, given the rapidly evolving and changing environmental and climatic conditions. Maurine suggested that although it is difficult to control what journalists publish, the better informed they are, the more likely it is that they will publish beneficial and accurate information. Major problems faced in developing and implementing the strategy was that communities don't categorize issues into separate problems like we do. It was hard to get them to understand why they should be interested in climate change in particular. Some do not believe in weather forecasting at all and think everything is determined by God. It is also difficult to identify a specific community segment that responded to the programme more positively over others.

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<b>Plenary session 22: Practical communication approaches for CBA</b>
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## **Plenary session 23: Emerging challenges for CBA**

The six papers presented in this session addressed a range of CBA challenges. Matt Spannagle began the session with an overview of the CBA projects that AusAid is involved in. Charles Nyandiga outlined barriers to developing and implementing CBA projects and thereafter to monitoring and evaluating them. Natasha Haider highlighted the importance of mainstreaming adaptation into development projects emphasising the fact that projects oriented towards development alone can increase vulnerability to climate change. David Obongo described some of the challenges of mainstreaming climate change adaptation into development planning in Uganda which include the absence of national policies and guidelines, a weak revenue base at the local government level and the inability of local government to spend conditional funding on adaptation activities.

Robin Bronen exposed the forced relocation of a community in Alaska due to climate change impacts and stressed the importance of relocation policies that are community-based and guided by principles of human rights. Finally, Sladjana Cosic identified some of the challenges to ensuring that adaptation funding is both accountable and transparent and emphasised the importance of ongoing learning from both successes and failures.

The discussion, like the presentations, highlighted a range of issues. One of these was the unacceptability of loans for adaptation to which Matt replied that AusAid does not issue adaptation loans due to the 'moral hazard' involved with this. One participant compelled the group to come back to the bigger issue of incremental transition versus transformation, suggesting that we could build on elements of the World Bank presentation related to transformation. Sladjana re-iterated that the World Bank is moving in the direction of social transformation. David Obongo was asked whether or not there was a framework in place to support long-term processes for adaptation in Uganda to which he responded that it was possible to start small and scale up, mainstreaming CBA into government planning.

Several questions and comments were directed at the presentation on forced displacement in Alaska. One participant felt that it was more of a loss and damage issue than an adaptation issue. Another wondered if the story of displaced Alaskan communities had permeated the consciousness of American citizens. Robin responded that this was indeed representative of adaptation, and that the issue had not yet reached the wider American consciousness.

In summing up, the session chair returned to the theme of communication, asserting that we must learn to communicate with each other better. He stated that though we need scientific certainty, all global decisions are based on a certain amount of uncertainty. He concluded by declaring that if we don't secure food, water and livelihoods for vulnerable communities we are not on the right path to development.

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### **Scaling up CBA**

By Matt Spannagle

National and provincial strategies and regulations to climate adaptation are essential for coordinated success, but in most cases pragmatic actions occur at the local level. AusAID, one of the biggest providers of adaptation funding in the region, has been trialling CBA in Asia and the Pacific through NGO grants, bilateral and multilateral partnerships. The time for trials and pilots is drawing to a close, and host governments and donors must find effective ways of scaling up local action. AusAID will present case studies from the Pacific and South East Asia, including the successful piloting and adoption of a national Community Based Disaster Risk Management programme by the government of Vietnam and NGO partners. AusAID will also outline outstanding challenges and lessons learned to date, including achieving scale in micro-states; facing the fundamental changes in community lifestyles; and incorporating traditional knowledge into rapidly shifting circumstances.

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## **Barriers and challenges for implementing CBA activities: institutional, technological, social and organisational**

By Charles Nyandiga

CBA as a strategy and tool to eliminate climate change impacts is often described as the panacea for finding and implementing adaptation measures and solutions at local and grassroots levels. Indeed, adaptation needs are felt and needed most by grassroots-based entities, be they individuals, households or community level actors. At this level of beneficiaries and actors, a number of barriers and challenges are evident and need scrutinizing. These come from a suite of issues that affect vulnerability and that relate to what the most impoverished community members face but also to effects on the social architecture and economic status of the community, and the associated methods and tools for trade available for their survival.

Many community-based activities and actors have fallen short of recognizing, harnessing and quantifying the positive energy present in many communities that comes from local skills, knowledge, capacities, organisation, informal institutional structures and volunteer contributions made to often under-resourced community adaptation projects. Instead, community adaptation activities have focused more on community strength as a homogenous group of vulnerable individuals, participatory processes for solving communal concerns and the provision of fertile ground for testing vulnerability and risk assessment methodologies. Furthermore, the focus of such activities frequently understates: the roles of traditional and modern institutional setups; inherent gender roles and functions; immediate livelihood needs; and the need to capitalize on existing social strengths and organisational structures and strategies that can help remove the multiple barriers that lead to risk. These problems are exemplified by the fact that communities often adopt coping strategies or short-term adaptation responses.

This presentation highlights the cumulative experience of working with over 5,000 communities from Least Developed Countries and developing countries with varied cultural norms and institutional and organisational styles. It describes how best to handle some of the barriers and challenges that affect widespread adaptation. A demand-driven, gender-based approach in which communities drive a suite of actions will be described and results from this shared. These findings are already contributing to local, sub-national, national and even global debates on how to ensure successful community adaptation strategies are generated, implemented and translated to influence policies and societal values.

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## **Adaptation and development: perspectives from Bangladesh**

By Syeda Sajeda Haider (Natasha) and Golam Rabbani

There is a confusion regarding the relationship between adaptation and development not only amongst the general public but also sometimes amongst adaptation practitioners. This study aimed to understand what practitioners felt climate change adaptation is; what the main elements of adaptation projects are; and what kind of adaptation activities are required to best address climate change impacts in Bangladesh.

The study shows that the objectives of adaptation projects in Bangladesh can be roughly divided into four thematic areas: (1) 'Disaster risk reduction' activities undertaken to reduce the vulnerability of climatic disaster affected communities by different structural and non-structural disaster risk reduction activities; (2) 'Food security' activities specifically addressing the problem of food insecurity resulting from different climatic stress such as temperature increases, floods, droughts and saline water intrusion; (3) 'Livelihood' activities mainly undertaken to achieve the diversification of livelihood options and livelihood improvement activities to reduce the impacts of climate change; and (4) 'Natural resource management' activities integrating nature conservation and climate change adaptation objectives.

In Bangladesh, climate change adaptation activities mostly integrate two or more of the above mentioned themes, which are co-related and very much dependent on each other for sustainability. For example, engaging natural resource dependent climate vulnerable communities through disaster risk reduction or livelihood diversification activities integrates natural resource management with disaster risk reduction or livelihood themes. Although there are strong linkages between adaptation and development, the long-term objective of adaptation is to reduce climate change vulnerability, which may not be the case for a development project. We know that development is a prerequisite for any kind of adaptation activity.



However, development activities tend to address the problem of poverty reduction which may in some cases increase climate change vulnerability. For example, the mass introduction of shrimp farming in the Chokoria Sunderban area has resulted in mangrove loss. The unique 8,500 hectare mangrove patch was completely destroyed with the introduction of shrimp farming. This exacerbates the impacts of extreme events, posing severe risks for coastal communities in Bangladesh. We therefore have to be careful that development activities do not increase the vulnerability of people. Rather than trying to distinguish between the concepts of development and adaptation, we should discover the unique characteristics and profiles of adaptation and development and use them to plan future adaptation activities more effectively.

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### **Integrating CBA into development planning**

By David O. O. Obong

Uganda is party to the UNFCCC and in its effort to address climate change issues has set up various institutional arrangements, including a coordination unit under the office of the Permanent Secretary, Ministry of Water and Environment, a Climate Change Policy Committee to give policy guidance, and an inter-institutional climate change technical committee drawn from different line ministries, institutions, private sector bodies and civil society organisations amongst which the Africa Climate Change Resilience Alliance (ACCRA) is represented.

The country's National Development Plan 2011/12 - 2014/15 clearly spells out the need and possible intervention areas for climate change, including mainstreaming climate change into sectoral development plans and budgets other than the National Adaptation Programme of Action (NAPA), which aims to build community and ecosystem resilience to adverse climate change effects - a step towards CBA.

This presentation describes experiences of the Ugandan government with working towards integrating CBA into government policies such as the NAPA and other development planning processes. The discussion uses evidence from Bundibugyo District. This comes from a capacity gap analysis study and community adaptation research undertaken in three districts by ACCRA (2010-2011) in collaboration with the Ministries of: Water and Environment (the Climate Change Unit and Department of Meteorology), Agriculture, Local government, Health, and Energy and Mineral development, and the National Agriculture Research Organization and Office of the Prime Minister - Disaster Management department.

Research findings revealed that current district development plans do not reflect local priorities for promoting CBA and climate related risk reduction measures, or link these to national priorities through line ministries. The common practice during district sectoral planning has been to focus on centrally-funded interventions rather than pressing local needs. The research also found that districts have not benefited from national policy provisions and commitments to CBA, such as the NAPA, which emphasizes community-based interventions and a multi-sectoral approach to enhance adaptation. Rather, each district sector is planning independently of the others, treating climate change as an environmental issue to be handled by the environment officer, and inadequately involving the community. Moreover, the natural resources sector where environment department belongs is the least funded.

Based on these gaps, ACCRA, with the Ministry of Water and Environment, facilitated an integrated planning and capacity enhancement process for district staff focusing on how to identify local adaptation priorities and integrate these into development planning. This was the first time all eleven sector and specific department heads in the district consulted communities, reviewed research findings, discussed and planned together. The result was a comprehensive five-year District Development Plan (2011-2015) with adaptation and disaster risk reduction measures integrated into each sector.

This presentation highlights key lessons, challenges and recommendations from this initiative to feed into the on-going process of developing the national climate change policy and its implementation plan, and climate change mainstreaming guidelines for all sectors.

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## **Climate-induced community relocation: CBA strategies to protect human rights**

By Robin Bronen

Climate change is transforming our natural environment with disastrous consequences for many communities. Scientists believe that climate change will increase the duration and frequency of extreme weather events, such as hurricanes, tropical cyclones, and storm surges. The International Organization for Migration (IOM) executed more than 60 projects responding to natural disasters in 27 countries across four continents in 2007 and 2008. Financial support to address natural disasters increased from one-fifth of the total funding received by IOM in 2006, to one-quarter in 2008. The Intergovernmental Panel on Climate Change predicts that 150 million people will be displaced by 2050 due to climate-induced ecological change.

Alaskan indigenous communities are at the forefront of climate-induced population displacement. Climate change is transforming Arctic ecosystems and threatening the way of life of the indigenous peoples who live along the navigable waters of Alaska's coasts and rivers. Disaster relief and hazard mitigation have been the traditional humanitarian responses to extreme environmental events. Yet government agencies are no longer able to protect communities despite spending millions of dollars on erosion control and flood relief.

In Alaska, several indigenous communities have decided that relocation is the only adaptation strategy that will protect them from the combination of climate-induced ecological changes caused by rising temperatures, thawing permafrost, and loss of arctic sea ice. Yet complex governance issues must be resolved in order to facilitate relocation. No U.S. federal or state government agency has the authority to relocate communities, no governmental organisation exists that can address the strategic planning needs of relocation, and no funding is specifically designated for relocation. Despite these challenges, one Alaskan indigenous community, Newtok, is relocating.

Clmigration is the word that best describes this type of population displacement. Communities, rather than individuals, will be forced to migrate. Permanent relocation will be mandated because there will be no ability to return home because home will be under water or sinking in thawing permafrost. Determining which communities are likely to encounter displacement requires a sophisticated assessment of a community's ecosystem vulnerability to climate change, as well as the vulnerability of its social, economic and political structures.

The policy and practical challenges to relocate Newtok are enormous and clearly demonstrate the need for new governance institutions that specifically respond to climate-induced relocation and protect the human rights of community residents. Severe economic, social and environmental consequences can occur in the relocation process. Relocation can unravel the fabric of a community, weaken community institutions and social networks, disrupt subsistence and economic systems, and impact cultural identity and traditional kinship ties within a community. A relocation policy framework based in human rights doctrine is essential in order to avoid or minimize these adverse impacts and to ensure a community's resilience after relocation. This presentation proposes the design and implementation of a unique adaptive governance relocation framework based in human rights doctrine.

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## **Social accountability in adaptation finance: emerging country-level practices**

By Sladjana Cosic

At COP17 in Durban, decisions were taken to establish and facilitate the immediate functioning of the Green Climate Fund (GCF). Resources are being mobilized with the aim of the GCF being capitalized and functioning within a few years. A significant share of the roughly US\$100 billion a year that Parties to the UNFCCC have agreed upon is needed to assist developing countries in undertaking actions to address the challenge of climate change. These funds are envisaged to finance their efforts in adaptation, and much of this new and additional financing is expected to flow through the GCF. But while the scale of the challenge in raising adaptation finance is enormous and politically difficult in times of global economic slowdown, it should not obscure the separate questions of how these funds would be governed, how to prioritize the use of adaptation finance at the country level, and who should be involved in making such decisions.



A growing number of developing countries are already taking significant actions to develop National Adaptation Plans, building on the earlier experience of developing National Adaptation Programmes of Action (NAPAs). Many are mainstreaming adaptation into national planning and budgeting frameworks. Recognizing that CBA can help address the distinct adaptation priorities of vulnerable groups in vulnerable areas, a growing number of countries are choosing to prioritize CBA within such national-level frameworks. Many governments are also seeking to engage civil society organisations to act as intermediaries in building community-level capacity for adaptation planning and action.

This presentation considers emerging country-level practices in engaging citizens directly in the prioritization and management of public spending on adaptation. They take a variety of forms, and a diverse range of operational instruments is being applied to support them. They range from direct budget support through development policy operations (for example in Mexico and Vietnam), including the application of Poverty and Social Impact Analysis to better understand the distributional implications of various policy actions in support of climate change adaptation; to projects designed to channel support to civil society organisations, acting as intermediaries in enhancing community-level climate resilience (for example in Bangladesh); to those under the Pilot Program for Climate Resilience (PPCR) that use additional adaptation finance to leverage larger investments from other public and private sources, managed through community-driven development platforms at the sub-national level (for example in Zambia). What these approaches share in common, however, is the use of social accountability tools and approaches to ensure transparency and participation by non-state actors in decision-making and resource allocation, and that higher-level authorities are held to account for their performance. Lessons from these diverse country-level practices can help inform wider efforts to prioritize CBA in national-level adaptation planning and budgeting, which is expected to increase significantly as the GCF is capitalized and becomes fully operational.

## Contacts

### Plenary session 23: Emerging challenges for CBA

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## **Plenary session 24: Identifying CBA research gaps and building a CBA community of practice**

The final session at CBA6 was chaired by Saleemul Huq. It summarised the strengths and weaknesses of CBA6 with regards to methods for transferring knowledge, networking, and the success of general conference management. As well as giving a brief recap on the conference, Saleem focused on proposals for improvements to be taken forward to CBA7, making suggestions such as banning PowerPoint presentations in order to ensure sufficient information intake and increased levels of interaction. This paved the way for an additional point raised by Saleem regarding the limited conversation during some sessions which he referred to as 'unsatisfactory'.

With a highly futuristic focus, the remainder of the presentation elucidated a proposed focus for CBA7 on mainstreaming CBA into government, and the need to bring more government representatives to the conference. It was suggested that two categories of government personnel be targeted: people in government who are doing something interesting and innovative with local communities and people who would like to have greater knowledge and influence. It was also noted that there should be further sharing of failures as well as successes in order to contribute to and increase knowledge on CBA and learn from ineffective as well as effective approaches. Saleem concluded on an enlightening note as he revealed the title for next year's conference, 'Mainstreaming CBA into National and Local Planning' to be held in Bangladesh in April 2013.

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### **The challenge ahead of mainstreaming CBA**

By Sam Bickersteth

The challenge going forward is how to scale-up CBA. If it remains a 'niche' area then it will never deliver the transformational change that it promises. Therefore, how to mainstream CBA is the question we should all start to focus on.

The Climate Development Knowledge Network (CKDN) delivers change by engaging with, supporting and strengthening the policy-making process for climate compatible development. Therefore, CKDN's concern is how to connect the 'bottom-up' to the 'top-down' approaches to adaptation? Further research and building a community of practice will be at the heart of this. The task is to identify the drivers of change, and pressure points, that will get CBA mainstreamed within the planning process at all levels. It will be impossible to hold on to an idea of a 'perfect' case of CBA. Instead, minimum standards or core principles of a CBA approach are required, that are capable of being scaled-up.

The community of practice on CBA that has started to develop needs to be expanded, with other sectors, and crucially also policy-makers, being brought on board. Together, this group has the skills and authority to synchronize the priorities of those with the funding, with the priorities of those that need it.

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<b>Plenary session 24: Identifying CBA research gaps and building a CBA community of practice</b>
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