

2011

Conference Proceedings

5th International Conference Community Based Adaptation (CBA)

24-31 March 2011

Dhaka, Bangladesh



Conference Secretariat:
Bangladesh Centre for Advanced Studies (BCAS)
Dhaka, Bangladesh

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This report is based upon the outcomes of the conference and has been compiled from the notes taken by the session chairs and respective rapporteurs. The report is a summary from the participants point of view, and does not necessarily express the views of the organizer. Presentations made during the plenary sessions of the conference are available at <http://www.slideshare.net/cbaied/presentations>.

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Abbreviations

CBA	Community Based Adaptation
CBNRM	Community Based Natural Resource Management
CBO	Community Based Organization
CRiSTAL	Community Based Risk Screening Tool - Adaptation & Livelihoods
CSDRM	Climate Smart Disaster Risk Management
CTFs	Conservation Trust Funds
CVCA	Climate Vulnerability and Capacity Analysis
DRR	Disaster Risk Reduction
FAO	Food and Agriculture Organization
GDP	Gross Domestic Product
IUCN	International Union for Conservation of Nature
IWRM	Integrated Water Resources Management
LAC	Local Adaptive Capacity
LDC	Least Development Country
MPA	Marine Protected Area
NAPA	Adaptation Programme of Action
NGO	Non Governmental Organization
ODI	Overseas Development Institute
PGIS	Participatory GIS
PLA	Participatory Learning and Action
PM&E	Planning, Monitoring and Evaluation
PRA	Participatory Rural Appraisal
PSF	Pond Sand Filter
RWHS	Rain Water Harvesting System
WFP	World Food Programme
WHO	World Health Organisation

Abstract

The success of the previous conferences and demand of the adaptation community resulted in the Fifth International Conference on Community Based Adaptation (CBA) which was jointly organized by Bangladesh Centre for Advanced Studies (BCAS) and International Institute for Environment and Development (IIED). This conference was held during 24-31 March, 2011 at Hotel Sheraton in Dhaka, Bangladesh. The primary aim of the conference was to share the latest developments in adaptation planning and practices among stakeholders and actors. The conference had three major parts- field visit, technical session, and high level panel session to present and discuss the issues and practices of community based adaptation around the world. The Fifth CBA conference covered topics on agriculture; local resilience and climate prediction services; communicating knowledge about CBA; bridging local, sub-national and national levels in adaptation; gender; health; funding and funding architecture; supporting adaptive capacity building; the economics of CBA; CBA tools and toolkits; synergies between disaster risk reduction, ecosystems, wider development projects and CBA. Prior to the conference sessions, about 300 participants took part in a three-day field visit to particular locations around Bangladesh that demonstrated different CBA activities. A total of 388 participants were registered for the conference, and among them 300 were international participants. The participants included scientists, researchers, disaster management practitioners, representatives from government agencies, international donors and members of UNFCCC Secretariat. A synthesis book will be published on the conference outcomes which will contribute to scientific and academic literature as well as the section on community based adaptation of the Fifth Assessment Report of IPCC. This publication will provide evidence based information on how to support CBA so that vulnerable communities are able to deal with impacts of climate change in future in a better way.

1

BACKGROUND

1.1 CBA Conference¹

Community Based Adaptation (CBA) recognizes that environmental knowledge, vulnerability and resilience to climate impacts are embedded in societies and cultures. This means the focus is on empowering communities to take action based on their own decision-making processes.

Increased resilience to climate stresses can be achieved by enabling communities to enhance their capacity to cope with climate extremes, such as hurricanes, floods and droughts. Although CBA is an emerging area, efforts are being made to develop participatory methodologies, raise awareness on climate change and foster adaptive capacity. This is particularly important in Asia, and among Asian countries Bangladesh is most vulnerable to climate change impacts.

Sharing experience and knowledge from pilot activities amongst practitioners, policymakers, researchers, donors and the communities at risk is essential. In view of this, the Second International Conference on CBA was held in Dhaka, Bangladesh, in February 2007. Those present also formed the CBA Exchange (www.cba-exchange.org) to promote knowledge sharing on CBA activities.² CBA is discussed at the annual Development and Climate Days event held during the Conference of Parties to the United Nations Framework Convention on Climate Change.³ CBA activities are also taking place in Africa, for example, through the South South North project activities⁴ and initiatives such as the Community Based Adaptation in Africa (CBAA) project being funded by the United Kingdom Department of International Development (DFID) and Canada's International Development Research Centre (IDRC) as part of their Climate Change Adaptation in Africa Programme (CCAA).

At the Third International Conference on Community Based Adaptation held in Bangladesh from 18 to 24 February 2009 participants agreed to form a Global Initiative on Community-Based Adaptation (GICBA) and to hold an annual conference to share knowledge and experience (details are available in www.bcas.net).

The Fourth International Conference on Community Based Adaptation to Climate Change was held in Dar es Salaam, Tanzania in February 2010 in recognition of the vulnerability of African nations to climate

1. Hannah Reid, IIED
2. See www.community.eldis.org
3. See www.dccdays.org
4. See www.southsouthnorth.org

change impacts (www.iied.org). Nearly 200 people from 38 countries attended the conference, and a two-day field trip preceded the three days of time spent in the hotel sharing information (through presentations, posters, publication dissemination and evening CBA video sessions), debating, working in small groups and networking.

At the end of the Fourth CBA conference, all the participants realized the need and continuation of such an initiative. Therefore, most of the sponsors/co-sponsors showed their interest in continuing co-sponsorship for the Fifth CBA conference which was jointly organized by BCAS and IIED. This conference was held during 24-31 March, 2011 in Dhaka, Bangladesh.

This year's theme was "Scaling Up: Beyond Pilots". During the Fifth CBA conference primary focus was on the need to spread CBA knowledge and practical lessons horizontally across communities and vertically across levels of governance and action. A total of 388 registered participants from 62 different countries attended the conference representing national and international development organizations working on climate change around the world.

1.2 Objectives of the Conference

The primary aim of the Conference was to share latest developments in adaptation planning and practices in certain priority sectors. Discussions on measures taken at different levels and dissemination of knowledge among stakeholders were also the primary objectives of the Conference.

The specific objectives were to:

- Bring together stakeholders and practitioners to share and discuss knowledge of Community-Based Adaptation planning and practices from different parts of the developing world and particularly Bangladesh.
- Capture the latest learning from community-based adaptation planning and practices around the developing world.
- Enhance the capacity building process of the most vulnerable groups and people to improve livelihoods in developing countries and integrate these lessons into national and international development programmes.
- Disseminate lessons learnt at the conference through proceedings and an immediate conference summary.

2

METHODOLOGY

2.1 Conference Structure and Programme

The conference was structured into three major parts- Field Visit, Technical Session, and High level panel session. The field trip was three days long and was designed to visit CBA projects in different ecosystems of Bangladesh, such as flood-prone areas, followed by three days of interactive discussions at the Sheraton Hotel which included daily morning and afternoon plenaries, daily technical sessions, a poster session, and British Council-sponsored short film presentations, (available at <http://uk.climate4classrooms.org/>). The plenary and technical sessions covered topics on agriculture, local resilience and climate prediction services; communicating knowledge about CBA; bridging local, sub-national and national levels in adaptation; gender; health; funding and funding architecture; supporting adaptive capacity; the economics of CBA; CBA tools and toolkits; synergies between disaster risk reduction, ecosystems and wider development projects.⁵

2.1.1 Field Visit

From 25-27 March, 2011, the participants went for a three-day field visit to see the community based adaptation initiatives and activities in eight different vulnerable sites of Bangladesh (please see annex-1 for details). Vulnerable sites mostly fall under drought, flood prone, river bank erosion, water logging, coastal salinity, high tide, coastal erosion and cyclone. All participants were divided into eight groups to visit particular vulnerable site or location.



Figure 1: Group visiting flood and erosion prone area in Bangladesh.

5. Earth Negotiations Bulletin (ENB), International Institute for Sustainable Development (IISD)

2.1.2 Inaugural session

The Fifth CBA conference was inaugurated by Sheikh Hasina, Honorable Prime Minister of the People's Republic of Bangladesh followed by introduction speeches by Dr. Atiq Rahman (BCAS), Dr. Saleemul Huq (IIED), Youssef Nassef (UNFCCC), Ian Burton (University of Toronto) and Dr. Hassan Mahmood (Honorable Minister, Ministry of Environment and Forests, Bangladesh) during the opening session.

On Monday morning, Dr. Atiq Rahman, Bangladesh Centre for Advanced Studies (BCAS) welcomed the participants to the Fifth Conference on Community Based



Photo credit: OneWorld

Figure 2: Sheikh Hasina, prime minister of Bangladesh, at CBA5 conference in Dhaka, 2011.



Figure 3: Dr. Hassan Mahmood (Honorable Minister, Ministry of Environment and Forests, Bangladesh), Dr. Atiq Rahman (BCAS), and Dr. Saleemul Huq (IIED) giving introduction speeches

Adaptation (CBA). He emphasized that climate change is the greatest threat that mankind faces today. Climate change is an integrated issue affecting all parts of development not only in developing countries but also the development of the rich countries is affected by it. Dr. Atiq Rahman also talked about the growing need for adaptation tools to face this problem. Youssef Nassef, United Nations Framework Convention on Climate Change (UNFCCC), stressed that the CBA conference could provide key inputs to the new processes and institutions being formed under the Cancun Adaptation Framework. He also mentioned that the series of international conferences on Community Based Adaptation is not only important in the field of adaptation but it has also become a forum for learning valuable lessons and sharing traditional knowledge. Ian Burton, University of Toronto, emphasized on the need to expand CBA to all communities, link CBA to developments at national planning levels, integrate adaptation into new areas of development, make CBA more strategic, and increase progress on mitigation. Hasan Mahmud, State Minister, Ministry of Environment and Forests, Bangladesh, stressed upon the need for support from the international community to address the vulnerability and resilience of Bangladeshis. Saleemul Huq,

International Institute for Environment and Development (IIED), stressed the opportunity for the conference to provide meaningful input to the International Panel on Climate Change's (IPCC) Fifth Assessment Report. Sheikh Hasina, Honorable Prime Minister of the People's Republic of Bangladesh, stressed that poor communities are most affected by the adverse impacts of climate change. She added that this conference will help the governments, scientific communities and non-governmental organizations (NGOs) with guidance and necessary assistance to address the impacts of climate change.

More than 500 participants including scientists, researchers, development and disaster management practitioners, representatives from government agencies, international donors and UNFCCC Secretariat attended the inaugural session.

2.1.3 Technical Sessions

The conference offered 23 plenary and parallel sessions to present and discuss issues and practices of community based adaptation around the world. Table 1 shows the different sessions held during the conference period (please see annex-2 for detailed programme). Some of the key discussions in the Fifth CBA Conference was- What constitutes CBA? How it differs from community based development activities? and How one can plan CBA activities in future to ensure that they are genuinely climate change adaptation activities and not just usual development activities?

Table 1: Conference Sessions: Plenary and Parallel

Plenary session 1:	Conference opening, welcome speeches and keynote presentations
Plenary session 2:	key concepts and terms in CBA
Parallel session 3:	Adaptive capacity - why it is significant? How do we support it?
Parallel session 4:	Water governance and climate adaptation
Parallel session 5:	Gender
Plenary session 6:	National policy action to foster CBA
Plenary session 7:	Agriculture, local resilience and climate prediction services
Parallel session 8:	The economics of CBA
Parallel session 9:	Urban areas
Parallel session 10:	Tools and toolkits for adaptation - supporting rapid replication and good practices
Parallel session 11:	Frameworks for measuring adaptation: alternatives to quantitative approaches
Parallel session 12:	Institutional capacity dimensions of scaling up CBA
Parallel session 13:	Building synergies between disaster risk reduction and CBA
Plenary session 14:	Communicating knowledge about CBA
Plenary session 15:	Bridging local, sub-national and national levels in adaptation - the articulation of institutions across scales
Parallel session 16:	How wider development interventions contribute to community adaptive capacity
Parallel session 17:	The role of ecosystems in adaptation
Parallel session 18:	Drylands and pastoralism
Parallel session 19:	CBA, disaster risk reduction and agriculture
Parallel session 20:	Health
Parallel session 21:	CBA knowledge management
Plenary session 22:	Funding and funding architecture to support up-scaling
Plenary session 23:	How to up-scale CBA while keeping the focus local - emerging lessons
Plenary session 24:	Conference closing statements and next steps

2.1.4 Poster Sessions

A Poster Session was held at the Fifth CBA Conference from 28-30 March, 2011 to create a scope for the presenters to share their research works with other fellow participants. The selection of posters were done by a review committee who evaluated the posters based on their content, graphical presentation and structure. The main objective for this session was to add a different dimension to the conference to make it more visual and interactive. Thereby, along with the display of posters, the session also facilitated different CBA related documentaries. This was an opportunity for the participants to see some relevant activities of other organizations working all around the world. The poster session was designed thematically to make it more interactive for the participants and the presenters to create a scope for networking among the organizations. The third day of the poster session was followed by an award ceremony where a panel of judges selected and declared three best posters of the session.



Figure 4: Poster session of CBA5

2.1.5 CBA-follow up

The Sixth CBA conference will be held in Vietnam next year and the theme will be "Communications". The conference will focus on learning lessons, sharing them amongst communities and practitioners and to the wider world on what is happening at the community level both in developing and developed countries.

2.2 Participants

The conference was open to anyone interested in CBA including policymakers, non-government organizations, research and policy institutes, those funding CBA initiatives, academics, government officials involved in adaptation and practitioners with grassroots experience of adaptation projects. There were 388 registered participants for technical sessions and among them around 300 were international participants (please see the list of registered participants in annex-3). About 40 participants from different LDC countries were funded by the Fifth CBA conference whose abstracts were selected by the conference organizers.

3

TECHNICAL SESSIONS OUTPUTS AND DISCUSSIONS : PLENARY AND PARALLEL

Plenary Session 2: Key Concepts and Terms in CBA

Session Chair: **Charles Ehrhart, CARE**

Lisa Schipper, Stockholm Environment Institute (SEI), discussed about the importance of having a core idea about adaptation theory, policy and practice. She stressed that rather than looking for a specific definition, we should share a same understanding of the landscape for adaptation actions. Lisa also highlighted the core differences between coping and adaptation stating that coping and adapting are related, but not the same. She emphasized that we need to be very careful while taking actions as some of them can increase people's vulnerability. At the end of her presentation Lisa stressed that as long as we understand the boundary and ultimate goal, it is not necessary to define adaptation in the same way.



Figure 5: Lisa Schipper, SEI

Charles Ehrhart, CARE, described the four principles of CBA: 1) non-discrimination, equality and the special needs of marginalized social groups; 2) active, free and meaningful participation; 3) empowerment; and 4) accountability.

Saleemul Huq, IIED, emphasized the importance of replicating successes, multiplying activities at the local level and influencing decisions from the ground up. Marcus Oxley, Global Network of Civil Society Organizations for Disaster Risk Reduction, stated that the terms used in the Disaster Risk Reduction (DRR) and CBA communities are very much related. He described that majority of the disaster losses are due to climatic events and also mentioned that Vulnerabilities are often affected by environmental, resource accessibility, governance and poverty variables. Harjeet Singh, ActionAid, mentioned that adaptation activities are dependent on social change. He stressed that in order to fully address adaptive capacity in vulnerable communities, it is necessary to deal with key social problems including extreme poverty, land

redistribution, health, education and energy. Quite a number of participants argued that it is very important to look at the current unbalanced power structure of the society and more importance should be given to community especially to women. Some participants stressed that adaptation should include 'ecosystem-based knowledge' and some others suggested to incorporate 'animal and plant rights' into CBA discussions. David Dodman, IIED, concluded the session by highlighting inter alia: the importance of using a variety of approaches to engage with different communities in order to achieve CBA goals; the importance of building synergies and engaging with the non-human world; and the role of knowledge and power at all levels.⁶



Figure 6: Harjeet Singh, ActionAid

Parallel Session 3: Adaptive Capacity – Why is it significant?

How do we support it?

Session Chair: **Rachel Berger, Practical Action**

Kirsty Wilson, Africa Climate Change Resilience Alliance (ACCRA), started her presentation by introducing ACCRA. She shared the activities of a project of CARE's on 'Household Income Building and Rural Empowerment for Transformation (HIBRET)' by using a case study from Kaseja, Ethiopia. Kirsty described that the project looks at how it is contributing across the different characteristics of adaptive capacity and then moving on to some of the gaps and opportunities for future action. She suggested some opportunities for the future such as evaluating crop choices, incorporating community assets with shorter benefit timeframes, improving technical support, improving the equity of institutions for managing key assets, using weather information to inform decision making, and creating more awareness of long-term changes.

Indrani Phukan, Christian Aid, talked about an approach called Climate Smart Disaster Risk Management (CSDRM) that strengthens CBA, integrates disaster risks into climate change programme design, strengthens ability of actors to enhance adaptive capacity, and promotes socially-just and equitable economic systems to address the structural causes of poverty and vulnerabilities.

Lorena del Carpio, Oxfam America, described the impacts of climate change in the highlands of Peru and shared the lessons learnt from working with indigenous communities in the highlands of Peru. She described a scaling up project involving enhanced water and pasture management, early warning measurement systems, and the creation of community to coordinate preventative and responsive action.

Krishna Lamsal, Local Initiatives - Biodiversity Research and Development (LI-BIRD), presented on the management of sloping and shifting cultivation lands for climate change adaptation and sustainable livelihoods. He also shared some examples of CBA approaches that builds community resilience through climate change adaptation by diversifying livelihood options and enhancing market linkage and promotion.

George Kasali, Copperbelt University, discussed on the barriers and opportunities for adaptive capacity building in the Mazabuka district of Zambia. He shared different impacts of climate extremes on livelihoods in that district and the barriers for different adaptation options. George highlighted that one of

6. Earth Negotiations Bulletin (ENB), International Institute for Sustainable Development (IISD)

the major barriers to adaptation is lack of credit facility. Farmers simply cannot afford the cost of any adaptation options unless it is contributed in-kind.

John Ajigo, Nigerian Environmental Study/Action Team (NEST), described a community based adaptation project to increase resilience and build adaptive capacity in Nigeria. The project aims to increase the capacity at community level by participatory peer-to-peer sharing, strengthening of local implementation committees into CBOs, and the inclusion of both men and women in decision making.

Srijita Dasgupta, Mahidol University, discussed on the adaptation capacity of fishing communities to climate vulnerabilities and changes for improving their livelihoods by using a case study conducted in the Cox's Bazaar district of Bangladesh. She stressed that it is important to empower fishing communities through supporting community-level institutional development. Srijita also stated that we should support risk reduction initiatives and sustainable fishing practices. Access to market and technical information plays an important role to limit the control of urban based fish traders. National-level planning in support of adaptation capacity should consider risk assessment of future fish stock variation and the likelihood of resource degradation and produce sectoral plans accordingly.

Anwara Begum, Caritas Fisheries Program, outlined the CBA activities of Caritas in Bangladesh. She stressed that it is very important to involve community in decision making to ensure the sustainability of a project. Anwara also said it is necessary to disseminate climate change information for identification of appropriate technology for adaptation. Access to natural resources and finance is also important to facilitate adaptation for the poor people.

Parallel Session 4: Water Governance and Climate Change Adaptation

Session Chair: **Katherine Cross, IUCN**

Katherine Cross, International Union for Conservation of Nature (IUCN), presented on integrating climate change adaptation into water governance institutions in Tanzania, Uganda and Kenya. IUCN partners are implementing a project that generates technical information and develops participatory forums to strengthen Integrated Water Resources Management (IWRM) in the Pangani Basin of Tanzania. The area wise challenges include conflict between water users, water degradation and pollution, insufficient force of the rule of law, poor infrastructure, shortage of supply, higher demand, and shortage in availability of water and multi-sectoral process that integrates national to local level stakeholder results in good water governance. The scaling up options include applying similar approaches in basins in other East African countries that include the identification of adaptation strategies, resources and others needed at the community level. She included that knowledge exchange between both intra and international sectors shall make the scaling up of water governance fruitful.

Hassan Arif, Water Aid Bangladesh, discussed on domestic water supply in climate vulnerable areas. In an overpopulated, poverty driven country like Bangladesh the threats of climate change are very much eminent. In terms of adaptation, low cost household based Rain Water Harvesting System (RWHS), disaster resilient pond with PSF, elevated Pond Sand Filters (PSF), raised platforms with tube wells are some of the innovative methods being practiced. The challenges of RWHS are the fragile clay jars and maintenance of pots and dipping tools are tedious. The raised facilities can be expensive and they are often useful in post disasters for a short period of time. Disaster resilient ponds are created through collective action to prevent saline intrusion, and raise and protect the embankments. The problem remains in extracting salt

water by using PSF, and a certain vegetation is needed to protect raised embankments. Participatory Vulnerability Assessment (PVA) and a community plan of action is pivotal to having any plan of action. The introduction of community based water management systems is another necessity. Horizontal learning and linkage among actors is a key method of scaling up community based adaptation in water governance.

Madyoury Tandia, Tenmiya, Mauritiana presented on land degradation in Guidimakha. Much of the world is affected by the degradation of land as an impact of climate change. The pedo-climatic conditions affecting Guidimakha in Mauritiana are torrential flows from highlands, rapid runoff of water to the Senegal River and soil erosion. Rainfall with high amplitude has been more frequent. The Water Community is affected by this degradation and the adaptation options currently being used are using of agricultural techniques which can improve water conservation in soil, building small dikes and the usage of seed grains for short cycle. Building infrastructure, such as filtering dikes, mixed dikes, thresholds of gabions and rocky grown are methods of adaptation. Restoration and management of 97 hectares entailed 205 tonnes of cereals in 2010, as compared to 12 tonnes before the project started. Some species that had disappeared previously appeared once again. Drinking water supply augmented. The scaling up option included extension of project up to 300 hectares of new lands to be managed in the area of Waret and to extend the watershed management.

Bhathiya Kekulandala, Practical Action, Sri Lanka, shared the findings of a project on adapting an indigenous water resources management system to new climatic realities. The project is situated in Kathiraveli in eastern Sri Lanka, at the bank of Verugal River. Due to 2004 tsunami, the area is facing vulnerability. Practical action launched a five year project that envisaged the integration of local communities by providing access to basic services, improve livelihoods and disaster resilience. The project studied how to rehabilitate the irrigation systems and how to train community members to manage the system. The communities have managed to minimize the damage to property and livelihoods.

Bach Tan Sinh, National Institute for Science and Technology Policy and Strategy Studies, Vietnam, discussed on local knowledge and community based adaptation to flood management in An Giang Province, Mekong Delta of Vietnam in the context of climate change. In the Mekong Delta, the annual discharge of the Mekong River during the wet season is 39,000 m³/sec. About nine million hectares of the Delta can be flooded, thus the rice basket of Vietnam loses production capability. "Controlling the Floods" includes the infrastructure work for protection the aqua and agricultural production and increasing the land-use coefficient and the safety of local people. "Avoiding the Flood" is applied to alert people at risk and evacuate local people out of flooding areas. "Living with Floods" is understood as the integrated solutions for adaptation by people. He talked about two different flood risk perceptions which are: the need to be prevent, control and reduce floods. The other perception is to live with floods which is an alternative coping mechanism in Vietnam. He concluded his presentation by explaining the Control Approach and Adaptive Approach. The Control Approach consists of structural measures to control floods such as dykes and embankments. The Adaptive Approach on the other hand consists of non-structural measures such as diversification of agricultural activities and generation of additional jobs.

Parallel Session 5: Gender

Session Chair: **Achala Chandani, IIED**

Krystel Dossou , OFEDI , Benin described energy technology transfer to combat deforestation and reduce climate change vulnerability in Zagnanado (Benin, West Africa). Vulnerability of domestic energy is strongly linked to forestry issues. Almost eighty percent of domestic energy is provided by biomass and there is a high rate of deforestation in Benin. FAO estimates the rate of losing forests at around 100,000 hectares every year. According to National Adaptation Programme of Action (NAPA), there is a high vulnerability among women, especially women working in groups to transform agricultural products or to cook. The objective of the CBA project is to reduce half of the consumption of fuel wood by adopting economic stoves made of local materials. These stoves have been tested and proved to reduce energy consumption. Another objective is to promote tree plantation to improve supply of woods. The main achievements of the project are participatory diagnosis and reference study. Three hundred women have been trained and their capabilities improved by the project. More than 25,000 trees have been planted. The project also provided a technical guide on how to build the stoves. As women cannot own land in most African countries the project had to make a commitment with the local government. Another difficulty was that the stoves got destroyed during rainy season and so additional protection measures had to be taken. It is very important to scale up this type of initiative for various reasons. First of all, it is important to maximize energy savings and efficiency. It is also important to increase forest resilience and increase carbon sink potential. This will help women to improve their wellbeing. There are many ways we can scale up this type of activity. For example, increase the reproducibility of pilot project taking into account local differences, language and culture, capacity building of women through training, and mobilizing fund to support these processes. Regional collaboration and exchange of ideas and experiences are welcome here.

Assalama Sidi, Plan International, Niger discussed the impact of climate change on girls in Niger. Climate change hazards affect people disproportionately based on gender and age. She stated that although girls and young women are greatly affected, they are often excluded in adaptation discourse. Climate change adaptation policies and funding must prioritize inter-generational justice by supporting girls education as part of adaptation activities as it will result in significant cost benefits. Experience has already shown that investment in girls can make a huge difference in terms of education and health. Many recommendations were mentioned by participants on how to integrate capacity building of girls in climate change adaptation process. One of the recommendations was to provide support to girls to take an active role in the climate change debate. They represent vulnerable groups who should take part in decision making.

Basra Ali, Regional Development Consulting Group, Kenya presented on scaling up community level work in North Kenya. She emphasized that it is very important to scale up key actors and institutions that are supporting the women groups like government officers, CBOs, NGOs and examine the underlying politics behind funding them.

Kathleen Mogelgaard, Population Action International, discussed the linkages between reproductive health, family planning and climate change. She pointed out that there is a conceptual linkage between reproductive health, family planning and climate change. Women face unique vulnerabilities as a result of climate change. It is necessary to increase access to family planning and reproductive health information in overpopulated areas which are also affected by climate change. Improved education and empowerment opportunities will contribute to improved status of women, reduction of poverty and spurring economic growth. All these factors are important and foundations for adaptive capacity.

Charles Nyandia, UNDP presented on how to mainstream gender into CBA. He discussed the importance of mainstreaming both genders into all aspects of CBA projects. He explained that to ensure a gendered approach, practitioners should focus on: an initial analysis of gender dynamics, including those with power

within the community; fostering equitable community participation; using new techniques and technology as entry points; using designs that accommodate women's traditional roles and responsibilities and, providing easy and accessible training to both women and men.⁷

Plenary Session 6: National Action to Foster Community Based Adaptation

Session Chair: **Heather McGray, WRI**

Communities and individuals will need to anticipate, plan and respond to the additional and growing challenges of a changing climate. Often, national level policy, investment and institutional arrangements will play a critical role in facilitating and enabling individuals and communities to successfully adapt to these changing circumstances. Out-dated or maladaptive national interventions can stifle adaptation and lead to adverse outcomes.

Nahau Rooney, Manus Provincial Government, Papua New Guinea discussed her country's national development strategy which included a climate change and environment component aiming to contribute to climate change adaptation and the improvement of governance and decision making in environmental policy. She described the vulnerability issues of a province and the measures its communities are taking to adapt to climate change. She concluded her presentation with an illustrative example of mangrove plantation along the coastline.

Jeremiah Mushosho, Zero Regional Environment Organization, presented on how his organization is meeting information and advocacy needs for climate change adaptation. He mentioned the importance of media involvement in disseminating information. Mushosho emphasized on stakeholder involvement and public participation and human-rights based approach to climate change. He concluded by saying that there is need for policy relevant research on climate change.

Nick Hall, Plan International, presented on the importance of adopting a children-centered approach to climate change adaptation. He highlighted challenges, including that 85% of climate change-related diseases are borne by children and that approximately 500,000 children are displaced by flooding every year. Hall called for designing adaptation policies and investments that encourage children to take an active role in adaptation policy making both locally and nationally.

Legesse Gebremeskel, Ethiopian Environmental Protection Authority, discussed national, regional and local adaptation mechanisms dealing with extreme events in areas dependent on rain-fed agriculture or pastoralism. He outlined the process of developing Ethiopia's Programme of Adaptation to Climate Change (EPA-CC). Legesse also shared different challenges and benefits of NAPA. Benefits include, increased awareness and involvement of individuals, and increased capacity among experts at the sectoral, regional, and local levels.

Arivudai Nambi Appadurai, M.S. Swaminathan Research Foundation, presented a weather-based farming model as a tool to enhance adaptive capacity, optimize delivery systems, and improve policy dialogue and advocacy. He explained that farmers who are trained to use locally-generated weather information are able to fine-tune their agricultural practices to enhance adaptive capacities in the long run, and disseminate weather information to inform policy makers.

During the discussion, participants mentioned issues like the identification of actions for governments to help scale up CBA projects; appropriate measures to strengthen climate change systems at the local and national levels and, communicate climate change messages to non-literate communities.⁸

7. Earth Negotiations Bulletin (ENB), International Institute for Sustainable Development (IISD)

8. Ibid

Plenary Session 7: Agriculture, Local Resilience and Climate Prediction Services

Session Chairs: **Sudip K Rakshit, AIT and Richard Ewbank, Christian Aid**

Mokbul Morshed Ahmad, Asian Institute of Technology, highlighted some of the main drivers of agricultural transformation which are population growth, ageing, migration, changes in production, technology, market access, marketing, land tenure and fragmentation. The impacts of climate change on South East Asia include the deterioration of irrigation systems, loss of fertile area, loss of potential harvests and the movement of farmers. He mentioned that adaptation options are necessary to address the problems in agriculture due to climate change. He also explained that organic agriculture is ecologically friendly and reduces dependency on pesticides and fertilizers, and organic crops also perform better under climate change conditions than non-organic crops.

Ben Twinoumugisha, Food Rights Alliance, Uganda discussed on scaling up appropriate scientific technologies in indigenous adaptation strategies. He stated that small scale farmers are major contributors to the GDP in many LDCs. Adaptation to climate change is still largely based on indigenous knowledge. It is currently challenged and made less effective by different climate impacts. Poverty amongst small scale farmers happen to be extreme due to limited access to improved technological inputs, relevant information and early warning systems. To scale up adaptation efforts it is very important to strengthen small scale farming by modern science and technology. At the same time, scientists should also take into account local and indigenous knowledge.

Dinanath Bhandari, Practical Action, Nepal, presented on ethnometeorology in the context of climate change in Nepal. In Nepal there is a severe shortage of meteorological stations to disseminate climate data. He stressed the need to integrate local people's knowledge and understating of how climate change has affected their assets and livelihood into climate forecasting. Dinanath recommended that community should have easy access to climate forecasting. He also described community-based forecasting techniques, knowledge exchange, livelihood strategies, the scope of CBA and the potential to generate more precise information on climate variation and impacts.

Damian Casmiri, Linda Kiluma and Ester Kibona, EPMS, Tanzania discussed on enhancing the adaptive capacity of communities in semi arid regions by harmonizing indigenous knowledge on weather forecasting with conventional forecasting. Smallholder farmers could greatly benefit from seasonal forecasts in a number of ways. For example, knowing in advance whether the rainfall will be normal, below or above average could help them choose the right crops varieties, adjust their cropping practices or take other necessary measures to maximize benefits or minimize losses. Poor interpretation and communication of forecast outputs have been a major problem. African communities and farmers have always coped with changing climate. Indigenous knowledge on weather forecast enables people to design their disaster management response long in advance. Different strengths of the two systems (indigenous and stereotypical) if combined will contribute significantly in the improvement of the accuracy and reliability of seasonal forecast.

Richard Ewbank, Christian Aid, shared the results of Christian Aid's Climate Change Innovation Fund projects in Africa. The objective of Christian Aid's projects in Africa is to involve in activities to enhance the community-based adaptation of livelihoods to predicted climate change. The steps to do that are through thorough analysis of climate change by using meteorological data, community knowledge and participatory vulnerability and capacity assessment. The Final step is the selection of the most relevant options including adaptation planning, climate proofing and climate screening. It is important to develop more location-specific "agricultural forecast" products designed with farmers for farmers. The usage of

accessible communication channels that explain concepts, uncertainty, probabilistic forecasts (not just dry radio forecasts) and a two-way communication link to integrate local knowledge, update on new LT information have been mentioned as recommendations.

Mohammad Azmey, World Food Programme (WFP), discussed the community early warning systems for disaster risks reduction in Sri Lanka. Critical dependence on water resources for food security, livelihoods and economy is increasing poverty and environmental degradation. Some of the recommendations mentioned were to build and strengthen existing national and local DRM systems, enhance focus on climate hazards and coordination mechanisms and collaboration between community and central levels, strengthen training and capacity building of local communities and extension services, and early warning system based on climate information. It is very important to align and interventions with both community and government priorities and plans. Stabilizing livelihoods among resettled families will play increasingly important role. Scaling up of resilience building activities is doable, for example through social protection mechanisms.

Parallel Session 8: The Economics of Community Based Adaptation

Session Chair: Co-chaired by **Muyeye Chambwera, IIED**, and **Nahau Rooney, Manus Provincial Government, Papua New Guinea**.

Rachel Berger, Practical Action, discussed on pre-project assessment for community-based adaptation. She discussed various advantages and disadvantages of cost-benefit analysis as a tool. Cost-benefit has its benefit but it also has some blind spots, particularly at local level because the aim of CBA is multiple and it includes social and environmental factors. According to her, it should not be the only tool for looking at pre-project options, nor should it be used for monitoring & evaluation for post-project benefits. However, for some projects such as comparing options for capital investment, cost-benefit analysis could be a useful tool.

Maria Rebecca Campos, University of the Philippines Open University, presented the case of economics of adaptation to climate change of sea cucumber fishers in the Philippines. She presented a case study of the economics of adaptation of sea cucumber fisheries, outlining impacts of climate change on this sector in recent years, including decreases in export earnings. Currently, sea cucumbers are mainly harvested by commercial fishing. Climate change has affected the commercial fishing sector of artisanal fishermen who rely on it as their source of livelihood. It has been shown that Marine Protected Areas (MPAs) is the most effective community-based methods to keep coral reefs and seagrass beds healthy. She stressed the need to find better ways of managing the MPAs. More strategies must be developed to reduce the annual cost of maintenance and enforcement. Sustainable revenue mechanisms must be put in place to offset costs that cannot be avoided.

Jessica Frank, Twin Trading, highlighted some benefits and problems of working with farmer organizations to reduce risks and vulnerabilities due to climate variabilities by using a case study. She shared some of the advantages and disadvantages of working with such organizations. The advantages are economies of scale through large membership, existing social capital, infrastructure, technical expertise, farmer organizations as social enterprises and building networks. The challenges are exclusion of marginalised groups, reaching beyond the organisation's membership and competing priorities.

Katharine Cross, IUCN, discussed adaptation options for microfinance institutions (MFIs). Access to finance is critical to facilitate investment in climate-proof livelihoods and to prepare for uncertainties and extreme events. She stated that MFIs can assist adaptation activity through developing an organizational level

disaster plan, and educate their customers about the potential risks and dangers of climate change introducing new products or incentives to support climate change adaptation activities, such as crop switch, livelihood diversification, insurance with flexibility clauses.

Martin Obermaier, Rede de Desenvolvimento Humano (REDEH) discussed a holistic approach to reduce poverty and adapt to climate change in semi-arid parts of Brazil with the specific objective of improving production of food and fodder on small plots of land. Unsustainable farming practices and extensive livestock raising have led to large-scale environmental degradation in major caatinga biome. According to him, scaling up phase needs subsidies, identification of local champions, engagement of private sector under good local management.

Ricky Carl, Federated States of Micronesia, discussed on the role of Conservation Trust Funds (CTFs) in resourcing CBA at scale by using case studies from Micronesia and Melanesia. He suggested using Conservation Trust to fund adaptation projects. There are over 50 conservation trust funds worldwide which are independent legal entities and a strong representation from various sectors. Most CTF's have high-level political support in-country and internationally. Micronesia has agreed to effectively conserve at least 30% of the near-shore marine resources and 20% of the terrestrial resources across Micronesia by 2020. CTFs can align well with National Development frameworks and complement government support for CBA. CTF's should build on community action, and not be the sole provider.

Parallel session 9: Urban areas

Session Chair: **David Dodman, IIED**

Three brief interventions outlined the scope for the session: David Dodman, IIED, introduced the session's rationale; Anna Brown, Rockefeller Foundation, provided an overview of the activities of the Asian Cities Climate Change Resilience Network (ACCCRN), and Katarina Soltesova gave an overview of grassroots initiatives in Korail, the largest inner-city informal settlement in Dhaka.

Shiraz Wajih, GEAG and Bach Tan Sinh, NISTPASS discussed experiences of core ACCCRN partners in India and Vietnam; and a Community Based Organization (CBO) leader and a local NGO representative from Korail reflected on the potential of communities and intra-urban networks to organize and engage in long-term multi-stakeholder processes contributing to greater resilience.

Parallel Session 10: Tools and Toolkits for Adaptation – supporting rapid replication and good practices

Session Chair: **Tine Rossing, CARE International**

The five presentations of this session were designed to explore the scope, application and experiences of different toolkits, tools and methodologies related to adaptation.

Anna Ricoy, UN Food and Agriculture Organization (FAO), discussed FAO's e-learning tool to support awareness raising and guide planning for CBA to climate change. The tools have four modules: improving understanding of climate change and associated impacts; linking concepts of agriculture and food security; and tools for preparing and implementing CBA projects. Modules are based on research based knowledge on climate change impacts with examples from the field. These e-learning modules can be used in different ways such as self learning, interactive training sessions and can be integrated in specific

course. These modules are tested in several countries and will be introduced based on the feedback from the tests.

Julie Webb, CARE Australia, shared CARE's new CBA toolkit developed for project cycle stages. This toolkit tells practitioners when to use which tool in different project cycles and creates a high quality standard for both the process and outputs of each stage.

Gretel Gambarelli, IUCN, presented the use of CRiSTAL (Community-based Risk Screening Tool - Adaptation & Livelihoods) and CVCA (Climate Vulnerability and Capacity Analysis) Tool for climate change adaptation vulnerability assessments in East Africa and Central America. These tools assist users in making adjustments to improve a project's impact on adaptive capacity and also identify activities to increase adaptive capacity. She stressed that no single tool can meet all needs, tools should be adapted and modified to specific scenarios.

Fiona Percy, CARE International, presented CARE's CBA toolkit and CVCA (Climate Vulnerability and Capacity Analysis) tool for practical step-by-step guidance and tools to facilitate analysis, design, planning, implementation and monitoring for CBA projects. These tools are used in CBA for local empowerment.

Mayuk Hajra, Development Alternatives, presented a case of Community Led Assessment, Awareness, Advocacy and Action Programme for Environment Protection and Carbon Neutrality in Himachal Pradesh. He presented the 4As Approach which comprises of Assessment, Awareness, Advocacy and Action.

Many concerns were raised by the participants about the quantity of tools development for CBA. Questions regarding constraints and challenges in sustainability of these tools were also raised.

Parallel Session 11: Frameworks for Measuring Adaptation - Alternatives to quantitative approaches

Session Chair: **SVRK Prabhakar, Institute for Global Environmental Strategy (IGES)**

Charles Ehrhart, CARE and Jessica Ayers, IIED, presented a project on participatory monitoring and evaluation for CBA. The objective of the project was to provide robust, reliable information to CBA project stakeholders about: prioritizing the right activities to achieve desired outcomes, appropriate approach considering socio-cultural, ecological, political contexts and achieving multiple changes at multiple levels ensure to sustainability.

Charles Tonui, African Centre for Technology Studies (ACTS), Kenya, discussed on participatory video for monitoring and evaluation of CBA. His presentation explained how communities were empowered to use video cameras to capture weather related information in the Lake Victoria Basin in Nyando, Kenya. Community members were trained to use video cameras and then play it to communities to help them learn more about climate vulnerabilities. This project has helped community members to attain a better sense of planning in accordance to the weather.

Lindsey Jones, Overseas Development Institute (ODI), presented on how to assess adaptive capacity at the local level by using a framework. How we measure adaptation will ultimately guide how we design interventions aimed at supporting it. Frameworks for adaptation must be drawn up based on consultations with academics, policy makers, practitioners and local communities. Local Adaptive Capacity (LAC) can be used for assisting in identifying potential strengths and gaps in a local system's adaptive capacity.

Rajan Kotru, International Centre for Integrated Mountain Development (ICIMOD), shared the frameworks for measuring the progress in institutional mainstreaming of adaptation. Local institutions play a crucial

role in shaping adaptation to climate change on ground. Local institutions shape the way communities respond to climate change, they act as intermediaries for external support to adaptation and they can be strong interface for any adaptation practice-policy-science framework. He stressed that vulnerability assessments should be done at local scales, there is need to reform the local developmental governance and align adaptation goals with local development goals. As a way forward Rajan mentioned two options of activities being under national public schemes and another option as building and scaling up available best practices of mainstreaming.

Paula Silva Villanueva, Institute of Development Studies (IDS), proposed a framework for planning, monitoring and evaluation (PME) of the integration processes of climate change adaptation, disaster risk management, climate change adaptation and development. The Climate Smart Disaster Risk Management (CSDRM) approach integrates planning, monitoring and evaluation in order to facilitate integration processes of climate change adaptation, disaster risk reduction and development. These are intended to support strategic planning, policymaking and programme staff to assess the effectiveness of existing DRM policies, projects and programmes in the context of a changing climate. CSDRM Grid helps CBA planning and M&E process by self-assessment and planning for Integration. CSDRM also monitors the direction of change within and across domains of work and scales, and evaluates to identify missing gaps.

Parallel Session 12: Institutional Capacity Dimensions of Scaling up CBA

Session Chair: **Maarten van Aalst, Red Cross/Red Crescent Climate Centre**

This session looked at the institutional dimensions of community-based adaptation (CBA): which institutions facilitate CBA, and how can their capacity to support such activities (at scale) be enhanced?

Ranga Pallawala, Practical Action, presented on harmonizing local governance systems to support CBA. He emphasized that linking and harmonizing these systems will strengthen sustainable development and CBA.

Nidhi Mittal, Save the Children, discussed on the role of community-based organizations in building urban resilience by presenting a case from Bhopal, India. She wanted to highlight the environmental injustice towards the poor. Nidhi stressed that it is very important to build resilience of urban poor by bridging the gap between adaptation and basic services. Community based organizations act as vehicle for the urban poor to build empowerment, transformation and climate resilience. She also shared some barriers in scaling up CBA, for example, dismissive attitudes of local government, lack of education, power struggle and rigid perceptions. At the end of her presentation she showed a multi-layered collective strategy action plan where community based organisations of women and children are a key vehicle for community based adaptation to Climate Change.

Sherpard Zvigadza, ZERO Regional Environment Organisation, discussed the importance of addressing poverty alleviation priorities in CBA. He stressed to engage stakeholders in decision-making, determining how climate change impacts will affect the poor and prioritizing adaptation measures.

Raju Chhetri, Climate Action Network International (CAN-I), discussed on building institutions for CBA linked to the Cancun Agreement. He stated that the provisions for adaptation concluded in Cancun could enable institutional support for CBA. For this to happen, NGOs will need to be pro-active and work at the local level to build capacity for adaptation and empowerment. NGOs will also need to work at the national level to build governments' understanding about the nature of adaptation and adaptive capacity.

Anna Taylor and Tahia Devisscher, SEI, with Helen Jeans and Nadia Bood, WWF UK and Belize, shared three case studies from SEI/WWF activities from May 2010 and April 2011. Different options and barriers to integrate governance of development, climate adaptation, and ecosystems were discussed. The opportunities they experienced were better integration and coordination; cross-scaling NGO work; and better channeling of global funds and market-based mechanisms. The barriers they found included: poor policy implementation and enforcement; limited sectoral policy scopes; coordination gaps between scales; and poor coordination of funding and investments.⁹

Parallel Session 13: Building Synergies between Disaster Risk Reduction (DRR) and CBA

Session Chair: **Marcus Oxley, Global Network of Civil Society Organizations for DRR**

Marcus Oxley, Global Network of Civil Society Organizations for Disaster Risk Reduction (DRR) chaired this session. He highlighted that it is very important to break down the disaster risk management and the climate change adaptation discourses into local, national, regional, and international levels in order to scale up CBA.

Terry Cannon, IDS, shared the Climate Smart Disaster Risk Management (CSDRM)¹⁰ approach with the participants. He stated that CSDRM is an integrated social development and disaster risk management approach that aims simultaneously to tackle changing disaster risks, enhance adaptive capacity, address poverty, exposure, vulnerabilities and their structural causes and promote environmentally sustainable development in a changing climate. He also discussed the applications and uses of CSDRM approach.

Jessica Mercer, Oxfam East Timor, shared the opportunities and challenges they are being faced with in scaling up DRR and CBA programme in East Timor. She suggested that climate change adaptation should be embedded into the disaster risk reduction approach.

Pramita Harjati, Mercy Corps, described the work of the Asian Cities Climate Change Resilience Network (ACCCRN) in Indonesia. She shared some of the challenges faced by the organization, including lack of coordination between national government sectors dealing with disaster risk reduction and climate change adaptation.

Karina Copen, Oxfam America, presented a disaster risk reduction and community based adaptation project in El Salvador through which she wanted to suggest that one effective way of addressing vulnerabilities is to strengthen community organizations and networks to build adaptive capacity. She stated that trust building between communities and local authorities is very important which forms a base for ongoing activities to build stronger, resilient communities.

Ben Wisner, University College London, pointed out that risk and opportunity management is the core of CSDRM. Stephane Bonduelle, Concern Universal Bangladesh, underlined that in order to build synergies, up-scale and mobilize and train community individuals, the development workers, role must change from “doers” to facilitators.¹¹

9. Earth Negotiations Bulletin (ENB), International Institute for Sustainable Development (IISD)

10. See www.csdrm.org

11. Earth Negotiations Bulletin (ENB), International Institute for Sustainable Development (IISD)

Plenary Session 14: Communicating Knowledge about Community-Based Adaptation (CBA)

Session Chair: **Pablo Suarez, Red Cross / Red Crescent Climate Centre**

Pablo Suarez, Red Cross/Red Crescent Climate Centre, chaired this session. Firstly, he invited the participants to think about three guiding questions:

1. Are there tensions on how to communicate knowledge for CBA? Do we need to resolve these tensions?
2. How can we scale up CBA communication given existing resource constraints?
3. What can we do to mobilize more resources for scaling up - as CBA practitioners?

He started the session with a game through which he tried to show the barriers in communicating knowledge on CBA.

Mokhlesur Rahman, Curtin University, presented on villager's perceptions of climate and non-climate stressors. In his presentation, he showed that local people in Bangladesh have no specific knowledge about climate change although their livelihoods are seriously affected by climate change impacts. They relate their climate related problems with weather and non-weather stresses. He stated that although some issues of climate change can be resolved locally, some climate change issues need trans-boundary measures.

Charles Chikapa, Malawi Broadcasting Corporation, described how community radio can be used as a catalyst to improve food security in the face of climate change.

Susan Nanduddu, Development Network of Indigenous Voluntary Associations (DENIVA), suggested working in partnership with other stakeholders to enhance learning from and within each category. Such a collaboration can link researchers directly with community, increases accountability horizontally and vertically, and creates larger scope of influence. This type of collaboration generates a lot of ideas from more than one institution on how best to strengthen adaptive capacity.

Bettina Koelle, INDIGO Development and Change, discussed the need of a robust methodology for implementing CBA projects. She pointed out the need to learn from the past successes and failures. According to Bettina, there is a rich pool of tools scattered across DRR initiatives such as project management, participatory rural appraisal (PRA), participatory learning and action (PLA), and participatory GIS (PGIS). We need to make use of these to make flexible guidelines for CBA methodology. She stressed the importance of integrating local people's knowledge and their past experiences by listening to them intensively. Bettina said that it is important to learn our ways toward a positive future instead of always trying to avoid negative impacts of climate change.

The issue of donor pressure was also raised by some participants. One suggestion was to communicate enough with the donors and to bring strong evidences from the local level to have realistic outputs so that the donors also have realistic expectations in terms of CBA. Some of the participants stressed the importance of involving communities more intensively in designing CBA activities to reduce uncertainties in the short term.



Figure 7: Participant of CBA5

Plenary Session 15: Bridging Local, Sub-national and National Levels in Adaptation - The articulation of institutions across scales

Session Chair: **Robin Mearns, World Bank**

Arun Agrawal, University of Michigan, presented two cross-regional studies of World Bank on different adaptation types and policy support to implement CBA. In one of the projects, different forms of adaptation at the local level were identified and analyzed what account these variations. As climate change impacts are uncertain, it is very important to consider the social dimensions through a precautionary approach. We need to focus on the vulnerability profile of communities to understand different ways in which people are vulnerable to identify adequate interventions.

Antonio Oviedo, World Wide Fund for Nature (WWF), presented WWF's activities in Amazon fisheries. His presentation, he suggested that management of CBA should be community driven.

Jessica Ayers, IIED, discussed the role of institutions and the importance of the meso level as an interface between community and higher levels of government. She also identified the importance of "nested" institutions that nurture information flow, create an enabling environments and intercept projects which may negatively impact communities.¹²

Margaret Barihaihi, Africa Climate Change Resilience Alliance (ACCRA), shared ACCRA's work in Uganda. The work is about bridging the gaps in communities, district and national levels on how to enhance community adaptive capacity. For this, ACCRA analyzed the national policies addressing DRR and CBA to find out how they can be implemented across district scales. Margaret also shared the capacity gap analysis of her work. One cross cutting issue ACCRA identified in the capacity gap analysis was the inadequate planning, coordination and support from central government.

Adeline Aubry, United Nations Development Programme (UNDP), shared UNDP's work on partnership building and advocacy of CBA in local and national levels. In her presentation, she showed how Global Environment Facility (GEF) funded community driven projects influenced bigger programmes through advocacy and partnership.

Margaret Arnold, World Bank, suggested that along with scaling up CBA, it is also important to 'scale out' to welcome solutions outside the environment sector as well as 'scale down' to facilitate outreach and decentralization of CBA. She also stressed to recognize and formalize the role of communities.

Yvan Biot, United Kingdom Department for International Development (DFID), shared some of his observations regarding CBA around the world. Some of the critical observations he shared were knowledge from community-based natural resources management (CBNRM) and planning is playing an important role in reducing vulnerabilities of communities through CBA processes; importance of scientific understanding of socio-economic environment of the area where a CBA project will be implemented; long-term vulnerability of community should be addressed; and CBA must consider the origin of community threats.

At the end of the session, participants shared some comments such as corruption as a challenge to CBA at national level, importance of international level processes on adaptation, importance of social characteristics and political issues determining vulnerabilities.

12. Earth Negotiations Bulletin (ENB), International Institute for Sustainable Development (IISD)

Parallel Session 16: How Wider Development Interventions Contribute to Community Adaptive Capacity

Session Chair: **Eva Ludi, Africa Climate Change Resilience Alliance (ACCRA) / ODI**

Jo Lofthouse, Oxfam and ACCRA, presented preliminary findings from ACCRA projects in Uganda and stated that it is very important to link livelihoods, disaster risk reduction (DRR), and social protection programmes to enhance communities' adaptive capacity. She also highlighted that it is very crucial to address the issue of existing power relations. Lofthouse recommended the need for more analysis and linkage with local and national governments and policies. She also stated that climate information must be a key in decision making for project design and for communities' choices. Lofthouse urged that we need to undertake capacity gap analysis to understand where the government gaps are in response to climate change and where our organizations can best add value.



Figure 8: Jo Lofthouse, Oxfam and ACCRA

Sarah Wiggins, Tearfund, presented on 'integrated approach to adaptation' which means a holistic approach that coordinates the interactions between different agency operations from the outset, rather than optimising them separately. Integrated adaptation is good for better end result and short term benefits. However, it has several challenges as well. For example, vested interests, lack of interest at the top, rotation of officials, and unhealthy competition. Sarah also shared some building blocks on integration which are mentioned below:

- Undertake consultative and participatory evidence gathering
- Improve communication around the science of climate variabilities and change
- Establish an adaptation funding mechanism that reaches communities
- Build the capacity of civil society

Partha Das, Aaranyak Foundation, presented a case study on how water related adaptation strategies are related to governance. He also showed how adaptation projects can end up in mal-adaptation if adequate public participation and government involvement is not ensured.

Lawrence Aribu, Climate Change Unit, Uganda, presented the process of NAPA development in Uganda. He discussed the role of NAPA in addressing CBA in Uganda. Aribu also shared some of the challenges of NAPA, such as difficulty in accessing international fund and limited implementation.

Participants shared some concerns regarding cash/food-for-work programme, the level of government involvement in CBA and gender issues in increasing adaptive capacity.

Parallel session 17: The Role of Ecosystems in Adaptation

Session Chairs: **Helen Jeans, WWF and Hannah Reid, IIED**

Metui Tokece, WWF, discussed how to engage communities in integrated ecosystem approach by giving the example of mangroves and associated ecosystems. He stressed the importance of government involvement as governments can play a key role in scaling up and replicating projects.

Jimmy Kereseke, The Lauru Land Conference of Tribal Communities, presented on ecosystems and community based climate change adaptation in the Solomon Islands. He shared a case study from Boe Boe village where the community has been involved in identifying vulnerabilities using 3D model of spatial and land use planning. He stressed the importance of integrating ecosystem and adaptation into community, provincial and national planning. Kereseke also suggested that it is very important to build network between NGOs, the provincial and the national governments to support sustainable and successful adaptation options.

Mouhamadou Farka Maiga, Ong Amade-Pelcode, discussed the role of ecosystem in adaptation by presenting on a project in Mali. The project is based on the principle of participation and empowerment of rural communities to restore degraded lands due to natural environmental impacts and also human induced activities. He stressed the importance to promote best practices in sustainable land management. Maiga finished his presentation by mentioning that international levels should recognize the importance of ecosystems in climate change adaptation. At the national level he suggested to integrate ecosystem services of strategies at national action plans for climate change.

Nella Canales Trujillo, CARE, shared CARE's experience of integrating Ecosystem Based Approach with Community Based Approach to build climate change resilience undertaken by WWF and CARE respectively. She stated that the project findings indicate that it is vital to work with people in Ecosystem Based Approach and respectively it is important to work with the environment in Community Based Approach. Thus, Nella emphasized the need to adapt livelihoods in an environmentally sound manner.

Pauline Buffle, IUCN, shared the challenges of integrating ecosystem management into CBA projects. She presented analysis of some CBA projects and good practices addressing ecosystem management. Some of her findings from the analysis were that the project activities should be community driven, the practices should be context specific, and collaboration among stakeholders, communication and compliance incentives are very important factors.

Some critical points were raised by the participants in this session regarding tensions between applying ecosystem and people centered approaches; linkages between ecosystems and human development; divergences between ecosystem and community based approaches; challenges of integration; importance of addressing both urban and rural adaptation needs; need for local empowerment; and value of shifting from a project focus to a systems focus.¹³

Parallel Session 18: Drylands and Pastoralism

Session Chair: **Victor Orindi, Ministry of State for Development of Northern Kenya and Other Arid Lands**

Gitte Motzfeldt, The Development Fund, shared preliminary results from an ongoing study on climate vulnerability and adaptation in the Afar and Somali regions of Ethiopia. In her presentation, she showed how pastoralists of Afar are vulnerable to different stresses of climate change and how they are coping with the change.

13. Earth Negotiations Bulletin (ENB), International Institute for Sustainable Development (IISD)

Lucy Waruingi, African Conservation Centre, Kenya, presented on approaches for CBA in pastoral communities. She stated that three factors are very important to build adaptive capacity of pastoralists. They are: productivity of rangelands to increase resilience, diversification of pastoral livelihoods and good governance of local institutes.

Nancy A Omolo, PhD student, University of KwaZulu Natal, South Africa, shared her study on 'Conceptual Framework Approach applicable to Gender and Climate Change' by using a case study from Northern Kenya. Her study analyzed three theoretical approaches: Sustainable Livelihoods Approach (SLA), Gender and Development (GAD) Approach, and Political Ecology Approach. In her presentation, Nancy showed various strengths and weaknesses of these approaches.

Parallel Session 19: CBA, Disaster Risk Reduction (DRR) and Agriculture

Session Chair: **Stephan Baas, FAO**

Stephan Baas, UN Food and Agriculture Organization (FAO), chair of the session discussed that the objective of this session was to share findings and lessons on opportunities and challenges of up-scaling CBA in the agriculture sector. He invited the participants to discuss on the impacts of climate change in agriculture and how an integrated approach together with Disaster Risk Reduction (DRR) and CBA can play an important role.

Katiella A. Mai Moussa, UNDP Niger, shared the findings of a UNDP/GEF funded project on building resilience of community in terms of food security in Niger. He highlighted the need of integrating CBA best practices in national strategies and plans. The local government can play a role in promoting CBA best practices into local development plans and capacity building of local adaptation experts.

S.K. Maharjan, RIMS Nepal, presented the process of designing the Local Adaptation Plan of Action (LAPA) in the agriculture sector. He stressed that the Village Development Committee (VDC), District Development Committee (DDC) and other local institutions can play an important role in mainstreaming climate change adaptation interventions in development plans.

Dang Quang Minh, National Disaster Management Center, Ministry of Agriculture Department, Vietnam, discussed different national policies and legislations regarding disaster risk reduction and climate change in Vietnam.

Marilyn V Sta. Catalina, Department of Agriculture, Philippines, presented the situation of CBA in Philippines. She stated that CBA is still a new approach at Philippines government level. The Local Government Units (LGU) in Philippines does not support or consider CBA as a priority intervention for DRR. Catalina stressed that CBA should be integrated in development projects. She mentioned that CBA can be integrated within the context of Community Based Disaster Risk Reduction (CBDRR) as one of its major components.

Mario Acunzo, FAO, shared the results of a study conducted by Food and Agriculture Organization (FAO) & Wageningen Agriculture University on the role of research, extension and communication in climate change adaptation in Agriculture. Findings of the study showed that innovation for climate change adaptation is not limited to technology development but requires institutional change that will enable CBA up-scaling. Mario acknowledged that there is a scope to up-scale CBA through a new focus on agricultural innovation and a reform of research and extension systems. He also stated that policy advocacy and capacity development of rural institution should be given a priority. Mario shared a participatory approach called Communication for Development (ComDev) that integrates communication strategies and media to

improve knowledge, information sharing and participation as part of CBA and agricultural innovation systems.

Once the panelists gave their presentations, Carlo Scaramella from the WFP lead a discussion on the main issues of the presentations. He summarized the presentations by highlighting the critical role of CBA in DRR and the critical role of internalizing DRR techniques with agriculture development pathways.

Parallel Session 20: Scaling up CBA for Health Protection

Session Chair: **Joy Guillemot, World Health Organisation**

Joy Guillemot, World Health Organisation (WHO), chaired the session. She stated that this was the first panel dedicated to health in the history of CBA conferences, and asserted that health problems and worries over health are vulnerability multipliers.¹⁴

Rada Dukpa, Royal Ministry of Health, Bhutan, described the impacts of Climate Change in Bhutan. Climate change is affecting the health of Bhutanese people in many different ways, such as loss of lives from frequent floods and landslides, loss of safe drinking water sources, and spread of vector-borne tropical diseases. The Bhutanese government has taken up a UNDP/GEF project to strengthen the national capacity to identify and prevent climate change related health impacts in Bhutan. The main outputs of this project were: enhancement of risk assessment and integrated surveillance for effective management of climate sensitive health risks; improved capacity of community and health sector institutions to respond to climate-sensitive health risks; and introduction of emergency preparedness and disease prevention measures.

Kristie Ebi, ClimAdapt LLC, discussed the goals of a new GEF project on health and agricultural adaptation in Samoa. The objective of the project is to develop information services to disseminate climate related health effects. This will be done through a range of activities, such as developing a climate early warning system for seasonal illnesses; mainstreaming of activities to ensure information is professionally assessed and broadcasted to communities; and, carry out pilot studies on seasonal diarrheal diseases, on dengue fever control through school training on larval surveys, and on hypertension due to salinization of water through sea-level rise.

Thuan Nguyen, International Federation of the Red Cross and Red Crescent Societies, presented about an operational research project on community-based dengue fever prevention in Vietnam. She stated that it is very important to communicate the changing risks in health sector due to climate change at the community level. CBO's play an important role in ensuring that early detection is translated into early response. Thuan also mentioned that existing mechanisms should be strengthened to complement both top-down and bottom-up models.

Osama Kittaneh, Ministry of Health, Jordan, discussed the problem of water scarcity and health risks due to Climate Change in Jordan. To address this problem, the Ministry of Water and Irrigation has undertaken a new water strategy to conserve water and seek alternative supplies, including planned increased use of domestic waste water. However, this solution can introduce new health hazards. Wastewater can increase farmer and resident exposure to microbial contaminants. So, it is very necessary to be careful that the project does not lead to "maladaptation" and increase workload for health sector. The Jordan government is undertaking different projects to address these problems. He stated that it is crucial to have a clear understanding of baseline epidemiological and environmental risk conditions. Communication plays an important role to build awareness and capacity building.

14. Earth Negotiations Bulletin (ENB), International Institute for Sustainable Development (IISD)

Iqbal Kabir, Ministry of Environment and Forests, Bangladesh, described how climate change is affecting the health of vulnerable communities. He shared some of the initiatives the Climate Change Health Promotion Unit of Bangladesh government is undertaking to build capacity and strengthen the health care system. Kabir stressed the importance of capacity building and involvement of community in addressing impacts of climate change on people's health. Different communication strategies play a key role here. Developing training manuals, community radio initiatives, early warning system are effective strategies to address this problem. He also highlighted the importance of community healthcare clinics as well as involvement and education of youth in this sector.

In the discussion, the importance of international processes to assist in the dissemination of information and exchange of lesson learned was addressed. It was also stated that focus should be given to the need of children while addressing adaptation. The participants of this session provided comments and raised questions regarding different issues starting from the impact of food insecurity on health, health impacts of salinization, to sustainability of healthcare projects.

Parallel Session 21: Community Based Adaptation (CBA) Knowledge Management

Session Chair: **Mozaharul Alam, Regional Climate Change Coordinator, UNEP ROAP**

Sukaina Bharwani, SEI, introduced the knowledge management web portal WeADAPT (<http://weadapt.org/>) and how to use this portal. The portal aims to improve collaboration between practitioners and amongst sectors. It also increases knowledge-sharing capacity and provides space for sharing lessons and experiences. WeADAPT can be used for high quality scientific and local knowledge on climate change adaptation in a visual way. It also helps to link communities of practise and shares barriers faced by different CBA projects.

Corinne Schoch, IIED, discussed a collaborative tool known as Global Initiative on Community-Based Adaptation (GICBA). This portal is used to create synergies and enrich networking opportunities. The portal aims to improve networking capacity amongst existing/new CBA projects, strengthen capacity building, share lessons learnt, and facilitates the exchange of CBA knowledge between continents, sectors and disciplines. It is possible to locate a CBA project through this portal and one can also learn about the challenges the project is facing.

Roopa Rakshit, AIT, presented on the Asia Pacific Adaptation Network and the Regional Climate Change Adaptation Knowledge Platform for Asia. The aim of this platform is to build climate resilience of vulnerable communities, ecosystems and economies; foster generation and exchange of knowledge and practices on CCA; increase adaptive capacities; facilitate integration of knowledge into; decision making processes and actions; bridge gaps between knowledge providers and users; and, promotes partnerships for transformative actions.

Cleofe Torres, University of Los Baños, shared the activities of Communication for Development (ComDev) which is a mechanism for planned learning and knowledge sharing of FAO. The mechanism mainly focuses on knowledge and information needs of rural stakeholders and institutions to address vulnerabilities. A variety of tools such as rural radio and new information and communication technologies (mobile phones, internet, etc.) are used for the systematic design and participatory communication methods and processes of this mechanism.

Dinesh Raj Bhujju, Nepal Climate Change Knowledge Management Center, stressed that practitioners should play an important role in facilitating knowledge sharing in communities. He also encouraged sharing new knowledge rather than only promoting traditional practices.

Plenary Session 22: Funding and Funding Architecture to Support Up-Scaling of CBA

Session Chair: **Ms. Fumiko Fakuoka, UNDP**

Andrew Adwera, African Centre for Technology Studies (ACTS), discussed the roles of existing and new organizations in operationalizing Climate Funds. Climate change will lead to the disruptions of the livelihood strategies and vulnerabilities in Sub-Saharan countries. Therefore, climate adaptation fund is a key in not only building community resilience but also to form the basis to support alternative livelihood approaches. He also shared the roles of different actors involved in climate change adaptation at global, national, and sub-national levels. Andrew stressed that adaptation to climate change is an important and a cross-cutting area that cannot be owned and boxed in a specific department/organization, but must be tackled through 'collective intelligence' of the climate change community whose objective remains saving the planet.

Leena Wokeck, Asian Institute of Technology (AIT), presented on Incentivizing Strategic Investments: barriers and opportunities for private sector engagement. She shared different barriers and opportunities for private sector engagement. She stated that it is necessary to have effective consultations with the business community and engagement of business in focused forums and in international, national, and local policy, planning, and implementation processes. Lenna also stressed that improved multi-stakeholder processes, cross-sectoral dialogues, and communication are key for business engagement.

Charles Nyandiga and Bhujang Dharmaji, UNDP, discussed on the funding architecture to scale up community based adaptation. The status of UNDP/GEF investment in adaptation including CBA was shared. He also stated that it is important to develop synergies with international, regional and national (bilateral) donor initiatives at the country, community and/or sectoral level. It was also stated that we need to promote and utilize existing infrastructure (e.g. community structures), involve community level organizations working with national and local authorities and be consistent with local and national development policies, particularly relating to climate change and adaptation.

Aminul Islam and Sarwat Chowdhury, UNDP, discussed on the integration of risk reduction and climate change adaptation with focus on the Local Disaster Risk Reduction Fund (LDRRF) in Bangladesh. Chowdhury shared some advantages and challenges of LDRRF. She stated that LDRRF is a quick release fund and it has three levels of monitoring: local government administration; other government joint monitoring system; and, a project monitoring team. However, LDRRF also has some challenges such as linking local level experience and priorities with policy and planning processes and connecting global funding for adaptation with local and community level initiatives.

Achala Chandani, IIED, discussed the role of UNFCCC in financing CBA. She also shared some concerns and opportunities of UNFCCC funding. She stated that the funding is very limited and a country driven process. Achala also suggested that a significant share of new multilateral funding for adaptation should flow through the Green Climate Fund.

James Hardcastle, The Nature Conservancy, talked on behalf of Albon Ishoda, Marshall Islands Conservation Society, on barriers of undertaking CBA in remote areas of the Marshall Islands. According to him, creating national frameworks for action, as well as national guidance on CBA, are instrumental in achieving CBA goals in such diffuse contexts. James also stressed on the need to raise awareness about CBA.

Plenary Session 23: How to Up-Scale CBA While Keeping the Focus Local - Emerging Lessons

Session Chair: **Saleemul Huq, IIED**

Anne-France Wittmann, UNDP/GEF, shared global experience on community mobilizing and ownership in the perspective of scaling up CBA based on UNDP/GEF programme. She described a participatory approach and design that includes community volunteers and can be tailored according to local realities and experiences. Wittmann proposed participatory videos for showcasing local experiences, techniques and achievements, and directly transmitting messages to decision makers and donors.¹⁵

Vincent Ziba, World Wide Fund for Nature (WWF), discussed on Community Based Natural Resource Management (CBNRM) which is a tool that has been applied in natural resource areas where a community is encouraged to manage resources and share benefits in a sustainable manner. He also discussed how CBNRM is addressing the issue of climate change. In order to up-scale, community ownership of natural resources can be very effective. The Government of Zambia has adopted some CBNRM approaches in the government policy documents and strategies. Also, academic courses are offered on CBNRM in South African and Zambia. Ziba suggested that up-scaling of CBA can consider the success stories of CBNRM and look at the challenges to avoid similar kinds of failures. Some of the participants raised concerns over poorly implemented CBNRM projects and stated that we should be careful and take lessons of CBNRM challenges.

Saleemul Huq, International Institute for Environment and Development (IIED), shared some of the decisions the organizing committee has taken as way forward, such as field visits will be compulsory in the next CBA, number of presentations will be reduced, number of posters will be increased, and more time will be allocated for creative discussion. He also shared that thematic session chairs of the Fifth CBA conference will contribute in book chapter published by Earthscan by the year 2011. The organizing committee is hoping that this book will contribute to the adaptation chapter of IPCC's Fifth Assessment Report (AR5). Huq also shared some of the new initiatives taken by the Fifth CBA Conference which were live webcasted by OneWorld, video logs and blogs, and Earth Negotiations Bulletin (ENB). He also announced that the next CBA conference will be held in Hanoi, Vietnam.

After these announcements, Huq invited participants to reflect on their impression about the conference and give their feedbacks. Participants raised issues concerning the need for: government representative attendance at CBA conferences; greater analytical rigor; youth engagement; education initiatives; innovative thinking; international negotiator's attendance, including members of the future UNFCCC Adaptation Committee; translation of sessions; media participation; media training; and discussion on migration issues. They also spoke about: harmonization and coherency among groups; deeper discussions on gender issues; greater private sector engagement; CBA training at local level; learning from past experiences; scaling up in all regions; focusing on an integrated approach; prioritizing specific CBA projects; increasing community knowledge in a sustainable manner; addressing land-use planning issues; greater government action; and, spreading awareness of CBA through improved communication skills and broader channels.¹⁶

15. Earth Negotiations Bulletin (ENB), International Institute for Sustainable Development (IISD)

Concluding Session

The Concluding Session was on 31st March. Ministers, senior level government as well as intergovernmental officials participated in the panel during the Concluding Session.

Atiq Rahman, BCAS, chaired the concluding session. Saleemul Huq, IIED, summarized the process of the conference and the ways in which the information's and experiences from CBA5 will be shared. He stated that the Fifth CBA Conference gave some clear understanding about what constitutes CBA. Huq also stressed that it is very important to increase internal communication and to link local and national government with the global decision making process of UNFCCC. He then encouraged participants to submit their project information to the CBA website which currently has over 1,000 examples of CBA projects: <http://community.eldis.org/cbax/>. In the end he announced that the Sixth CBA meeting will be held in Vietnam in 2012.¹⁷

Ian Burton, University of Toronto, described the significances of out-scaling, up-scaling, integration, strategy, mitigation, and pathways. He called out scaling a positive “process of contagion,” requiring engagement of entire localities, and suggested up-scaling as a “flood-up” movement, which will require new communication methods and instruments. Burton noted that CBA activities must consider location and relocation, and warned not to ignore the value of mitigation efforts in their activities. Lastly, he urged the establishment of climate resilient development pathways.¹⁸

Mesbah Ul Alam, Ministry of Environment and Forests, Bangladesh, illustrated Bangladesh Government's climate change activities, and urged the importance of sustainable financing of these projects.

Rajendra Pachauri, Chair, IPCC, started his keynote speech by expressing deep gratitude for having the opportunity to participate in the Fifth CBA Conference. He complemented the organizers for putting together this institutional innovation in a field which is unfortunately being neglected worldwide. Pachauri thinks that CBA conference is a place where you not only have exposure to different adaptation actions and initiatives but also bring together analytical components of what needs to be done. This

is very important to spread out and create network of activities to ensure that those insights and knowledge is shared with the wider community. He also stated that the generic issues of the Fifth CBA Conference will feed into the whole structure of IPCC's Fifth Assessment Report to fill up the gaps in our knowledge, particularly in the work of IPCC. Pachauri also shared some of the findings from the Fourth Assessment Report of IPCC. It identified regions that are particularly vulnerable to climate change. He stressed that in order to better understand how vulnerability is going to change in different parts of the world, we need to undertake a climate change assessment such as magnitude, scale and manner in which the climate is going to manifest itself in future. Adaptation is a very important initiative in this regard which can reduce vulnerabilities mentioned in the Fourth Assessment Report of IPCC. Pachauri also stated the importance of local actions and what needs to be done to build the capacity at local level.



Figure 9: Mr. Mesbah ul Alam, Secretary, Ministry of Environment and Forests (MoEF), Bangladesh giving speech at the concluding session of CBA5

16. Earth Negotiations Bulletin (ENB), International Institute for Sustainable Development (IISD)

17. Ibid

18. Ibid

Atiq Rahman, BCAS, emphasized the magnitude of climate change and how it can impact the wellbeing of people. He stressed the importance of integrating climate change mitigation and adaptation and also noted the necessity of development for poverty reduction. He concluded by thanking all the participants, the Government of Bangladesh, and the organizers.

4

ABSTRACTS
FOR POSTER
SESSIONS**Table 2:** Abstracts accepted for poster presentations at Knowledge Fair of CBA5 Conference

Theme	Poster Title	Organization
1. Gender & Health	How Can Community-Based Adaptation Respond to Vulnerabilities Related to Rapid Population Growth? Investigating Links between Population, Health and Environment (PHE) Approaches and Community-Based Adaptation (CBA)	Population Action International
2. Sustainable Development/Policy/Strategies/Actions	Asian Cities Climate Change Resilience Network (ACCCRN)	CARE International
3. Agriculture/ Ecosystem/ Conservation	Application of Geospatial Analytical Tools for Developing Community Based Adaptation Options to Climate Change in the Forest and Wetland Ecosystems in Bangladesh	Bangladesh Centre for Advanced Studies (BCAS)
	Forest, Fish and Fruit: A new model of CCA in Bangladesh	UNDP Bangladesh
	Adaptability of Traditional Rice Farming in Sri Lanka to Climate Change	Future In Our Hands Development Fund
	Climate change and farmers adaptation in mixed-farming systems in the coastal area: A case study in Trieu Van Commune, Terieu Phong district, Quang tri province, Vietnam	CARE International
	System of Rice Intensification (SRI) An Effective measure to respond to Climate Change	CARE International
	Advancing CBA in Floodplain and Coastal Ecosystems in Bangladesh.	Bangladesh Centre for Advanced Studies (BCAS)

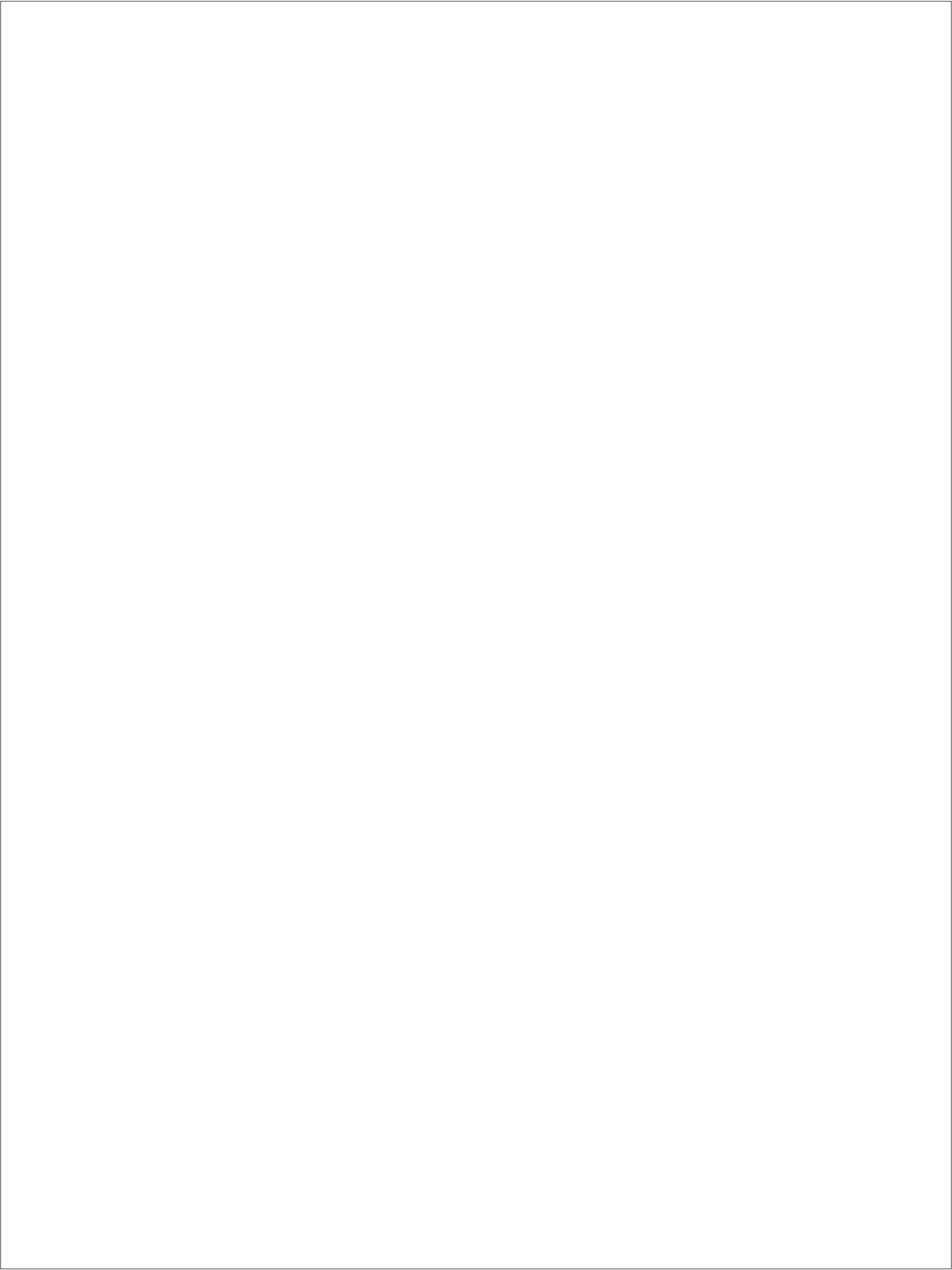
Theme	Poster Title	Organization
	Maintaining Biodiversity through Rangeland Management: Climate Carbon Community	African Conservation Center
4. Disaster Risk Reduction/Vulnerability	From Vulnerability Assessment to Adaptation: A Case Study from the Central Ganga Basin	WWF India
	Disaster Resilience and Adaptation to Climate Change through Livelihood-Centered approach.	Practical Action, Bangladesh
	Community based adaptation Participatory Watershed Management - (PWM)	CARE International, Vietnam
	Participatory Risk Reduction for Climate Resilience: Community Risk Assessment and Action Plans	UNDP Bangladesh
5. Development Interventions/Sustainable Livelihoods/ Poverty	Adaptation to climate variability for sustainable livelihoods by the poor and vulnerable farming communities of Zimbabwe: Experiences from the Protracted Relief Programme	GRM International
	Low carbon pathways by Farmers in Bundelkhand	Development Alternatives, TARAGram
	Community-Based Flash-Flood Prevention Control and Adaptation to Climate Change in HA GIANG Province	CARE International
	Lean Period Management in a Changing Climate: Case Study from Naogaon, a Northern District of Bangladesh	ActionAid



Figure 10: Atiq Rahman, BCAS and Stefan Priesner, UNDP presenting the first prize to Brighton Mvumi, GRM



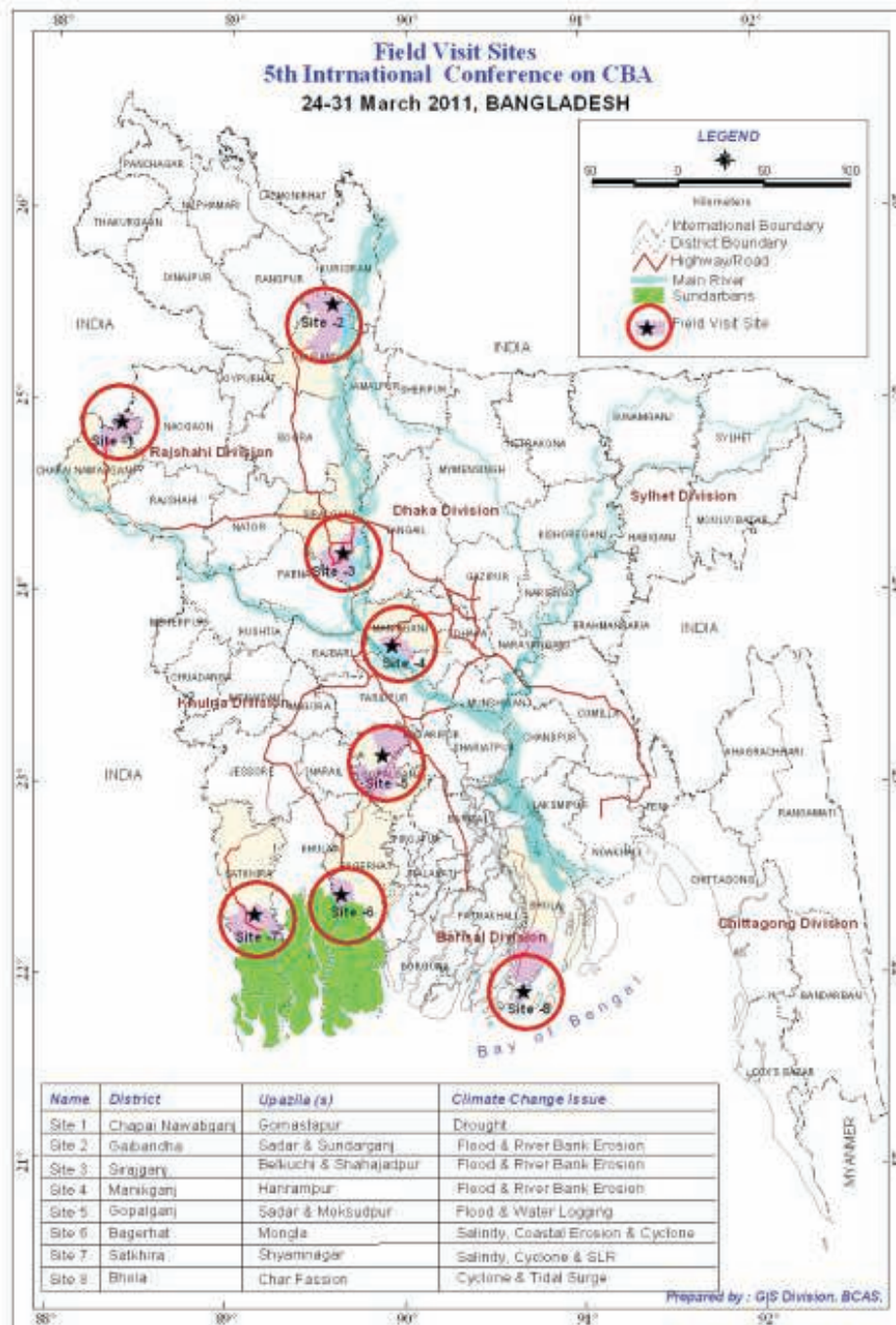
Figure 11: Poster session judges and finalists



ANNEXURES

ANNEX 1

Field visit sites of CBA5 Conference



ANNEX 2

CBA5 Conference Programme

Day one - 24th March	Daytime	Participants arrive
	5.00pm	Welcoming participants, briefing on field visits followed by dinner
Day two - 25th March	Morning	All participants depart for field sites
	Afternoon	Arrival at field site
	Overnight	In field
Day three - 26th March	Daytime	In field
Day four - 27th March	Day	Field visit then return to Dhaka
	7pm	Dinner
Day five - 28th March	9am-10.30am	<p>Plenary session 1: Conference opening, welcome speeches and keynote presentations</p> <p>Chair: Saleemul Huq, IIED</p> <ul style="list-style-type: none"> ■ Sheik Hasina, Prime Minister, Bangladesh ■ Atiq Rahman, Executive Director, BCAS ■ Christiana Figueres, Executive Secretary, UNFCCC ■ Farrukh Khan, chair, Adaptation Fund Board ■ Andrew Steer, Special Envoy for Climate Change, World Bank <p>Keynote presentations</p> <ul style="list-style-type: none"> ■ Ian Burton, University of Toronto: Upscaling adaptation from local to global: from projects to transformational change
	10.30am -11am	Tea break
	11am-12.30pm	<p>Plenary session 2: key concepts and terms in CBA</p> <p>Chair: Charles Ehrhart, CARE</p> <p>Participants in the 2009 and 2010 CBA Conferences identified a number of "frequently asked questions" about CBA. This session will summarize how some experts answer those questions, highlighting where there is ambiguity as well as growing consensus. Presentations and subsequent discussion will address the following questions:</p> <ul style="list-style-type: none"> ■ What is the difference between "adapting" and "coping," if any? ■ What do people mean by "resilience"- is it simply the opposite of "vulnerability"? ■ How can we differentiate between sustainable development, disaster risk reduction and CBA projects, and is it necessary to do so? ■ The impacts of climate change are not limited to the village level, is CBA? And how can CBA link to larger scales of action at national and international levels? ■ What is the relationship between "community-based" and "ecosystem-based" adaptation? ■ What do we mean by "climate-proof," "climate-smart," and "climate-resilient"? And where does the challenge of mitigating climate change fit in relation to CBA? <p>This session aims to increase common understanding around key concepts and terms as a basis for productive discussions later in the conference.</p>

12.30pm-1.30pm	Lunch
1.30pm -3.00pm	<p>Parallel session 3: Adaptive capacity - why it is significant? How do we support it?</p> <p>Chair: Rachel Berger, Practical Action</p> <ul style="list-style-type: none"> ■ Managing sloping and shifting cultivation lands for climate change adaptation and sustainable livelihoods - Krishna Lamsal, Gyan Bandhu Sharma and Keshav Thapa, LI-BIRD, Nepal ■ Adaptation capacity of fishing communities to climate vulnerabilities and changes for improving their livelihoods - a case study conducted in Cox's Bazar district of Bangladesh - Srijita Dasgupta, Mahidol University, Thailand ■ The importance of adaptive capacity in designing Ethiopian adaptation programmes - Kirsty Wilson, ACCRA Ethiopia ■ Enhancing resiliency: lessons from working with indigenous communities in the highlands of Peru - Lorena del Carpio, Oxfam America ■ Participatory approaches for adaptation project identification - George Kasali, The Copperbelt University / Energy and Environmental Concerns for Zambia ■ Climate change adaptation: experiences of small holder farmers in northern Nigeria - John Ajigo, Nigerian Environmental Study/Action Team (NEST) ■ The CBA initiatives of Caritas Bangladesh - Anwara Begum and Mijanur Rahman, Caritas Fisheries Program, Bangladesh <hr/> <p>Parallel session 4: Water governance and climate adaptation</p> <p>Chair: Katherine Cross, IUCN</p> <ul style="list-style-type: none"> ■ Integrating climate change adaptation into water governance institutions in Tanzania, Uganda and Kenya: Transforming policy into practice - Katharine Cross, IUCN, Onesmo Zakaria, IUCN et al. ■ Dealing with domestic water supply in climate vulnerable areas: pilot and beyond pilot - Kazi Rashed Hayder, Aftab Opel, Hasin Jahan and Arif Abdullah Khan, WaterAid Bangladesh ■ Stop land degradation in Guidimakha - Madyoury Tandia, TENMIYA, Mauritania ■ Adapting an indigenous water resource management system to new climatic realities - Bhatiya Kekulandala, Practical Action, Sri Lanka ■ Local knowledge and community-based adaptation to flood management in An Giang Province, Mekong Delta of Vietnam in the context of climate change - Bach Tan Sinh, National Institute for Science and Technology Policy and Strategy Studies, Vietnam ■ Using environmental flows as an adaptation approach to climate change - Katharine Cross, and Gretel Gambarelli, IUCN <hr/> <p>Parallel session 5: Gender</p> <p>Chair: Achala Chandani, IIED</p> <ul style="list-style-type: none"> ■ How to mainstream gender into CBA - Lucy Wanjiru, UNDP ■ Energy technology transfer to combat deforestation and reducing climate change vulnerability in Zagnanado (Benin, West Africa) - Krystel Dossou, OFEDI, Benin

- Weathering the storm - girls in a changing climate - Niger, Assalama Sidi, Plan International, Niger
- Scaling up community level work in North Kenya - Basra Ali
- Climate change as an opportunity for gender mainstreaming in Nepal - Jony Mainly, Nepal and Achala Chandani, IIED
- Healthy women, healthy planet: women's empowerment, family planning and resilience - Kathleen Mogelgaard, Population Action International

3pm - 3.30pm	Tea break
3.30pm -5.00pm	<p>Plenary session 6: National policy action to foster CBA</p> <p>Chair: Heather McGray, World Resources Institute</p> <ul style="list-style-type: none"> ■ The need for multi-agency collaboration in Ethiopia - Rep of Govt of Ethiopia tbc ■ Enabling child-centred agency in climate change adaptation - Nick Hall, Plan International ■ Community based adaptation - a new opportunity for social justice - Harjeet Singh, ActionAid, India ■ The Philippines Climate Change Act: integrating climate change adaptation with disaster risk reduction - Yeb Sano, the Philippines Climate Change Commission ■ Climate change and migration in Mexico: the role of national safety net programs - Augustine Latipi, CIESAS, Mexico ■ Enhancing local adaptive capacity to climate risks: an experiment on weather based farming model in the Semi-arid region of India - Arivudai Nambi Appadurai, M.S. Swaminathan Research Foundation (MSSRF), India ■ Meeting information and advocacy needs for climate change adaptation in Zimbabwe - Jeremaih Mushosho, ZERO Regional Environment Organisation, Zimbabwe
7pm	Dinner

Day six - 29th March	9am-10.30am	<p>Plenary session 7: Agriculture, local resilience and climate prediction services</p> <p>Chair: Mohammed Zainul Abedin, IRRI, and Sudip Rakshit, AIT</p> <ul style="list-style-type: none"> ■ Climate change impacts on tropical agriculture and the potential of organic agriculture to overcome these impacts - Mokbul Morshed Ahmad, Asian Institute of Technology ■ Scaling up appropriate scientific technologies in indigenous adaptation strategies: best options for enhancing small scale farmers' livelihoods in Least Developed Countries - Ben Twinomugisha, Food Rights Alliance, Uganda ■ Ethno meteorology in the context of climate change in Nepal - Dinanath Bhandari, Practical Action, Nepal ■ Enhancing the adaptive capacity of communities in semi-arid areas by harmonizing indigenous knowledge weather forecasting with conventional forecasting - Damian Casmiri, Linda Kiluma and Euster Kibona, EPMS, Tanzania
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10.30am -11am	Tea break
11am-12.30pm	<p>Parallel session 8: The economics of CBA</p> <p>Chair: Muyeye Chambwera, IIED</p> <ul style="list-style-type: none"> ■ Economics of adaptation to climate change of sea cucumber fishers in the Philippines - Maria Rebecca Campos, University of the Philippines Open University ■ Social technologies for climate change adaptation - Martin Obermaier, REDEH, Brazil ■ Community-based climate change adaptation and the provincial-level development policy: the roll-out of Papua New Guinea's Vision 2050 National Development Strategy - Nahau Rooney, Manus Provincial Administration, Papua New Guinea. ■ Microfinance and climate change adaptation: supporting communities in a changing climate - Mareike Hussels, Triodos Facet, Katharine Cross, IUCN, Amita Vaux, Business in the Community and Yanina Ivanova Taneva, Ideas Factory ■ Pre-project assessment for community-based adaptation: the need to go beyond cost benefit analysis - Rachel Berger, Practical Action <hr/> <p>Parallel session 9: Urban areas</p> <p>Chair: David Dodman, IIED</p> <p>This session will take the form of a moderated discussion exploring approaches taken by a range of stakeholders to generate broader community participation in strengthening urban adaptive capacity across scales.</p> <ul style="list-style-type: none"> ■ Building resilience in towns and cities: challenges and opportunities for developing and implementing urban CBA - David Dodman, IIED, UK ■ Three brief interventions will outline the scope for the session: David Dodman (IIED) will introduce the session's rationale; Anna Brown (Rockefeller Foundation) will provide an overview of the activities of the Asian Cities Climate Change Resilience Network (ACCCRN); and Katarina Soltesova will give an overview of grassroots initiatives in Korail, largest inner-city informal settlement in Dhaka. ■ Four participants will join in a moderated discussion. Shiraz Wajih (GEAG) and Bach Tan Sinh (NISTPASS) will discuss experiences of core ACCCRN partners in India and Vietnam; and a CBO leader and a local NGO representative from Korail will reflect on the potential of communities and intra-urban networks to organize and engage in long-term multi-stakeholder processes contributing to greater resilience. <hr/> <p>Parallel session 10: Tools and toolkits for adaptation - supporting rapid replication and good practices</p> <p>Chair: Tine Rossing, CARE</p> <ul style="list-style-type: none"> ■ Practical tools and resources for CBA: CARE's toolkit and CBA standards - Julie Webb, CARE Australia ■ Planning for community-based adaptation to climate change - an e-learning tool, Anna Ricoy, FAO ■ Community-led carbon footprint tracking for climate change sensitization and catalyzing action - Mayukh Hajra, Development Alternatives, India

- CBA for local empowerment and global influence: methods and practice from the Adaptation Learning Programme for Africa - Fiona Percy, and Cynthia Awuor, CARE International
- Climate change adaptation vulnerability assessments using adaptation tools (CRISTAL and CVCA) in East Africa and Central America: next steps - Onesmo Zakaria, Katharine Cross and Gretel Gambarelli, IUCN

12.30pm -1.30pm Lunch

1.30pm-3.00pm

Parallel session 11: Frameworks for measuring adaptation: alternatives to quantitative approaches

Chair: SVRK Prabhakar, IGES

- Participatory monitoring and evaluation for CBA: tracking changes in vulnerability together - Charles Ehrhart, CARE
- Participatory video for monitoring and evaluation of CBA - Charles Tonui, ACTS, Kenya
- Towards a framework for the assessment of adaptive capacity at the local level: lessons from the Local Adaptive Capacity Framework - Lindsey Jones, ODI
- Frameworks for measuring the progress in institutional mainstreaming of adaptation - Rajan Kotru, ICIMOD
- Evaluation of adaptation: strengthening the science-policy interface - Suruchi Bhadwal and Sreeja Nair, TERI, India
- A proposed framework for the planning, monitoring and evaluation of integration processes of disaster risk management, climate change adaptation and development - Paula Silva Villanueva, IDS

Parallel session 12: Institutional capacity dimensions of scaling up CBA

Chair: Maarten van Aalst, Red Cross and Red Crescent Climate Centre

- Harmonizing local governance systems and CBA - Ranga Nadeera Pallawala, Practical Action, Sri Lanka
- The importance and role of community-based organisations in building urban resilience - Nidhi Mittal, Save the Children
- What Ingredients for climate change adaptation beyond pilots: capacity building and poverty alleviation in CBA projects in Africa - Sherpard Zvigadza, ZERO Regional Environment Organisation, Zimbabwe
- Governing to support vulnerable communities and ecosystems adapt to climate change - Anna Taylor and Tahia Devisscher (SEI Oxford) and Helen Jeans and Nadia Bood (WWF UK and Belize)

Parallel session 13: Building synergies between disaster risk reduction and CBA

Chair: Marcus Oxley, Global Network of Civil Society Organisations for Disaster Reduction

- Setting the context:
 - Strengthening climate resilience: developing a Climate Smart Disaster Risk Management (CSDRM) approach in Asia and Africa - Terry Cannon, IDS, UK

- Disaster risk reduction and climate change adaptation in Timor-Leste: grassroots realities - Jessica Mercer, Oxfam Australia
- Experience in building synergies and harmonization of disaster risk reduction and CBA in the urban context - Pramita Harjati, Mercy Corps
- Disaster risk reduction and community-based adaptation in El Salvador - Karina Copen, Oxfam America
- Moderated panel discussion: building synergies to scale up local action. Panellists to include Terry Cannon, Karina Copen, Jessica Mercer, Pramita Harjati, Stephane Bonduelle and Ben Wisner (University College London)
- Community-managed approaches to climate change adaptation - Stephane Bonduelle and Peter Raab, Concern Universal Bangladesh

	3pm -3.30pm	Tea break
	3.30pm-5.30pm	<p>Plenary session 14: Communicating knowledge about good CBA Chair: Pablo Suarez, Red Cross and Red Crescent Climate Centre</p> <ul style="list-style-type: none"> ■ Strengthening collaborations to enhance adaptive capacity - Susan Nanduddu, DENIVA, Uganda ■ Climate change and vulnerability of coastal communities in Bangladesh: preliminary observations on villager perceptions of climate and non-climate stressors - Bob Pokrant and Mokhesur Rahman, Curtin University, Australia ■ Small scale farmers taking action - towards a robust methodology for CBA - Bettina Koelle and Shannon Parring, Indigo Development & Change, South Africa
	7pm	Dinner
Day seven - 30th March	9am-10.30am	<p>Plenary session 15: Bridging local, sub-national and national levels in adaptation - the articulation of institutions across scales Chair: Robin Mearns, World Bank</p> <ul style="list-style-type: none"> ■ Local institutions, social differentiation and adaptation outcomes: assessing cross-regional evidence - Arun Agrawal, University of Michigan ■ Social learning and community adaptation: local level study of environmental impacts and adaptation to climate change - Antonio Oviedo, WWF Brazil ■ The role of local government in building adaptive capacity in communities - Margaret Barihaihi, ACCRA Uganda ■ Partnership building to scale up pilot CBA projects - Adeline Aubry, UNDP-GEF CBA Programme ■ Institutions and climate change adaptation: challenges in scaling up bottom-up adaptation planning - Nanki Kaur, Simon Anderson and Jess Ayers, IIED, UK ■ Discussion panel with Margaret Arnold (World Bank) and Yvan Biot (DFID)

10.30am-11am	Tea break
11am-12.30pm	<p>Parallel session 16: How wider development interventions contribute to community adaptive capacity</p> <p>Chair: Eva Ludi, Africa Climate Change Resilience Alliance / Overseas Development Institute</p> <ul style="list-style-type: none"> ■ Do livelihoods, disaster risk reduction and social protection programmes contribute to communities' adaptive capacity in Africa? Preliminary findings from the Africa Climate Change Resilience Alliance (ACCRA) - Jo Lofthouse, Oxfam and ACCRA ■ Community based adaptation in Mykahayya, western Sudan - Sumaya Ahmed Zakiedeen, SECS, Sudan ■ Integrated approaches to adaptation - Sarah Wiggins, Tearfund ■ The role of policies and institutions in CBA: learning from the field experiences - Neera Shrestha Pradhan, ICIMOD, Nepal
	<p>Parallel session 17: The role of ecosystems in adaptation</p> <p>Chair: Helen Jeans, WWF and Hannah Reid, IIED</p> <ul style="list-style-type: none"> ■ Integrating sound ecosystem management into CBA projects: preliminary findings from a projects' review - Gretel Gambarelli and Pauline Buffle, IUCN (Ecosystems and Livelihoods Adaptation Network) ■ Sound ecosystem management in support of human-based adaptation. The case of SCAPES in San Ignacio Province, Cajamarca, Peru - Nella Canales Trujillo, CARE ■ Exemplars of resilience in Pacific mangroves, people & livelihoods - Metui Tokece and Monifa Fiu, WWF South Pacific, Fiji ■ Ecosystems and community-based climate change adaptation across Luru Island, Choiseul Province, Solomon Islands - Jimmy Q. Kereseke, The Luru Land Conference of Tribal Communities, Solomon Islands ■ Restoration of degraded lands of Djimbala: Case of palm groves of M'betou - Mouhamadou Farka Maiga, Amade-Pelcode, Mali
	<p>Parallel session 18: Drylands and pastoralism</p> <p>Chair: Victor Orindi, Ministry of State for Development of Northern Kenya and Other Arid Lands</p> <ul style="list-style-type: none"> ■ Mainstreaming climate adaptation in planning in northern Kenya - Victor Orindi (Ministry of State for Development of Northern Kenya and Other Arid Lands) Ced Hesse and Simon Anderson (IIED) ■ Pastoralism, climate change and vulnerability in Ethiopia - Gitte Motzfeldt, The Development Fund, Norway ■ Approaches for CBA in pastoral areas - Lucy Waruingi, David Western, John Kamanga, African Conservation Centre, Kenya ■ Conceptual framework approaches applicable to gender and climate change: case study of pastoral communities in Northern Kenya - Nancy Omolo, University of KwaZulu Natal, South Africa

12.30pm-1.30pm	Lunch
1.30pm-3.00pm	<p>Parallel session 19: CBA, disaster risk reduction and agriculture Chair: Stephan Baas, FAO</p> <ul style="list-style-type: none"> ■ Development of sustainable agricultural techniques for adapting to climate change in three villages in the municipality of Roumbou, Department of Dakoro, Niger - Katiella A. Mai Moussa, UNDP Niger ■ Mainstreaming disaster risk reduction and adaptation in the programs/projects of the department of agriculture - St Catalina, FAO ■ Evaluating the vulnerability of small-scale cotton producers in Mali - Boubacar Fall, ENDA, Senegal ■ Designing Local Adaptation Plans of Action for the agriculture sector - S. K. Maharjan, P. Sapkota, R.B. Mijar, D. Rijal, B. R. Regmi, K. Gaudi and S. Anderson <hr/> <p>Parallel session 20: Health Chair: Joy Guillemot, World Health Organisation</p> <ul style="list-style-type: none"> ■ Protecting health from Climate Change in Himalayan Communities - Mr Sonam Chophel, Ministry of Health, Bhutan ■ Health adaptation in Samoa - Laulu Tamati Fau (National Health Service, Samoa), Anne Rasmussen and Kristie Ebi ■ Managing increasing uncertainty: an operational research project on community-based dengue fever prevention in Vietnam - Thuan Thi Nguyen, International Federation of Red Cross Red Crescent Societies ■ Water scarcity and health protection from climate change in Jordan - Usamah Kettaneh and Mazan Malkawi, Ministry of Health, WHO Center for Environmental Health (CEHA), Jordan ■ Community risk reduction of climate change impacts on health in Bangladesh - Dr Iqbal Kabor, Climate Change and Health Promotion Unit Bangladesh Climate Change Trust Fund, Ministry of Environment and Forest <hr/> <p>Parallel session 21: CBA knowledge management Chair: Mozaharul Alam, UNEP</p> <ul style="list-style-type: none"> ■ Scaling up local knowledge using innovative online knowledge management tools - Sukaina Bharwani, SEI ■ Learning and sharing knowledge through Communication for Development: integrating local, regional and global efforts - Cleofe Torres, University of Los Baños, The Philippines and Mario Acunzo, FAO
3pm-3.30pm	Tea break
3.30pm -5.00pm	<p>Plenary session 22: Funding and funding architecture to support up-scaling Chair: Fumiko Fukuoka, UNDP</p> <ul style="list-style-type: none"> ■ A thematic approach to community-based adaptation: experiences of the UNDP-CBA pilots in developing countries. Charles Nyandiga (UNDP) and Fumiko Fukuoka (UNDP)

- Resourcing community-based adaptation at scale: initial lessons from a conservation trust fund in Melanesia - Jane Mogina, Mama Graun Conservation Trust Fund, Papua New Guinea
- Incentivizing strategic investments; barriers and opportunities for private sector engagement - Leena Wokeck, AIT
- Financing CBA under the UNFCCC financial architecture - Achala Chandani, IIED
- Positioning community-based adaptation in the context of national planning for fast-start climate finance in the Republic of Marshall Islands - Albon Ishoda, Marshall Islands Conservation Society
- Accelerating adaptation financing in Africa and the roles of existing and new organizations - Andrew Adwera, African Centre for Technology Studies, Kenya

	Evening	Dinner
Day eight - 31st March	9am-10.30am	<p>Plenary session 23: How to up-scale CBA while keeping the focus local - emerging lessons</p> <p>Chair: Saleemul Huq, IIED</p> <ul style="list-style-type: none"> ■ Mobilizing and promoting communities' contribution to adaptation to scale-up pilot CBA Projects - Anne-France Wittmann, UNDP-GEF CBA Programme ■ Community-based natural resource management as a vehicle for community adaptation to climate change - Lilian Goredema, WWF ■ Governance of community based adaptation following the Cancun agreement - Rachel Berger, Practical Action and Raju Chettri, CAN International
	11am-12.30pm	<p>Plenary session 24: Conference closing statements and next steps</p> <p>Chair: Atiq Rahman, BCAS</p> <ul style="list-style-type: none"> ■ Rajendra Pachauri, TERI and IPCC ■ Aban M. Kabraji, IUCN Asia Regional Director
	12.30pm-1.30pm	Lunch
	Afternoon	Participants depart

ANNEX 3

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ANNEX 4

Co-Sponsors



The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry, no matter how small, should be recorded to ensure the integrity of the financial data. This includes not only sales and purchases but also expenses, income, and any other financial activities. The document also highlights the need for regular reconciliation to identify any discrepancies between the recorded amounts and the actual bank statements or receipts.

Furthermore, it stresses the importance of using clear and concise language when recording transactions. Ambiguity can lead to misunderstandings and errors, so it is crucial to use specific terms and provide necessary details for each entry. The document also mentions the importance of keeping records for a sufficient period to comply with legal requirements and for future reference.

In addition, the document provides guidelines on how to handle corrections and adjustments. It states that any errors should be identified and corrected promptly, and the reasons for the corrections should be clearly documented. This ensures that the records remain accurate and reliable over time.

The second part of the document discusses the importance of maintaining a clear and organized system for storing and retrieving financial records. It suggests using a consistent naming convention for files and folders to make it easy to locate specific records. It also recommends using secure storage methods to protect sensitive financial information from unauthorized access or loss.

Finally, the document concludes by emphasizing the overall importance of maintaining accurate and organized financial records. It states that these records are essential for making informed financial decisions, monitoring business performance, and ensuring compliance with legal obligations. By following the guidelines provided, individuals and businesses can ensure that their financial records are accurate, reliable, and easy to manage.