Community Based Adaptation:

harnessing natural resources and ecosystems for adaptation

11th International Conference
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Kampala, Uganda

Conference proceedings

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ICCCAD
International Centre for Climate Change and Development
at
Independent University, Bangladesh
in partnership with BCAS and IIED

MAKERERE UNIVERSITY

Contents

Acronyms List

ACCRA	Africa Climate Change Resilience Alliance
ACTS	African Centre for Technology Studies
ALP	Adaptation Learning Program
ANDES	Association for Nature and Sustainable Development
ASSAR	Adaptation at Scale in Semi-Arid Regions (OXFAM)
BCAS	Bangladesh Centre for Advanced Studies
BRACED	Building Resilience and Adaptation to Climate Extremes and Disasters
BSF	Bio-sand water filter
CAAP	Community Adaptation Action Plan
CARIAA	Collaborative Adaption Research Initiative in Africa and Asia
CBA	Community-based adaptation
CBNRM	Community-based natural resource management
CF-CCA	Community Forestry - Climate Change Adaptation
CISONECC	Civil Society Network on Climate Change
CoBRA	Community Based Resilience Analysis
CRA	Climate Risk Assessments
CRAEM	Climate Resilient Agro-Ecosystems Model
CSA	Climate Smart Agriculture
EbA	Ecosystem-based Adaptation
ECIC	Ethiopia Climate Innovation Center
ECOTRUST	Environmental Conservation Trust of Uganda
ENDA-TM	Environment and Development Action in the Third World
FAO	Food and Agriculture Organization of the United Nations
GC-RED	Global Policy Centre on Resilient Ecosystems and Desertification (UNDP)
GCF	Green Climate Fund
GEF	Global Environment Facility
GICBA	Global Initiative on Community-Based Adaptation
ICCCAD	International Centre on Climate Change and Development
ICI	International Climate Initiative
ICT	Information and Communications Technology
IDRC	International Development Research Centre
IFC	International Finance Corporation
IIED	International Institute for Environment and Development
IISD	International Institute for Sustainable Development
IUB	International University of Bangladesh
IUCN	International Union for Conservation of Nature
IWMI	International Water Management Institute
LDC	Least Developed Countries
LEG	Least Developed Countries Expert Group
LUCCC	Least Developed Country University Consortium for Climate Change
MUCCRI	Makerere University Centre for Climate Change Research and Innovations
NAPA	National Adaptation Programme of Action
NAP	National Adaptation Plan

NDMA	National Drought Management Authority
PACJA	Pan African Climate Justice Alliance
PELUM	Participatory Ecological Land Use Management
PRA	Participatory rural appraisal
PRISE	Pathways to Resilience in Semi-Arid Economies
RECOFTC	The Center for People and Forests
SDPI	Sustainable Development Policy Institute
TaiCCAT	National Science and Technology Center for Disaster Reduction of Taiwan
TAMD	Tracking Adaptation and Measuring Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNEP-WCMC	World Conservation Monitoring Centre
VC-ARID	Value Chain Analysis for Resilience in Drylands
VIP	Virtual Internet Participant
WRI	World Resources Institute

Background to the Conference Series

Community-based adaptation (CBA) recognises that the root causes of vulnerability and resilience to climate impacts, and much knowledge and capacity on how to adapt, are embedded in societies and cultures. This means the focus of adaptation policies and actions needs to be on empowering and supporting communities to take action based on their own decision-making processes. Actions need not be limited to the local level; indeed, CBA can operate at the city or even national level. But such mainstreamed or up-scaled actions must not lose their emphasis on local needs, priorities, knowledge and the capacities of vulnerable communities most at risk.

CBA is an emerging area. The proliferation of field level activities needs to be accompanied by efforts to share emerging knowledge and experiences amongst practitioners, policymakers, researchers, funders and the communities at risk. In recognition of this, the Bangladesh Centre for Advanced Studies (BCAS) in collaboration with the International Institute for Environment and Development (IIED) convened the First 'International Workshop on Community Based Adaptation (CBA) to Climate Change' in Dhaka, Bangladesh, in January 2005. The Second International Workshop on CBA was also held in Dhaka, Bangladesh, in 2007. Those present formed the CBA Exchange[1] to promote knowledge sharing on CBA activities. At the Third International CBA Conference held in Bangladesh in 2009, participants agreed to form a Global Initiative on Community-Based Adaptation (GICBA)[2] and to make the conference an annual event to improve knowledge sharing. GICBA is still an active forum for sharing CBA-related activities and information. The decision to hold the conference alternately in Bangladesh and another vulnerable country was also made, with a view to sharing experiences with and learning from activities in various vulnerable countries and communities throughout the world. All conferences since have been held in Least Developed Countries (except for CBA9 in Kenya).

The Fourth International CBA Conference was held in Dar es Salaam, Tanzania in February 2010 in recognition of the vulnerability of African nations to climate change impacts. Nearly 200 people from 38 countries attended, and a two-day field trip preceded three days of time spent in the hotel-based information sharing sessions. This model of a two- or three-day field-based component of the conference preceding hotel-based discussions, has continued ever since. The field trips provide experiential learning on how communities are coping with climate change impacts, and also allow conference participants to network and get to know each other better.

The fifth International CBA conference took place in Bangladesh in 2010 with the theme 'Scaling Up: Beyond Pilots'. It accentuated the importance of moving away from stand-alone projects and ensuring that best practices were accurately and systematically shared both horizontally across communities and vertically across levels of governance and action. The conference showed that CBA could operate at scale, for example through mainstreaming into government processes, but with communities remaining central to planning and action. A total of 388 registered participants from 62 different countries attended the conference. Conference outputs included the Routledge book Community Based Adaptation to Climate Change: Scaling it up.[3] Chapters from this book were cited many times in the Intergovernmental Panel on Climate Change (IPCC), thus bringing community and practitioner knowledge into a key policy making arena.

The 6th International CBA conference was held in Vietnam in April 2012. Over 320 people from 61 different countries attended, with many more attending the opening and closing sessions. Over 30 co-sponsors and other contributing organisations provided support. In addition to formal plenary and parallel sessions on a number of sub-topics, the theme of CBA6 - communicating CBA - was addressed in dedicated communication-related sessions on blogging, working with the media, digital photo storytelling, using games to communicate risk, and methods and tools for working with children. Dedicated poster sessions and evening film sessions were also held.

[1] http://community.eldis.org/cbax/
[2] www.weADAPT.org/gicba
[3] Schipper, E. L. F., J. Ayers, H. Reid, S. Huq and A. Rahman (2014) *Community Based Adaptation to Climate Change: Scaling it up*. Routledge, London.

Conference outreach was dramatically improved at CBA6. Live interviews were broadcast online each day and more than 50 interviews uploaded to YouTube. Delegates wrote nearly 30 blog posts and produced nearly 2000 tweets, using the Twitter hashtag #CBA6. The conference supported several developing country journalists, which resulted in a number of published media articles throughout the world. This commitment to conference outreach to those who cannot attend in person has continued as the conference series has progressed.

The seventh international CBA conference returned to Dhaka, Bangladesh, in 2013. The theme was 'Mainstreaming CBA into National and Local Planning' and over 30 government representatives attended and consequently formed a 'Government Network on Mainstreaming Climate Change.' The small cohort of government officials attending CBA6 also reported back. This was an indication of the growing levels of government interest and experience in CBA. Augmented outreach meant its daily communication-related outputs reached several hundred Virtual Internet Participants (VIPs) and the IIED CBA7 website was a hub for all CBA7 related activities, blogs and online video streams. Conference outputs included a special issue of the academic journal Climate and Development, entitled 'Community-Based Adaptation: Mainstreaming into National and Local Planning'[4], which helped bring and validate community and practitioner knowledge to and in the scientific arena.

The eighth international CBA conference was held in Kathmandu, Nepal, 24-30 April 2014. The theme was 'Financing Local Adaptation' in recognition of the need to understand how best to finance the growing number of CBA project and programme activities around the world. Roughly 450 people from 58 different countries attended, including representatives from governments and many of the large international and bilateral funds, donors and foundations currently supporting CBA. This included the Executive Secretary of the UNFCCC, Chair of the Adaptation Fund Board, and Prime Minister of Nepal. CBA8 concluded with the launch of the Kathmandu Declaration on Financing Local Adaptation, which saw delegates call for a radical shift in financial flows to ensure the most vulnerable communities can adapt to climate change.[5]

CBA9 was held in Nairobi, Kenya, 24-30 April 2015, in partnership with the African Centre for Technology Studies (ACTS) and hosted by the Government of Kenya. The conference theme was 'Measuring and Enhancing Effective Adaptation' and more than 400 people from roughly 90 countries attended. Increasingly interactive sessions were run more like workshops than formal presentation-oriented formats. Online coverage through tweets, Storify, photos, posters shared on Flickr and Pinterest, blogs, short CBA films, key speeches, and interviews with session chairs and others summarising emerging lessons allowed those who wished to attend but couldn't to follow conference proceedings online. The resulting Nairobi Declaration on Community-Based Adaptation to Climate Change emphasises the importance of addressing the needs and interests of the poorest and most vulnerable in international agreements on sustainable development, development finance and climate change. This was taken to COP21 and other key international forums by top Kenyan government officials.

The tenth anniversary CBA conference returned to Dhaka, Bangladesh, 21-28 April 2016. The International University of Bangladesh (IUB) campus hosted the event with more than 300 participants from around the world. In light of the fact that more than half of the world's population now live in urban centres, and growing numbers of vulnerable urban communities are struggling with climate change impacts and finding ways to cope, the theme for CBA10 was 'Enhancing Urban Community Resilience'. Following the field trips, the University-based conference sessions included high-level panels, formal presentations in thematic plenary or parallel sessions, poster and video sessions, debates, small group work and a large number of interactive 'out-of-the-box' sessions.

Discussions at CBA10 highlighted examples of federations and communities of the urban poor coming together to organise themselves and provide an opportunity for urban developers, climate change practitioners and local government to mainstream local adaptation. Delegates showed that with the right

[4] All articles in the Special Issue are freely available for download here: http://www.tandfonline.com/toc/tcld20/6/4#.VGRWC01xmUn
[5] See: http://pubs.iied.org/G03787.html

support, these federations can and do build resilience to climate change, and help strengthen the cities they live in. Working with community federations of the urban poor is a 'bottom up' approach to achieving adaptation at scale, which also has benefits for pro-poor urban development. In many developing countries, shack and slum dwellers' associations have the potential to scale up CBA projects and initiatives and continue the work started by development agencies. These community federations are also important resources for infrastructure development, as they can mobilise support and provide important inputs into building solutions to urban infrastructure challenges, such as housing, sewage and waste management. Urban community federations represent very poor communities living in cities and should be an important intermediary to ensure that climate finance reaches those who need it the most. CBA10 thus concluded with a call for governments, NGOs and infrastructure investors to work with urban community federations to mainstream and finance local adaptation. Speakers at CBA10 also reiterated the need to build on the opportunities presented by the UNFCCC Paris Agreement on climate change, signed by 175 countries in New York in early 2016.

Each CBA conference aims to build upon the lessons learnt from previous conferences. As such, they no longer just answer questions around, 'what is CBA?', rather they discuss how to best scale-up, mainstream, finance, communicate, monitor and support CBA to reach the ever-increasing numbers of vulnerable poor people affected by climate change. In acknowledgment of the reliance of those most vulnerable to climate change for their lives and livelihoods on natural resource based sectors such as farming, forests and fisheries, the theme for CBA11 in Uganda in 2017 is 'Harnessing Natural Resources and Ecosystems for Adaptation'.

Aims of the 11th International Conference on Community-Based Adaptation to Climate Change (CBA11)

Share and consolidate the latest developments in CBA best practice, policy and theory in different sectors and countries, in Africa and globally. Harnessing natural resources and ecosystems for adaptation will be a key theme.

Capture and disseminate this knowledge and experience more broadly, to CBA11 participants and through online web coverage and conference proceedings.

Strengthen the existing network of practitioners, policy makers, planners and donors working on CBA at all levels by bringing them together at CBA11 and supporting knowledge sharing and collaboration. Holding CBA11 together with the NAP Expo will bring more government stakeholders to CBA11.

Enhance the capacity of practitioners, governments and donors to help those most vulnerable to climate change to improve their livelihoods.

IIED managed CBA11 in collaboration with the International Centre on Climate Change and Development (ICCCAD) and Makerere University Centre for Climate Change Research and Innovations (MUCCRI). The Government of Uganda hosted the conference.

Over the years, the conferences have been funded by a number of generous co-sponsors and contributing organisations, and also through individuals attending and paying a conference fee. Limited funding is sometimes available to bring selected participants from developing countries who could not otherwise afford to attend.

CBA11 received support from a number of international conference co-sponsors. These included: the Africa Climate Change Resilience Alliance (ACCRA), BRAC, the Climate Justice Resilience Fund, FHI 360, the Food and Agriculture Organization of the United Nations, the International Development Research Centre (IDRC), Irish Aid, International Union for Conservation of Nature (IUCN), The Rockefeller Foundation, United Nations Development Programme (UNDP), United Nations Environment Programme (UNEP), and the United States Agency for International Development (USAID).

CBA11 Programme Summary

26th June	
Inaugural Plenary session 1	Conference Opening and Welcome Speeches
Plenary session 2	Climate Smart Agriculture and Indigenous Knowledge
Parallel session 3A	Inclusive Approaches in Ecosystem-based Adaptation
Parallel 'out-of-the-box' session 3B	Ecosystem-based Approaches to Reduce Community Disaster Risk
Parallel session 3C	Tools for EbA and CBA
Plenary session 4	Financing CBA and EbA
Conference welcome dinner and launch of the Least Developed Country University Consortium for Climate Change (LUCCC)	
27th June	
Plenary session 5	Poster Market Place
Parallel session 6A	Youth, Climate and Livelihoods: Bringing innovation to CBA youth engagement, and youth-driven innovation to CBA practice
Parallel 'out-of-the-box' session 6B	Adapting to Climate Variability and Change in Fragile and Conflict-affected States
Parallel session 6C	Research to Policy and Practice
Parallel session 7A	Application of CBA/EbA in the Urban Setting: Perspectives from the environment community and urban community
Parallel session 7B	Ecosystem Adaptation
Parallel 'out-of-the-box' session 7C	CBA Short Films
Plenary 'out-of-the-box' session 8	Climate Data Cuisine
28th June - CBA11 combines with the Regional NAP Expo for the day	
Plenary session 9	Regional NAP Expo session: National Adaptation Plans
Parallel session 10A	Regional NAP Expo session: Building essential knowledge bases and awareness to support considerations of vulnerable communities, groups and ecosystems in NAPs
Parallel 'out-of-the-box' session 10B	Education and Training for CBA
Parallel session 10C	Mainstreaming Adaptation at Sub-national Levels
Parallel session 11A	Regional NAP Expo session: Protecting vulnerable ecosystems from climate change
Parallel session 11B	Prioritising Participation: emphasising the 'C' in CBA
Parallel session 11C	Foundations for Resilient Development in Dynamic Dryland Systems: Planning, scaling and learning
Plenary session 12	Integrating Climate into Development Planning
29th June	
Plenary session 13	Provocations – Is ecosystem-based adaptation really new? CBA12 planning
Plenary session 14	Conference Closing Session

Meetings and Activities held in Parallel with CBA11

CBA11 supported a number of parallel events and activities, which linked to the conference and were held during the same month. These included:

- ***The First National Community-based adaptation (CBA) Symposium*** held on 16th June at the Hotel Africana, Kampala (Uganda). Theme: Profiling National Community-based Adaptation Efforts for Food Security, Reproductive Health and Disaster Risk Reduction
- ***Regional Workshop on Civil Society Readiness to the Green Climate Fund (GCF),*** Kampala (Uganda), 20-22 June 2017. Co-organised by the Pan African Climate Justice Alliance (PACJA) and CARE International.
- ***Africa Regional NAP Expo***. Held on 28th June 2017 as part of CBA11 programme. Organised by the Least Developed Countries Expert Group (LEG) under the UNFCCC, to promote exchange of experiences and foster partnerships between a wide range of actors and stakeholders on how to advance National Adaptation Plans (NAPs).
- ***11th International Conference on Community-Based Adaptation (CBA11): Youth Conference***, 28-29th June 2017, Kampala (Uganda). This aimed to enhance the ability of youth to build ecosystem resilience while venturing into livelihood activities for employment and income generation (poverty eradication).
- ***Children's Art Exhibition: Climate Change through the Eyes of Children.*** Supported by Plan International, Filipina artist Catherine Young displayed work throughout CBA11. Catherine worked with children and youth living in climate-vulnerable areas and who have been affected by climate impacts in the Asia region to generate a set of sculptures. These reflect the reactions of children to climate change, and are designed to evoke responses and reflection amongst the audience.
- ***CBActive game*** played throughout CBA11. Organised by the Red Cross / Red Crescent Climate Centre to learn about CBA in a fun interactive way.

Session Summaries

Inaugural Plenary session 1: Conference Opening and Welcome Speeches

Chairperson

- Alfred Okot Okidi, Permanent Secretary, Ministry of Water and Environment

Session Speakers

- Sophie Kutegeka, International Union for Conservation of Nature (IUCN)
- Dónal Cronin, Ambassador of Ireland to Uganda
- Gebru Endalew, Chair of the Least Developed Countries (LDC) Negotiators Group
- Mette Wilkie, United Nations Environment Programme (UNEP)
- Bernard Bashaasha, Principal, Makerere University
- Saleemul Huq, Senior Fellow, International Institute for Environment and Development (IIED) / Director, International Centre for Climate Change and Development (ICCCAD)
- Clare Shakya, Climate Change Group Head, IIED
- John Ddumba Sentamu, Vice Chancellor, Makerere University
- Official Opening: Hon. Sam Cheptoris, Minister of Water and Environment, Uganda

Saleemul Huq thanked the Government of Uganda and Makerere University for hosting CBA11, and noted that there were 300 participants from 50 countries attending. He proceeded to introduce each of the panellists in turn.

Bernard Bashaasha welcomed the participants to Africa, noting that Uganda is heavily affected by climate change and is therefore a good place to have discussions about it. He urged participants to visit Makerere University and enjoy Ugandan hospitality.

Sophie Kutegeka highlighted the recommendations of the 1st National Symposium for Community Based Adaptation in Uganda, held one week previously, organised by the Ministry for Environment and Makerere University in collaboration with numerous NGOs. Recommendations included encouraging partners to support predictable, adequate, long-term finance for climate action, encouraging Least Developed Countries to scale up domestic finance, prioritising climate smart agriculture, managing population growth and interventions at the catchment level. Sophie explained how the Government of Uganda urges CBA11 host countries to subsidise local participation in CBA11, recognising that support is currently limited.

Dónal Cronin pointed out that after the Paris Agreement, 2017 brings the difficult phase of action and implementation. He asked how to keep up momentum, public interest, secure resources where they are needed and move from words to actual change. The European Union regrets the decision of the United States to exit the Paris Agreement, and reaffirms its belief that it is fit for purpose, ambitious and enables countries to shape their own path. Uganda has shown leadership and commitment to implement the Agreement. Ireland is committed to working with partners to implement the Paris Agreement, and increasing support for countries tackling climate change to €36,000,000. It is on track to meet its COP21 commitment to scale up finance, reaching a cumulative total of €175,000,000 by 2020. The Embassy of Ireland is one of the first to be declared carbon neutral.

Mette Wilkie identified UNEP actions supporting ecosystem-based adaptation (EbA), including developing guidelines adopted by the Global Environment Facility, leading to a UN resolution requesting UNEP and others to enhance support to developing countries to implement community-based national and regional ecosystems based programmes, incorporating traditional knowledge as a valuable resource. UNEP programmes are valued at $200,000,000 globally, and seek to address capacities to anticipate, absorb and adapt to climate change, and to develop south-south learning. They are developing a Global Centre for Excellence on Climate Adaptation.

Gebru Endalew explained how the LDC Group works to secure tangible outcomes to safeguard the lives of the poorest, speaking for 48 LDCs. EbA is an important element of adaptation for sustainable management of ecosystems against drought, rising sea levels and other hazards. International climate finance needs to flow and be scaled up. Adaptive technologies and capacity building are needed to support the National Adaptation Plans. South-south cooperation is necessary – this is why CBA has incredible value.

Clare Shakya argued that Brexit and Donald Trump reneging on UNFCCC Paris commitments are distractions. They have inspired greater action elsewhere, and the economics of energy use work in our favour. We must use ten years of learning on CBA to benefit hundreds of millions of people. She posed two key questions:

1. Can we reflect on our experiences of what works at scale and is transformational? How can we refresh our approach to be more relevant and influential?
2. How can we distil what works, and be more effective in our actions?

Clare pressed for testing multiple emerging areas: tackling the root causes of poverty, integrating multiple mechanisms, working across scales, investing in flexible, adaptive, responsive approaches, thinking long-term by investing in institutions and capabilities, working with governments for scale, and having foresight for future climate challenges.

John Ddumba Sentamu identified the knowledge economy as one of the six most important drivers for societal change. Education is a key element for sustainability. Effective adaptation takes place at the community level, and bottom up thinking allows local knowledge to be shared and applied. CBA11 is in line with the vision of Makerere University, which launched the Centre for Climate Change Research and Innovation (MUCCRI) to strengthen East African resilience and adaptation capacity.

Alfred Okot Okindi explained that the Ministry of Water and Environment hopes that the meetings of minds and brains can support the Ministry to put change into action that can be seen and felt. This conference will help community adaptation to be embedded in national planning.

Sam Cheptoris, the Honourable Minister of Water and Environment, congratulated the organisers for establishing the CBA conference series in response to very real challenges. The Intergovernmental Panel on Climate Change identifies the development and environmental problems of global warming and the threat of eroded natural resource capital. This may curtail the goals in Uganda's Vision 2040 and the Second National Development Plan. Global warming is affecting the important tourism industry as well as biodiversity and wildlife. Agriculture, which employs 66% of the population and provides national food supplies, relies on adaptation. Vulnerability is compounded by low income and a high population. The CBA11 theme of 'harnessing natural resources and ecosystems for adaptation' is directly relevant to Uganda, whose economy depends on rural communities and natural resources.

Uganda has developed a series of policies and plans to address climate change, including the Green Growth Development Strategy, the National Adaptation Plan of Action and the National Climate Change Policy and Action Plan. It is accessing and seeking further funding from multiple sources to invest in bankable adaptation projects. The minister challenged delegates to come up with practical solutions for adaptation and welcomed them to the conference.

Plenary session 2: Climate Smart Agriculture and Indigenous Knowledge

Facilitator

- Krystyna Swiderska, IIED
- Willy Kakuru, Food and Agriculture Organization of the United Nations (FAO)

Session Speakers

- Michael Mbogga, Makerere University Centre for Climate Change Research and Innovation, Uganda
- Joshua Aijuka, Participatory Ecological Land Use Management, Uganda
- Julius Ng'oma, CISONECC / Southern Voices on Adaptation, Malawi
- Stephen Muwaya, Ministry of Agriculture, Animal Industry and Fisheries, Uganda

Session Details

Krystyna Swiderska opened the session by outlining three key challenges for agriculture and food systems:

- Food insecurity and the need to increase production
- The growing impact of climate change on agricultural production
- The contribution of food systems to greenhouse gas emissions (up to one third).

One response to these challenges is Climate Smart Agriculture (CSA), a relatively new term used to denote agriculture that sustainably increases productivity, enhances resilience and reduces greenhouse gas emissions.

Krystyna explained that there are many different CSA approaches, but that they all fall into two basic models: ‘green revolution’ (climate smart monocultures), and ‘complex diverse’ (agro-ecological systems). Whilst the former are typically associated with higher yields, the latter are associated with lower risk and can bring other co-benefits, for example relating to nutrition, farmer innovation, mitigation and ecosystem health. She stressed that both models are needed, and that it is important to tailor CSA approaches to the local context and build on local and indigenous knowledge. The latter can be very effective for enhancing yield, resilience and income.

Krystyna concluded by stressing that whilst indigenous knowledge is recognised as an important resource for adaptation through the Intergovernmental Panel on Climate Change and Paris Agreement, it remains under threat, and genetic diversity for adaptation is also being lost at a rapid rate.

Willy Kakuru announced that Uganda has recently launched a National Adaptation Plan for the agriculture sector, targeting the livestock, crops, fisheries and land and natural resources sub-sectors, and adopting CSA principles. Plan implementation is anchored in different climate change adaptation options, which are documented in a local government level Knowledge Management System that recognises the importance of integrating indigenous knowledge and modern scientific knowledge. He invited panel members to discuss the following key questions:

- Which CSA models are most effective for ensuring stable productivity in risk prone areas and generating co-benefits?
- What is the role of indigenous knowledge in CSA? How can modern science and indigenous knowledge be better combined for effective CSA?

- How can indigenous knowledge be better integrated in adaptation policy and planning?

Michael Mbogga shared his experiences of working on a project in the semi-arid 'cattle corridor' in central Uganda, funded by the FAO and Belgian government. The project has helped district governments to establish knowledge management and information systems for CSA. The team visited villages in order to understand how farmers are using indigenous knowledge to cope with climate change and boost productivity. It used Farmer Field Schools to bring scientists and farmers together. Results showed that a range of practices such as growing coffee with shade trees, use of improved pasture varieties, and using fodder as well as pasture to reduce methane production, have been ongoing for decades. Modern science can be combined with indigenous knowledge only if researchers and project managers go to the farms and establish spaces for information sharing. In some cases farmers raised the question of proper compensation for their knowledge. He recommended increased use of participatory research and action learning approaches.

Joshua Aijuka noted that farmers in extreme environments have knowledge of adaptation, but that knowledge is lost if a new technology appears. It is important to build on local knowledge and participatory processes. Agro-ecology is a powerful solution for smallholder farmers facing climate change. The Climate Resilient Agro-Ecosystems Model (CRAEM) reflects farmers' interpretation of CSA because it builds on agro-ecology. There is a need to empower farmers to understand that they have valuable knowledge, to ensure the proper participation of women as custodians of most local knowledge bases, and to plan beyond the farm to surrounding agro-ecological systems.

Julius Ng'oma explained that modern science has helped a lot, but both scientific and indigenous technologies have limitations, and that given the speed of climatic changes we cannot rely on only one knowledge system. For example, he noted that many interventions are still based on historical seasonal cycles, and that there is a need to generate up-to-date information on when the best time to plant crops is, using both biological indicators and modern science for forecasting.

Stephen Muwaya emphasised that agricultural systems in Africa are frequently disrupted by drought, floods, pests and diseases. Faced with these stresses, farmers rely more on indigenous knowledge, so both indigenous knowledge and science are essential to find breakthroughs for climate resilience. Indigenous people are the custodians of agricultural land and have valuable knowledge in a number of important areas, such as livestock breeding, seed breeding systems and water harvesting systems, all of which have their roots in indigenous knowledge. Indigenous knowledge should be integrated into adaptation policy, planning and project design processes right from the start, by actively involving farmers, pastoralists and women who are key indigenous knowledge holders. Project design should ensure that indigenous knowledge is strengthened through community institutions and processes and exchange of knowledge. Communities should be empowered so that they have the confidence to speak out. We must reward innovation, and combine indigenous knowledge and science through innovation platforms, participatory action planning and participatory research. These processes require access to finance.

In response to the panel, session participants emphasised:

- The need to enhance women's participation at all levels and to empower women. This is a key challenge for better integration of indigenous knowledge and science.
- The fact that some indigenous knowledge has evolved out of unequal power structures within communities (for example in Northern Ghana), and the need to revitalise customary principles of conservation and equity that lie at the core of many indigenous cultures.
- The need to promote sharing of indigenous knowledge while protecting intellectual property rights, so that communities are compensated in the event of commercial use. In Mount Elgon, Uganda, farmers had been incentivised to participate in knowledge sharing forums by virtue of small financial incentives provided by the district government. This has proven cost-effective.

A farmer from Mityana district in Uganda commented that a lot of scientific knowledge is produced by institutions that are detached from indigenous communities. He stressed that farmers should be

considered active participants, rather than passive beneficiaries, that they should be engaged from the start, and should receive research findings. Agro-ecology is broader than CSA – it is a social movement that draws upon rights-based approaches in order to address unequal power relations, and can be used to build influence from the bottom up. In the Gambia, scientific researchers, farmers and policy makers were successfully brought together in a safe space for a week, during which time they drafted a series of practical recommendations. Indigenous knowledge tends to remain in district centres, and needs to be communicated more effectively in order to influence planning, policy making and implementation and thus affect change. Young people receive information via social media, and indigenous knowledge could be shared through internet technologies.

In closing the session, Krystyna Swiderska highlighting the need to:

- Channel more resources into agro-ecology, given that the majority of investment in CSA so far has been in high-tech projects;
- Promote and integrate indigenous knowledge into CSA initiatives while respecting intellectual property rights;
- Enhance the participation of indigenous farmers and rural communities in the design and implementation of CSA policies, plans and projects.

Parallel session 3A: Inclusive Approaches in Ecosystem-based Adaptation

Facilitator

- Kimberly Junmookda, Plan International

Session Speakers

- Angel Christy Patricia, Plan International Indonesia
- Constance Okollet, Climate Wise Women
- Gabriel Kulwaum, The Nature Conservancy

Session Details

We know that the impacts of climate change will disproportionately affect the most poor and vulnerable communities, who already have few resources and capacities to adapt. But even while adaptation projects include the explicit aim of reaching such populations, in practice the ‘last mile’ in reaching the most vulnerable is challenging. What implementing organisations have learned is that reaching various ‘unreached’ populations, including children, women and persons with disabilities, will require special and innovative approaches. This session explored ‘what works’ in reaching children, women and remote communities, based on experiences in implementing inclusive EbA projects by the panellists.

Kimberly Junmookda opened the session by asking why we should care about inclusion. It is because the very purpose of investing in adaptation efforts is to help the most poor and vulnerable - those who will be affected by climate change the worst - adapt to its impacts: if we are not reaching the most vulnerable, then our efforts are missing the mark. Kimberly then asked the panellists a number of questions.

Who are you seeking to include in climate change adaptation and why?

Gabriel Kulwaum said that he is a farmer and a fisherman and has been working in a coastal village affected by sea level rise in Papua New Guinea for 30 years. He summarised the challenges he has

faced by quoting an elderly member of his community: “You have been talking about climate change, environment and conservation. But I want to ask you a simple question: Can I eat climate, environment or conservation?” This quote illustrates the difficulties of reaching remote communities and convincing them of both the importance of climate change, and the ways in which adaptation can mitigate this change without damaging local livelihoods.

Constance Okollet described how she has been working in rural Uganda to help farmers and remote communities adapt to climate change, focusing on women and girls. Constance explained that her community used to live “very well”, with full granaries, but that this changed with the onset of floods in 2007, which displaced thousands of people. She emphasised that “climate change doesn’t discriminate – it affects everyone”. The most vulnerable in her community are women, children, disabled and sick people, including those with HIV. The government can often overlook these groups, so Constance works to enable them speak together; to have one voice.

Angel Christy Patricia has been working on how best to involve children, especially girls, in adaptation planning in Indonesia. She said her work prioritises children as one of the most vulnerable groups in the context of climate change. The involvement of children in EbA planning is important as they provide important connections between actors and communities (for example, teachers and parents).

How easy was it to engage the groups you have worked with? How did you find them, and what were the barriers?

Angel said that Asian cultures often diminish the importance of children relative to adults, and that children are not deemed to have an important role to play in EbA. She explained that Indonesia has more than 17,000 small islands and that children are aware that their land is being affected by sea-level rise, while many adults are unaware. They can therefore play an important role in convincing their parents to plant more trees and plants, and to preserve coastal areas for their future.

Plan International works to overcome cultural barriers by creating safe spaces of discussion for different groups (male adults, female adults, young men and young women, and children). Forming separate discussion groups was an effective means of representing the voices of children without undermining the position of community elders. Angel explained: “When we give children space to speak to inform other groups, it is difficult but not impossible for adults to see climate change from their perspective.”

Constance said that in the wake of the 2007 floods she asked the sub-county government to support the formation of a women’s network. She shared new information on climate change with the community.

Gabriel said it was important to recognise the unique challenges faced by different contexts, for example cities versus coastal villages. The two main challenges he has faced are cultural norms restricting, for example, the participation of women and children, and centralised governance structures that do not seek to be responsive to local voices.

How can we convince women and children they have a role, and not simply approach them as ‘beneficiaries’?

Constance emphasised the power of doing by showing. When she stands up to speak in her community, she creates an example, and breaks a norm, which allows others to follow suit. Gender laws in Uganda protecting the rights of women to work and earn an income have also played an important role in increasing their influence and reducing domestic violence.

Angel talked about how Plan International has worked to convince communities to listen to children by empowering children to become sources of information on climate change and adaptation solutions.

Gabriel said that his organisation works to mobilise traditional institutions by increasing inclusion in clan meetings. He emphasised the importance of working with institutions that are already working on the ground, rather than starting from scratch. These are best placed to conserve local resources. As

Constance argued, once you begin to involve women in these structures, others also come and seek involvement.

What are your experiences of involving vulnerable groups in ecosystem-based adaptation, and the particular perspectives they bring?

Gabriel argued for more bottom-up planning that involves women, children and disabled people from the start, to incorporate the problems they face. This involves challenging existing power structures. Constance said that she does this by organising meetings at the local level and then reporting issues directly to national government bodies where possible, skipping mid-level tiers of government.

Angel said we must find better ways to engage children more interactively, on their level and in their language. Kimberly added that Plan International has engaged children to use 'climate change flipcharts': sets of visual materials that tell the story of why climate change is happening, and the risks faced by communities; and that this has led to children becoming champions, bringing climate change awareness to their communities, and thus changing the role they play.

During the closing session discussion on challenges and successes in reaching hard-to-reach groups with adaptation initiatives, Sarah McIvor, Irish Aid, emphasised the importance of simplifying scientific information in ways that are understandable to affected communities. John Kaganga, a farmer and representative of Kikandwa Environmental Association, emphasised the importance of approaching climate change adaptation holistically and intervening at an early stage. He said that the challenge lies in delivering a message that is comprehensive enough to reflect reality, but simple enough to be understood.

Pauline Nantongo, Environmental Conservation Trust of Uganda, said that given that adaptation initiatives usually take place on land, we have to engage land owners, who are often absent and hard to reach. There is a need to create inclusive spaces, for example through sport and leisure, through which adaptation drivers and initiatives can be shared and discussed. Eugine Rwibasira, Rwanda Development Organisation, noted the importance of being proactive rather than reactive, for example by addressing long-term drivers of vulnerability through family planning and conflict resolution initiatives. Ida Klockmann, Danish Family Planning Association, reiterated the importance of family planning in increasing the power of women and managing the long-term effects of population growth.

The panel concluded that making adaptation inclusive is not a technical exercise, but a social one. It starts with identifying existing power relationships between local and traditional institutions, and recognising the baseline for participation of vulnerable groups. This tension is not insurmountable, but requires time, challenging norms, creating new forums, and 'showing by doing'.

Parallel 'out-of-the-box' session 3B: Ecosystem-based Approaches to Reduce Community Disaster Risk

Facilitators

- Colin McQuistan, Practical Action, UK
- Anita Van Breda, WWF

Session Details

Anita Van Breda introduced the session and a short film on flood risk management, which highlighted different response options and emphasised the importance of finding the right strategy for green flood management. A session 'icebreaker' activity had participants moving and mingling according to a posed question. Then, an interactive activity in which session participants were divided into five teams comprising roughly 11 participants each began.

The activity started with a simulation in which a government constituted a river management committee made up of ministerial representatives. The committee's powers were revoked because it failed to adequately plan for river basin catchment management. Following committee dissolution, a new committee with members of the community was constituted. Members were selected from upstream, middle stream and lower stream areas, and included an urban dweller, local government representatives and the private sector. From these, the members selected a chairperson and a treasurer.

The activity was highly interactive, with each team conducting roleplay to select the best adaptation option possible. The fact that the committee was constituted with community representatives resonated well with the feeling at CBA11 that local people know what to do, and need to adapt using best practices, with support from team members representing the private sector and government bodies.

The activity was somewhat complex and involved the need for committee members to make different calculations balancing environmental, social and economic values. Participants needed the capacity to think fast, agree on a decision quickly and select an option that balanced these three values.

Calculating the flood impact was hilarious. One group was made up of males from different countries, who found it difficult to reach agreement. This would be particularly challenging when you consider the intricacies of a catchment like that of the River Nile. Reaching a decision that would please the whole population would take much more effort than this group displayed.

Issues raised by session participants once the activity had finished were as follows:

- Is the activity practical?
- There could be issues with language barriers during planning phases because the upstream and downstream communities may be in different nations. Within a country like Uganda, where decentralisation means that districts are independent, planning could be problematic with people failing to agree on basic principles.
- The game provides well-documented details of different costs, and the committee must make a cost benefit analysis to inform their decision making for the good of the many based on these. But oftentimes, such detailed information is lacking.
- Stakeholder training before the game is implemented could be useful. The calculations were problematic for some practitioners who thus made errors. This also demonstrates the complexity of decision making based on economic valuations, and the barrier that this would pose to ensure full engagement of community representatives.

Colin McQuistan informed session participants that this was the first time the game had been piloted, so a few modifications might be expected. It is based, however, on real life experiences of his work in the Mekong River basin. The game can be modified to fit the level of training of session participants, or different sub-games can be used for different audiences.

At the end of the session, two teams won in different categories: the team with overall highest mark, and the team that completed their tasks first. Winning team members took prizes home: an eco-green bag from Practical Action.

Session take home messages included the need to involve local people in planning, but the challenges of facilitating this at scale. River commissions with community representatives are a step in the right direction, but even though communities may have a seat at the table for adaptation planning, power and knowledge imbalances may limit their ability to contribute.

Parallel session 3C: Tools for Ecosystem-based Adaptation and Community-based Adaptation

Facilitators

- Charlotte Hicks, UNEP-WCMC
- Arno Sckeyde, GIZ

Session Details

This session provided information and experiences on the use of EbA relevant tools and guidance to support adaptation to climate change. It aimed to support learning from the adaptation community about the benefits, challenges and experiences of using EbA relevant tools and guidance. The session started with short presentations to set the context, and then moved to an interactive 'EbA tools and guidance marketplace'.

Charlotte Hicks began by describing findings from an inventory of EbA relevant tools: https://www.iied.org/call-for-feedback-inventory-tools-support-ecosystem-based-adaptation This inventory currently has 222 EbA-relevant tools, yet adaptation planners and practitioners still cite the need for tools as a major challenge. The tools are mainly general in purpose, for use in the multiple stages of EbA and for multiple ecosystem types. The inventory found only seven tools trying to address both adaptation and mitigation jointly. In terms of accessibility, only 32 are available in non-English languages and only seven in non-European languages. Key questions on whether the right tools are available and accessible for users formed the basis of discussions to synthesise highlights from the marketplace.

Next, Arno Sckeyde shared information on PANORAMA, a newly created internet-based platform, created and managed by IUCN and GIZ, which provides access to a multitude of applied and proven tools. It is designed to share proven tools and methods for the management of natural resources (a 'solutioning' approach). Presently it has three 'portals' (predefined search-filters) including protected area, marine and coastal EbA. Arno described an example from Pakistan about using trees to adapt to a prolonged winter and dry seasons. The project had developed and applied a tool for assessing community vulnerability and identifying adaptation measures. The project provided this tool as a building block as part of a full EbA solution to the platform. A key issue, however, was how to make learning more efficient and existing and replicable tools more available. Participants were encouraged to visit PANORAMA under www.panorama.solutions and become 'solution providers'.

The main part of the session was a 'tools marketplace' providing opportunities to learn about a selection of EbA and CBA tools and to provide input on some key questions about tools. Session participants were taken through the different EbA and CBA tools on display. A list of the tools shared and contact details provided are below.

- Ecosystem-based adaptation: Question-based guidance for assessing effectiveness (developed by IIED, UNEP-WCMC, IUCN). Contact: Hannah Reid: Hannah.reid@iied.org; http://pubs.iied.org/17606IIED/
- Community Based Monitoring Model for Natural Resources Management (developed by CARE International in Uganda). Contact: Deziderius.Irumba@care.org; Pinault.Delphine@care.org; http://accu.or.ug/wp-content/uploads/2014/06/CBM-Booklet-layout_final.pdf
- Community Based Resilience Analysis (CoBRA) (developed by the United Nations Development Programme's Global Policy Centre on Resilient Ecosystems and Desertification (UNDP GC-RED)). Contact: yuko.kurauchi@undp.org; ben.twinomugisha@undp.org; www.undp.org/gc-red; http://www.undp.org/content/undp/en/home/ourwork/global-policy-centres/sustainable_landmanagement/resilience/cobra/
- EbA Planning Tool (under development, this is a working name) (being developed by International Institute for Sustainable Development (IISD) and IUCN). Contact: Anika Terton; aterton@iisd.ca; https://www.iisd.org/project/development-ecosystem-based-adaptation-eba-planning-tool; https://www.iisd.org/blog/connecting-dots-how-ecosystem-services-support-adaptation-climate-change
- Community-Forestry Climate Change Adaptation (CF-CCA) (developed by RECOFTC - The Center for People and Forests). Contact: https://www.recoftc.org/reports/recoftc-usaid-adapt-asia-pacific-project-brochure
- Participatory Digital Resource Mapping (developed by IIED and GeoData Institute). Contact: Sam.greene@iied.org; Ced.hesse@iied.org; http://pubs.iied.org/17401IIED/
- Knowledge-based Participatory Action Research – also known as 'Decolonising PAR' – for establishing biocultural heritage territories (developed by the Association for Nature and Sustainable Development (ANDES) and IIED). Contact: Krystyna Swiderska: Krystyna.swiderska@iied.org; http://pubs.iied.org/17400IIED/ http://pubs.iied.org/G03843/
- Vegetal fiber logs, a soft engineering solution developed by an EbA project, made and installed locally by the community with the guidance of hydrologists (Seychelles). https://www.facebook.com/pg/pcusey.sc/photos/?tab=album&album_id=1660574327581438; https://www.facebook.com/pg/pcusey.sc/photos/?tab=album&album_id=1683102975328573
- Adaptive Forestry App (developed by Action on Climate Today). Contact: www.actiononclimate.today
- Self-governed Community (in the context of disaster risk management) (developed by National Science and Technology Center for Disaster Reduction of Taiwan - TaiCCAT). http://taiccat.ncu.edu.tw/main.php https://itunes.apple.com/tw/app/tai-nan-shui-qing-ji-shi-tong/id590994074?l=zh&mt=8 (Tainan city government); https://play.google.com/store/apps/details?id=com.tainanwatergroup&feature=search_result#?t=W10 (Tainan City Government)
- Climate Resilient Agro Ecosystems Model (CRAEM) (developed by Participatory Ecological Land Use Management (PELUM) with financial support from Bread for the World). Contact: joshuaaijuka@pelumuganda.org; www.pelumuganda.org; www.facebook.com/pelum.uganda

At the end of the session, participants were asked to provide feedback on four guiding questions. The questions and various participant responses discussed are listed below:

1. **How do you usually find suitable tools/guidance for EbA?**

- Through sharing with partners and adapting existing tools.
- The biggest problem is finding tools.
- Ask experts, though how can we ensure tools meet minimum standards?
- Would consider a less complex tool that is adaptable and accessible at community level.
- Many tools can be found online but the marketplace and interaction helps to select tools.

2. **Does the market place have what you want?**

- The marketplace has a good range of tools, but often a combination of tools is required.
- Most of the tools are developed from a global perspective and are not focused on the local level. A key issue is how to embed the tools in national monitoring systems.
- Tools are plentiful.
- Most participatory rural appraisal (PRA) tools can be adapted to include CBA and EbA attributes.
- Most tools can be adapted to suit the context.
- It would be very useful to have monitoring and evaluation tools for adaptation. There is a lot on different EbA/CBA stages but a gap when it comes to monitoring and impact indicators.
- It's important to consider equity when selecting groups for tool application (men, youth, women et cetera).
- How can we create synergies between the myriad of tools out there? Many of them are almost addressing the same issue.

3. **What's your advice to tool developers/promoters?**

- Developers should identify target groups for the tools they create and facilitate access for these groups.
- Tools are often project-based. Developers need to consider their exit strategy and sustainability.
- As tools are increasingly based online, how do we ensure access and use by the most marginalised and vulnerable?
- It would be good to organise a symposium on EbA tools.
- Tools should be user-friendly.
- Stakeholders should be involved at all levels of tool development.
- Find ways to provide tools/guidance in non-EU languages.
- Generate evidence for adaptation planning.

- Bring the right stakeholders together for a shared understanding, developing trust and commitment for action.
- Involve the youth for sustainability and involve ministries of education to integrate tool use into schools.

4. Would you like to provide a solution?

- OXFAM's Vulnerability and Risk Assessment can support an EbA approach.

Plenary session 4: Financing CBA and EbA

Facilitators

- Psamson Nzioki, Transparency International
- Felix Ries, International Climate Initiative of BMUB

Session Speakers

- Mahfuzul Haque, Transparency International Bangladesh
- Pauline Nantongo, Environmental Conservation Trust of Uganda (ECOTRUST)
- Martina Dorigo, Adaptation Fund
- Victor Orindi, National Drought Management Authority (NDMA), Kenya
- Thabang Phago, Conservation South Africa
- Thomas Loster, Munich Re Foundation
- David Howlett, Global Resilience Partnership
- Callist Tindimugaya, Commissioner, Ministry of Water and Environment, Uganda

Session Details

The session began by setting session objectives and introducing the panellists. The facilitators then posed guiding questions to the panel members covering three thematic areas including: sources of finance for CBA and EbA; effectiveness and transparency of climate funding; and, linking community action with national climate plans and budgets/international climate finance mechanisms. The session aimed to facilitate sharing of experiences, success stories and failures on taping into finance sources and exploring innovative approaches to financing CBA/EbA interventions.

Martina Dorigo identified the role that the direct access modality of the Adaptation Fund has played in preparing countries to access other financing (for example, from the Green Climate Fund), and in giving responsibility to national institutions to supervise projects and take on fiduciary risk. She also emphasised that demonstrating public consultation and country ownership is key to receiving funding.

Pauline Nantongo described an approach to private sector engagement using 'cooperative offsetting' – enabling smallholders to gain carbon credits from improved land management and receiving payments over 25 years while selling produce from improved lands. Smallholders are incentivised to be sustainable by applying viable land use practices and business plans.

Victor Orindi described how applying decentralised climate finance approaches in Kenya engages communities who lead strategic planning, and focuses on good governance and mainstreaming climate change into planning using existing government structures. The funds seek to become mainstreamed to receive funding from domestic revenue sources.

Thomas Loster described the role insurance can play in building resilience through ensuring stability, lowering interest rates and making projects economically viable. He noted that participatory engagement is key to making these schemes work.

Mahfuzul Haque highlighted the need for clear information to enable communities to own, monitor and engage with projects, and to ensure transparency through strong reporting and mechanisms for redressing grievances.

Thabang Phago identified the need to make sure projects were "influencing the people they should be" – and clearly targeted towards the recipients' needs. Ownership is key, itself depending on the capacity for sustainability. He highlighted his work in South Africa which has sought to use public works to provide short-term employment for local communities.

Callist Tindimugaya pointed out the need for harmonisation between national policy (such as climate change strategies and national action plans) and local activity, to enable coordinated planning and implementation. Multiple funding streams need to be thought of holistically to avoid duplication. This could include working across administrative boundaries and respecting communal planning. Participation should seek to include non-traditional stakeholders such as faith groups.

David Howlett highlighted the 93 trillion dollar bond market, the 80 billion dollar green bond market and the 170 billion dollars smallholder farmers invest of their own funds, which dwarf the commitments of the Green Climate Fund. The question is how to engage the private sector in resilience and adaptation through national banks and investors, such as through resilience bonds.

The floor was then opened to the audience for further discussion and questions. Audience questions focused on how finance can reach grassroots or community levels, via the private sector, through micro-insurance, agricultural investment, grants or domestic development finance that mainstreams climate change.

One response identified the small grant facilities offered to communities as part of a project funded by the Adaptation Fund. With the Enhanced Direct Access programme, communities can send project proposals to their National Implementing Entity, which reviews them against a set of criteria, ensuring they are coherent, address local needs, are consistent with social and environmental standards and align with national plans and strategies. Another pointed out the thin line between adaptation and development, noting that good development, such as improved water management systems, can have strong adaptation outcomes. Mainstreaming climate change into development planning can enable climate proofing to take place as well as channelling all development finance to the same goals as long-term adaptation.

It was noted that the private sector has an interest in funding adaptation in areas in which supply chains are based, but that it is not interested in 'charity'. Adaptation is similar to the growth curve of a product or business, and there are forms of finance for every stage in the 'growth curve' of an adaptation project.

It was noted that international finance mechanisms seem to prefer working through international agencies, and fear engaging with communities because of perceived risks. The key is to help communities get organised and package their needs in a recognisable format to access finance through strong prioritisation. Additionally, if agriculture was sustainable and profitable, smallholder farmers would invest in adaptation themselves. Productive agriculture should be able to finance its own adaptation investments. Natural capital for sustainable ecosystems, however, is not supported (for example, through subsidising organic fertilisers).

Final comments from panellists noted that it is important to learn lessons from previous projects (such as Building Resilience and Adaptation to Climate Extremes and Disasters - BRACED), have a flexible approach, and consider bringing local businesses and local government into consortiums for adaptation, rather than NGOs and multilateral agencies. Out-of-the-box solutions are needed to leverage private sector finance: we need to talk to the people we disagree with to influence them. Comments also noted the need for flexibility of funding sources and modalities, bringing in non-traditional stakeholders (such as faith groups), and the need for mainstreaming climate change into development planning while ensuring transparency and accountability.

Finally, climate finance needs to be diverse, thinking across multiple sectors, including national budgets, and creatively thinking out-of-the-box, such as through payments for ecosystem services to communities and small grants for activities that are not attractive to the private sector. Climate finance should be embraced ‘in all its colours’.

Plenary session 5: Poster Market Place

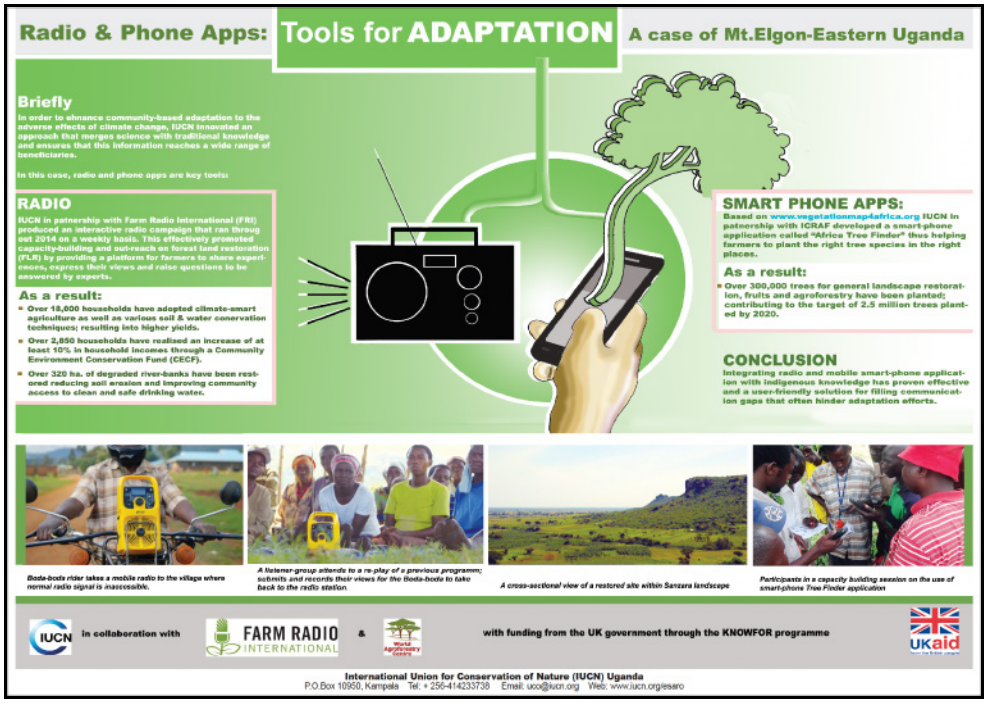
Facilitator

- Hannah Reid, International Institute for Environment and Development

Session Details

Twenty-four conference participants briefly presented their posters in this plenary session. All posters are available for viewing on IIED's Flickr site.[6] A short award ceremony for the winning CBA11 posters was then held. The winners were as follows:

First Place: Sophie Kutegeka, IUCN



[6] See https://www.flickr.com/photos/iied/sets/72157683363807405/with/34383678276/

Second Place: Thabang Phago, Conservation South Africa

Taking Adaptation to the Ground: A Small Grants Facility for enabling local level responses to Climate Change in Namakwaland, Northern Cape, South Africa.

Thabang Phago (Conservation South Africa, Namakwaland Facilitating Agency); tphago@conservation.org

1. Introduction

In South Africa the Adaptation Fund (AF) is supporting a Small Granting Facility in two local Districts in order to support the development of Enhanced Direct Access to Adaptation finance. A vulnerability assessment and mapping exercise helped determine the 2 priority areas for their vulnerability to Climate Change, namely the Mopani District in Limpopo Province and Namakwaland District in Northern Cape. There are currently four (4) projects being implemented in Namakwaland District and five (5) approved in the Mopani District. Two more applicants are currently being considered for funding in Namakwaland, which if approved, will bring the total number of projects funded under the SGF in Namaqualand to Six (6). A total of at least 12 projects will be funded across both priority areas. The total grant for each project is in the region of USD100,000.00.

2. Approach

Figure 1. A map of the Namakwa District, Northern Cape in South Africa where some of the current Small Grants Facility projects are being implemented

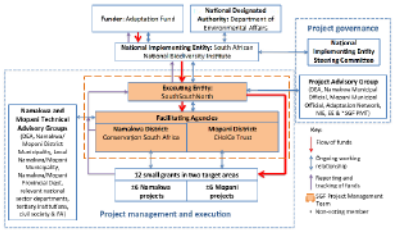


Figure 2. SGF Governance structure

4. Lessons learnt

- South Africa is most fortunate to have this opportunity to pilot these Small Granting Facilities to further our understanding on the most effective mechanisms for enhancing direct access to adaptation finance for vulnerable communities.
- All four (4) projects in Namakwaland are currently implementing their projects and 2 more applicants are being considered for funding under SGF.
- There has been many lessons learnt thus far, and developing this type of mechanism that effectively supports communities to build resilience is challenging, especially with the need for strict criteria for funding. For implementation to be effective, a great deal of capacity development and support is needed on the ground and it has been a critical role for the Facilitating Agencies to provide this support. Through these learning processes we are also aiming to replicate and scale up the Small Granting facilities within other areas in South Africa, through funds such as the Green Climate Fund.

3. Projects under implementation in Namakwaland

A. Building resilience to Climate Change by promoting Savings with Save Act Trust:

Figure 3. Savings group in Namakwaland piloting the climate change educational module

Save Act is an organization that supports communities to improve their resilience through savings and credit groups. Access to savings provides a means to building climate change resilience by enhancing a communities ability to diversify their income potential and have savings in times of need. A climate change module has also been introduced to the organization's traditional financial education modules to ensure climate change adaptation is emphasized and individual members in savings groups are encouraged to build resilience through their savings.

B. Climate, Biodiversity, and Red Meat – Land & Livestock Adaptation with Gondwana Alive and Biodiversity & Redmeat Co-operative:

Figure 4. Some members of the Biodiversity and Redmeat Co-operative with resilient meatmaster rams

Gondwana Alive together with the Biodiversity and Redmeat Co-operative are building resilience through testing the introduction of more climate resilient livestock. The meatmaster livestock are meant to be more resilient to heat, more disease resistant and graze less selectively which aims to have a positive impact on the veld and animals, thus enhancing productivity and livelihoods. The impact of these breeds in order to enhance resilience within this community is being piloted through the project.

C. Two communities adapting together with the Environmental Monitoring Group:

Figure 5. Project beneficiaries lending a hand in one local community where EMG is implementing roof insulations and installing rain water harvesting technology.

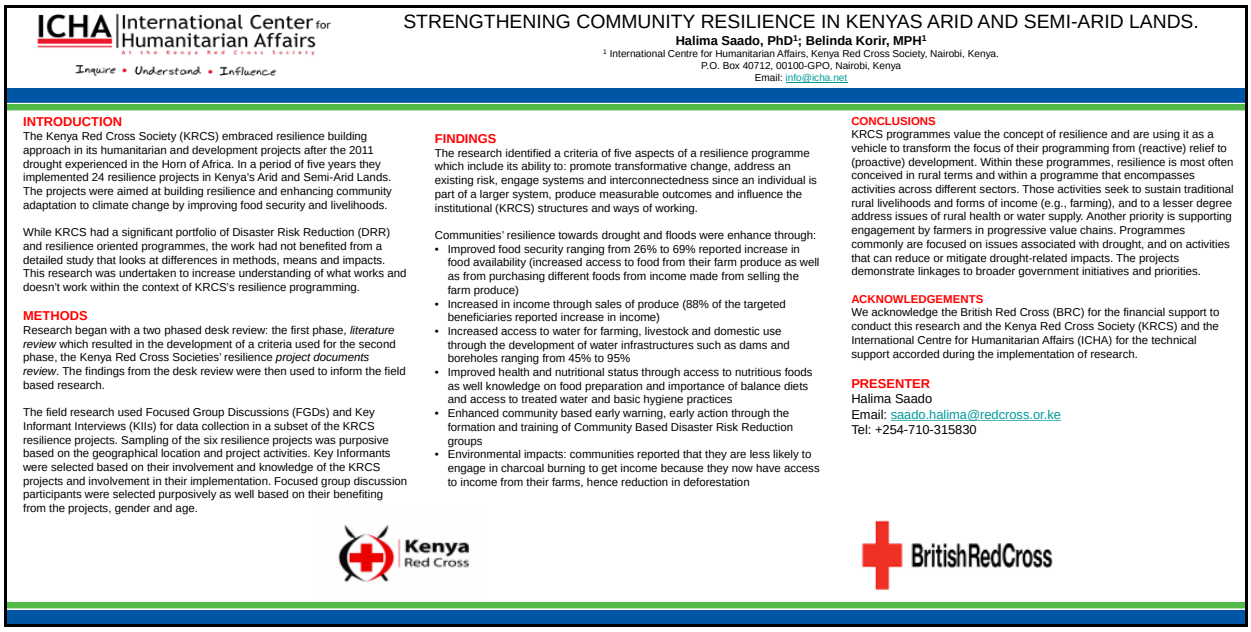
The Environmental Monitoring Group together with 2 communities (Soebatsfontein and Suid Bokkeveld) are helping to implement more climate resilient settlements through water saving technologies, house roof insulations, composting toilets and harvesting of rainwater. Communities are also providing in kind contributions towards these new technologies in their homes.

D. Climate proofing small-scale rooibos production with Heiveld Co-operative:

Figure 6. Rooibos plantations where different methods of retaining water in the soil are explored via different plots treatments

The Heiveld Co-operative with the community of the Suid Bokkeveld are building their resilience by climate proofing their small scale rooibos production through climate smart agriculture approaches. This is done through innovative methods of land management and using composting, mulch and water wise technology.

Third Place: Halima Saado Abdillahi, Kenya Red Cross Society



ICHA International Center for Humanitarian Affairs
At the Kenya Red Cross Society
Inquire • Understand • Influence

STRENGTHENING COMMUNITY RESILIENCE IN KENYAS ARID AND SEMI-ARID LANDS.

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INTRODUCTION

The Kenya Red Cross Society (KRCS) embraced resilience building approach in its humanitarian and development projects after the 2011 drought experienced in the Horn of Africa. In a period of five years they implemented 24 resilience projects in Kenya's Arid and Semi-Arid Lands. The projects were aimed at building resilience and enhancing community adaptation to climate change by improving food security and livelihoods.

While KRCS had a significant portfolio of Disaster Risk Reduction (DRR) and resilience oriented programmes, the work had not benefited from a detailed study that looks at differences in methods, means and impacts. This research was undertaken to increase understanding of what works and doesn't work within the context of KRCS's resilience programming.

METHODS

Research began with a two phased desk review: the first phase, *literature review* which resulted in the development of a criteria used for the second phase, the Kenya Red Cross Societies' resilience *project documents review*. The findings from the desk review were then used to inform the field based research.

The field research used Focused Group Discussions (FGDs) and Key Informant Interviews (KIIs) for data collection in a subset of the KRCS resilience projects. Sampling of the six resilience projects was purposive based on the geographical location and project activities. Key Informants were selected based on their involvement and knowledge of the KRCS projects and involvement in their implementation. Focused group discussion participants were selected purposively as well based on their benefiting from the projects, gender and age.

FINDINGS

The research identified a criteria of five aspects of a resilience programme which include its ability to: promote transformative change, address an existing risk, engage systems and interconnectedness since an individual is part of a larger system, produce measurable outcomes and influence the institutional (KRCS) structures and ways of working.

Communities' resilience towards drought and floods were enhance through:

- Improved food security ranging from 26% to 69% reported increase in food availability (increased access to food from their farm produce as well as from purchasing different foods from income made from selling the farm produce)
- Increased in income through sales of produce (88% of the targeted beneficiaries reported increase in income)
- Increased access to water for farming, livestock and domestic use through the development of water infrastructures such as dams and boreholes ranging from 45% to 95%
- Improved health and nutritional status through access to nutritious foods as well knowledge on food preparation and importance of balance diets and access to treated water and basic hygiene practices
- Enhanced community based early warning, early action through the formation and training of Community Based Disaster Risk Reduction groups
- Environmental impacts: communities reported that they are less likely to engage in charcoal burning to get income because they now have access to income from their farms, hence reduction in deforestation

CONCLUSIONS

KRCS programmes value the concept of resilience and are using it as a vehicle to transform the focus of their programming from (reactive) relief to (proactive) development. Within these programmes, resilience is most often conceived in rural terms and within a programme that encompasses activities across different sectors. Those activities seek to sustain traditional rural livelihoods and forms of income (e.g., farming), and to a lesser degree address issues of rural health or water supply. Another priority is supporting engagement by farmers in progressive value chains. Programmes commonly are focused on issues associated with drought, and on activities that can reduce or mitigate drought-related impacts. The projects demonstrate linkages to broader government initiatives and priorities.

ACKNOWLEDGEMENTS

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Kenya Red Cross

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Session participants then circulated freely amongst the posters listed below, asking questions and discussing poster contents with those who had brought and presented them.

1. Adrine Musiime, A Rocha, Uganda - Bio-sand water filters (BSFs) by A Rocha Uganda
2. Alemayehu Zewdie, OXFAM - ASSAR: Adaptation at Scale in Semi-Arid Regions
3. Anika Terton, IISD - New tools for better ecosystem-based adaptation planning
4. Arno Sckeyde, GIZ - Making ecosystem-based adaptation effective – a framework for defining qualification criteria & quality standards
5. Catherine Mulinde, Makerere University Centre for Climate Change Research and Innovations (MUCCRI) - Livelihoods and climate adaptation: a community-based risk assessment in Uganda's coffee growing areas
6. Charlotte Hicks, UNEP-WCMC - Improving access to tools for Ecosystem-based Adaptation
7. Diane Husic, Moravian College - Ecological Restoration: Re-establishing Landscapes While Building Resilience and Communities
8. Emmanuel Bwengye, Isingiro District Local Government- Isingiro Community-based Climate Change Adaptation in Banana-Livestock system
9. Emmanuel Ntale, MUCCRI/FHI 360 - Ecosystem-Based Adaptation: Opportunities and Constraints for drought adaptation by agro-pastoral farmers in Nakasongola District, Uganda
10. Halima Saado Abdillahi, Kenya Red Cross Society - Strengthening community resilience in Kenya's arid and semi-arid lands
11. Hannah Reid, IIED - Ecosystem-Based Adaptation and the Paris Agreement
12. Hausner Wendo, VSF Germany - Integrating CBA with EbA approaches for Community Adaptation Initiatives in ASAL Northern Kenya: A Case for Mainstreaming Participatory Action Research
13. Irene Auron, Red Cross Red Crescent Climate Centre - Forecast based financing
14. Jennifer Abdella, Near East Foundation - Decentralised Climate Adaptation Funds

15. Juan Camilo de los Ríos Cardona, Corantioquia - Wetlands of life. Ecosystem-based Adaptation in Colombian Wetlands with an Active Community Involvement
16. Krystyna Swiderska, IIED - Biocultural heritage: nurturing resilient mountain communities
17. Luis Artur, Universidade Eduardo Mondlane - The Role of Ecosystems for Poverty and Disaster Risk Reduction: A Case Study from Mabalane District, Mozambique
18. Muhammad Awais, Sustainable Development Policy Institute (SDPI) Islamabad Pakistan - Migration futures in Asia and Africa: economic opportunities and distributional effects – A case of Pakistan
19. Rigan Ali Khan, Practical Action - From Vulnerability to Resilience (VR2) 2009-2017
20. Saleemul Huq, ICCCAD - Factors enabling greater local cooperation in natural resource management
21. Sophie Kutegeka, IUCN - Radio and Phone apps: tools for adaptation. A case of Mt Elgon in North Eastern Uganda
22. Susan Nanfuka, Makerere University - Ecosystem-based adaptation options to drought impacts
23. Thabang Phago, Conservation South Africa - Taking Adaptation to the ground: a Small Grants Facility for Enabling Local Level Responses to Climate Change in Namakwaland, Northern Cape, South Africa
24. Tian Lin, RECOFTC - The Center for People and Forests - Building adaptive capacity through community forestry: example from the dry zone, Myanmar

Parallel session 6A: Youth, Climate and Livelihoods: Bringing innovation to CBA youth engagement, and youth-driven innovation to CBA practice

Facilitator

- Heather McGray, Climate Justice Resilience Fund

Session Speakers

- Clara Decent Atuhaire, Mbarara University of Science and Technology
- Tehut Tesfaye, Ethiopia Climate Innovation Center (ECIC)
- Daphne Stella Nansambu, International Water Management Institute
- Edwin Muhumuza, Youth Go Green Uganda

Session Details

Today's youth want more than climate education and awareness-raising. They want to be active agents of change, and they want practical skills and tools to help them pursue a stable, satisfying livelihood, so that they, their families and their communities can thrive in the changing climate. The session explored four key questions. Panellists sought to answer these questions by making use of an innovative, walk-and-talk format, through which audience members were encouraged to move around, meet new people, and reflect on the contributions of each of the panellists:

How can CBA programmes engage youth in ways that help to realise these aspirations? Young people have been central actors in the 'innovation ecosystem' that has brought us transformative Information and Communications Technology (ICT) and is delivering exciting new opportunities in green energy access.

Daphne emphasised that we live in the 'dotcom era', and that Kampala is in the midst of an ICT boom, which is helping to facilitate youth involvement in new initiatives. She noted that social media is used predominantly for entertainment purposes, and that CBA programmes can harness this in ways that engage youth. One such example is the Big Water Platform: an open access platform that enables users to share information and best practice on water initiatives. Its users include stakeholders from the water and agricultural sectors, who collectively find solutions to water problems and advocate for better practices.

Tehut discussed the work the ECIC has done to support young entrepreneurs in the climate change space in Ethiopia. ECIC helps youth bring products to market, through the provision of finance, grants (up to US$50,000 per entrepreneur), connections to investors, connections to markets, business advisory services, in-house business councillors, and International Finance Corporation (IFC) certified business trainers. In addition, relevant information on doing business is provided to entrepreneurs. Policy research, identifying policy bottlenecks for entrepreneurs in doing climate tech business, and benchmarking best practices is carried out, and later submitted to policymakers, to create a conducive environment for action.

Adrine Musiime, A Rocha Uganda, responded to the question of how to make CBA attractive to youth. She said that when she grew up, agriculture was a punishment – sending people outside to dig. In order to address this, her organisation has developed a programme called 'Farming God's Way', which creates vegetable gardens in primary schools and introduces competitions for the best garden. This has been successful in engaging people in issues relating to agriculture and environment from a young age.

Three barriers to youth engagement in CBA programmes were identified. Firstly, Mwiya Mundia, Irish Aid, Charles Kabiswa, Ecological Christian Organisation, and David Mfitumukiza, FHI 360, pointed out that internet technologies remain absent in many rural areas, and that we need to think about more accessible platforms. Gabriel Kulwaum, The Nature Conservancy, added that urban youth tend to be more visible than their rural counterparts, and that more needs to be done to reach remote rural youth. Furthermore, Sam Barrett, IIED, warned that unless we focus on including the most vulnerable, we risk increasing inequality by improving the situation of groups – including urban youth – that already have capacity.

Secondly, Gabriel Kulwaum said that government structures often exclude youth from CBA programming, both at national and the local levels. Edwin Muhumuza said that the Ugandan government has many CBA policies but youth are rarely engaged in these. Similarly, Joan Namuleme, MUCCRI, said that donors pass funds to government bodies, who then implement project themselves – they don't give funds to youth or youth groups because they don't see them as being qualified. The Ugandan government has, however, recently started to develop a policy on youth in agriculture, thanks to the efforts of Edwin and other youth activists.

Thirdly and relatedly, Deziderius Irumba, CARE Uganda, said that access to finance is a significant barrier to youth engagement in CBA. Funding is often absorbed by intermediaries, rather than passed on to youth groups, in part due to corruption issues. Edwin noted that youth are often ineligible for loans as they lack collateral, and that grants such as those provided by Tehut and the ECIC are very important.

How can youth help to bring the entrepreneurial spirit from these sectors into the climate-sensitive sectors central to CBA and EbA (such as water management, food provision, land management or climate information and planning services)?

Tehut opened discussion on this question by emphasising that youth are affected by climate change, but are also active agents of change. For example, the ECIC has received more than 300 submissions for the call for proposals on youth CBA innovations.

Edwin talked about the role of youth activism. He has been advocating for the inclusion of youth in adaptation initiatives, was invited to share his proposal at COP22, and is now establishing regional networks of youth activists on climate issues.

Clara Decent Atuhaire summarised the Community Twinning Project run by her university, which works to create solution-focused exchanges between urban youth (university students) and rural communities on pressing development issues. Students go to communities in order to share the lessons they have learnt in class, and to learn about the practical challenges faced in the communities. They then collectively come up with solutions to these challenges. For example, one area of Mbarara faced challenges with waste disposal and accessing energy for cooking stoves given the cost of charcoal (up to US$15 per sack). In response, the group decided to try community composting, making briquettes that convert waste into energy and income. The programme has generated innovation by pairing indigenous knowledge generated in the community with scientific knowledge generated in the university.

Two barriers to youth innovation in climate sensitive sectors were identified and discussed. Firstly, and related to the issues of finance and governance above, Edwin said that youth lack access to land. Even when they are interested in agriculture, it is difficult for them to convince relatives, leaders and government officials to grant them access. Constance Okollet, Climate Wise Women, said that when her community in Tororo, Uganda, provide youth with access to land, they sell it off and leave the community – they don't want to work with their parents on the land. Discussion returned to the issue of how best to engage youth in agriculture.

Secondly, Mercy Naturinda, Bwindi Mgahinga Conservation Trust, said that many of the youth that she works with have not been to school and lack core skills in, for example, proposal writing. Deziderius also noted that rural youth are hampered by a lack of capacity. As such, there is a need for skills and capacity training in order to maximise the potential of youth innovation, such as that provided by Tehut and the ECIC.

What market opportunities are on the horizon for youth interested in adaptation? For example, what skills and knowledge are needed to create equitable, climate-resilient agricultural value chains for the future?

Daphne reiterated the potential of internet and platform-based technologies to expand marketing opportunities for youth in agriculture. For example, she has been involved in the development of a platform called MoBFIT, which connects rural producers with urban consumers. The platform allows farmers to market their produce while it is still in the ground – rather than harvesting it early – and provides them with more power to determine prices. The loss of productivity due to early harvesting is a significant problem in Uganda. Edwin added that initiatives such as MoBFIT are very important for improving market opportunities for youth, but they need to be accompanied by training and capacity building practices.

How must capacity building practices evolve to support today's youth to bring climate resilience into their future livelihoods? For example, what capacity building approaches can foster enterprise, risk-taking, innovation and forward thinking?

Tehut emphasised the important role of educational institutions in providing practical skills and entrepreneurial mind sets to youth in order to enable them to build climate resilient livelihoods. The Community Twinning Project described by Clara above is one such example. Tehut emphasised the importance of achieving scale in capacity building by benchmarking best practices and sharing them with government to ensure they are integrated into policy making processes.

James Omoding, IUCN, noted that young people are becoming detached from indigenous knowledge. Consequently, in addition to capacity building from above, there is a need for communities to develop the capacity of young people by passing on traditional knowledge, for example on the relationship between different crops and different climatic conditions. Edwin added that there is a lack of research on climate smart agriculture, and that building the research capacity of youth could facilitate their involvement in data collection activities. In addition to taking the university students to the communities, there is a need to take the communities to the universities.

Reflections on closing the session then followed. Gabriel Kulwaum reminded us that: "Youth is powerful! Youth can move nations. Youth can move the world." Governments and communities should invest in youth and in doing so invest in the future. Edwin emphasised that youth are the majority in many countries in the global south, and that virtually every challenge in a country affects young people.

Daphne emphasised the need to move away from the idea that young people have no capacity at all. Rural youth in Uganda, for example, actively use mobile phone platforms such as mobile money. Urban and rural youth should also share information and support each other to bridge the information gap. The cost of adaptation strategies recommended for implementation should be considered, and support should be given especially to local communities.

Returning to the issue of promoting agricultural livelihoods, Clara called on session participants to develop ways of packaging climate change and CBA that are attractive to youth, for example by using platforms they are familiar with and excited by (WhatsApp, Facebook, et cetera). Edwin added that we need to challenge the idea of agriculture as antiquated.

Heather ended the session by acknowledging some of the tensions that need addressing when looking to bring youth-driven innovation into CBA practices, for example tensions: between rural and urban approaches to intervention; between the 'field' and the university; between low and high-tech interventions; and between targeting those with very little capacity and those with existing skills and experiences. She said that these tensions can be resolved when we work together across geographical and generational divides.

Parallel 'out-of-the-box' session 6B: Adapting to Climate Variability and Change in Fragile and Conflict-affected States

Facilitator

- Roop Singh, Red Cross / Red Crescent Climate Centre

Session Speakers

- Jennifer Abdella, Near East Foundation
- Mohammed Qazizada, Government of Afghanistan
- Wani Nelson Mogga, Ministry of Environment and Forestry, South Sudan
- Nhial Tiitmamer, The Sudd Institute, South Sudan
- Jean Vergain, International Committee of the Red Cross

Session Details

This session applied experiential learning activities including story-telling, games and discussions to: (1) explore the highly complex relationships between climate, livelihoods, migration and conflict; (2) increase understanding of how different factors interact with one another, including the role of climate change and variability; and (3) explore ways that CBA and EbA approaches can adapt to and offer solutions to these challenges.

Roop Singh introduced the session by indicating that it would use story-telling to discuss the complexities associated with implementing CBA and EbA interventions in fragile and conflict-affected areas. To demonstrate the complexities that emerge in adapting to climate change in conflict-affected environments, participants were asked to play an opening game where they were required to keep their climate adaptation strategies (a person in the room) to themselves and another person was designated as an 'extreme climate event.' Surprising and unplanned interactions emerged. Individuals employed different and sometimes conflicting strategies in order to avoid being affected by the extreme event. During the game debrief, participants affirmed the reality that adaptation interventions in fragile and conflict areas are characterised by complexities at multiple levels, competing interests and an inability to target strategies effectively over time and space to reach desired outcomes. The overall lesson from this game was that in fragile environments (countries or societies), multiple layers of socio-economic and political complexities significantly hinder adaptation interventions and curtail them reaching their goals. Conflict adds to such complexities making it very difficult to pursue clear CBA/EbA strategies and achieve tangible outcomes.

Following this, participants were transported to the rural wilderness of Uganda. This story-telling part of the session constituted participants sitting down around a bonfire to listen to tales from some of the most conflict-afflicted parts of the world. Stories from Afghanistan, South Sudan, Somalia and Mali painted a picture of institutions and organisations working with vulnerable people facing various levels of conflict, devastation and insecurity to achieve adaptation goals in the face of climate-related impacts that result in famine and poverty. For example, in his story from South Sudan, Wani Nelson Mogga described a young republic ravaged by war and instability since its independence in 2013 and even before this. He observed that in the current environment of instability, inter-ethnic and cross-regional natural resource-based conflicts are common in the country as populations are left with limited livelihood options. In such circumstances, as in Mali, Afghanistan and other conflict areas, disenfranchisement means approaches such as CBA and EbA lack the community leadership and organisation they need.

Jennifer Abdella set a similar scene by adding that in fragile environments in Mali, the impacts of climate variability and change can amplify resource-based conflicts into major conflict situations as vulnerable populations compete for survival. One of the emerging issues from discussions was that a lack of leadership and authority undermines adaptation strategies in fragile environments due to persistent uncertainty. Adaptation goals could thus be almost impossible to achieve before socio-political stability is guaranteed. However, working with informal organisations and networks to broker peace was seen as partial solution to some of these issues in Mali.

The scenario from Afghanistan reiterated the difficulties of organising structured interventions for adaptation and development in the context of long-term conflict. As Mohammed Qazizada explained, building trust with communities in such circumstances takes a long time of deliberate effort to put together institutions and strategies that can work. Broad-based consultations with multiple players at the community level are essential and have proved effective in Afghanistan.

Jean Vergain shared the story of Issa, a pastoralist, who struggled with various war-related challenges and eventually decided to ‘pick up a gun’ for survival. Jean reflected on the reality that vulnerable people face immense stress at the confluence of climate and conflict.

Reflections from the stories brought to the fore the importance of adaptation interventions that ‘do no harm’, and the need to avoid creating perceived or real changes in power balance that could incite further violence. Storytellers further highlighted thinking beyond physical interventions, to support issues such as emotional resilience and existing informal structures as avenues to build peace and resilience. Importantly, it was clear that conflict has inevitably become part of climate change adaptation work as some of the most vulnerable people live in fragile and conflict-affected states. The session showed that violence in connection to climate extremes and variability is more likely to occur in places where institutions are less effective, people are excluded from power, and essential services are difficult to obtain. Efforts to build resilience, through increasing rural incomes, connecting people to essential services and reducing the impact of climate extremes may prevent vulnerable situations turning to violence in some instances.

Parallel session 6C: Research to Policy and Practice

Facilitators

- Evans Kituyi, Collaborative Adaption Research Initiative in Africa and Asia (CARIAA), IDRC
- Hannah Reid, IIED

Session Speakers

- Chris Henderson, Practical Action
- Patrick Kibaya, Uganda Chartered HealthNet
- Sebastiaan Soeters, CARE International

Session Details

Ecosystem-based adaptation is a young concept, defined as the use of biodiversity and ecosystem services as part of an overall adaptation strategy to help people to adapt to the adverse effects of climate change. Despite its growing popularity both as a concept and in terms of implementation, evidence around whether EbA works, how we measure its effectiveness and what the conditions under which EbA is optimal is weak. This includes the need to clarify what institutional, governance and policy

contexts are optimal to support EbA initiatives and broader mainstreaming into local, regional and national government structures, policies, laws and planning processes. This session explored how researchers working on EbA initiatives respond to these challenges.

In the opening part of the session, Evans Kituyi explained that research is crucial for policy and practice on adaptation. EbA targets the most vulnerable people around the world.

Hannah Reid then described her research on EbA effectiveness. She looked at 13 EbA projects in 12 countries to see if they worked and assessed how to support policy uptake. Assessing EbA effectiveness involved asking four questions:

- Does the EbA initiative allow human communities to maintain or improve their adaptive capacity or resilience, and reduce their vulnerability in the face of climate change, while enhancing co-benefits that promote long-term well-being?
- Does the initiative restore, maintain or enhance the capacity of ecosystems to continue to provide important ecosystem services for local communities, and allow ecosystems to withstand climate change impacts and other stressors?
- Is the initiative cost-effective and economically viable over at least five to ten-year horizons, but hopefully much longer?
- What institutional, political and capacity-related factors influence the implementation of effective EbA initiatives and how might challenges best be overcome?

Early research results indicate that EbA can support human adaptive capacity and resilience and has a multitude of associated co-benefits that promote long-term well-being. It can benefit those who are particularly vulnerable to climate change. But there are trade-offs in terms of who benefits, where benefits accrue and when. EbA can also help ecosystems improve their resilience and continue to produce ecosystem services for local communities. But the boundaries that influence ecosystem resilience are poorly understood, as are the thresholds beyond which ecosystems can no longer provide key services. In most instances EbA is financially viable and economically beneficial, with a multitude of economic co-benefits that are hard to quantify. But there are trade-offs concerning where and when financial / economic costs and benefits accrue. EbA implementation is hindered by a range of social, institutional and capacity issues, most notably, the cross-sectoral nature of EbA project planning and management. Opportunities are provided by EbA ‘champions’, government prioritisation, appropriate incentives, strong institutions and a supportive policy / legislative context. Opportunities for mainstreaming and upscaling EbA are numerous and include incorporation into national public works programmes and climate change finance initiatives.

Panellists were then asked to address three questions in a ‘talk show’ style session format:

- Using your EbA research project as an example, demonstrate how the research has led to inclusive, climate-resilient development.
- What institutional, governance and policy contexts proved necessary in this particular case?
- How is impact at scale being pursued for this successful local adaptation approach?

Chris Henderson described how EbA research was influencing policy in the coffee sector in Peru. Practical Action works there with in-country partners to influence policy formulation and implementation, so that coffee can be grown under forest cover thus increasing farmer incomes. Patrick Kibaya described how the use of radio and telephones in Uganda was enhancing resilience by sharing agricultural and market information and thus enhancing productivity. Loss and damage is reduced by 20%, and productivity is up by 70%. Sebastiaan Soeters described a short action research study on adaptive capacity in Northern Ghana generating evidence of the nature, source and importance of adaptive capacity among vulnerable men and women towards their long-term climate resilient development.

Regarding the institutional, governance and policy contexts, Chris described how the Ministry of Lands and Forestry in Peru had developed a policy to protect the forests, and how a coffee Nationally Appropriate Mitigation Action (NAMA) in the Andes had been developed. Patrick Kibaya described how sub-national organisations developed local location-specific ordinances for climate and weather information and two policy papers were also developed. Sebastiaan Soeters described results from the

Adaptation Learning Program (ALP), which has tried to increase people's capacity to press local government for services, especially dams and dugouts, prioritised in the Community Adaptation Action Plan (CAAP). These efforts have been largely unsuccessful. Engagements at the sub-community level were much more successful. In community wards or sections, people had succeeded in securing boreholes; and one village group had gone to the district assembly, through a high standing community member, and received support for block farming. So in terms of EbA best practice, he recommended looking at sub-community structures, which are less politicised, and more flexible in how they represent themselves at the district assembly level.

In discussing the issue of impact at scale, panellists described how if the mandate of stakeholders was development, then scaling up to the multi-country level was essential. The private sector needs to be encouraged to take part in the integration of EbA into national and local planning processes. Financing adaptation could increase EbA upscaling. Upscaling EbA should be farmer-centric or maladaptation may occur.

A number of additional panellists were then identified from the audience to share their experiences and answer the above three questions. Key emerging issues were the importance of community participation in research, which is crucial for any successful research outcome. The watershed level is a particularly good entry point for conducting participatory and community-led research and building community resilience.

During the final general session discussion, various issues arose. Good research needs to include informal research by communities and indigenous knowledge. This should be linked with scientific research. Support for both formal and informal research is needed. Chris explained how in the Andes, research was done with local communities to satisfy this need.

Monitoring and evaluation is important for research, but is difficult for civil society, which rarely has enough funds for this once the research is finished. Local projects are often not systematic and it is therefore difficult to gauge their effectiveness. Knowledge of costs in addition to benefits is important in order to inform successful business planning.

Take home messages from the session were as follows:

- Co-production of knowledge among diverse stakeholders is essential to finding new solutions for complex challenges, such as those brought about by climate change and variability. But community representatives still feel they are not consulted in the design or planning stages of research projects intended to benefit them. As a consequence, the influence of indigenous/local knowledge on such projects is lost.
- Effective research-into-use strategies must be built into projects to ensure adoption of innovations. This calls for knowledge translation champions and tools as part of the overall research strategy.
- Practitioners and researchers need to get better at measuring, demonstrating and articulating the importance of ecosystems for adaptation, especially for the poor and vulnerable.
- Poor countries are prioritising ecosystems in their adaptation planning, but support is needed to make these visions a reality and ensure sustainable ecosystem management is mainstreamed into climate change and sectoral plans (especially agricultural plans).

Parallel session 7A: Application of CBA/EbA in the Urban Setting: Perspectives from the environment community and urban community

Facilitators

- Julie Greenwalt, Cities Alliance
- William Monteith, IIED

Session Speakers

- Paul Mafabi, Ministry of Water and Environment, Uganda
- Sarah Nandudu, National Slum Dwellers Federation of Uganda
- John Bosco Isunju, School of Public Heath, Makerere University
- Ho-Ching Lee, National Central University, Taiwan
- Julie Arrighi, Red Cross Red Crescent Climate Centre
- Rebecca Carter, World Resources Institute (WRI)

Session Details

As a session 'icebreaker', participants were organised according to the years they had spent working in adaptation and working in an urban setting, and according to who lived in an urban setting. It was interesting to see that the 'elders' of adaptation included Hannah Reid, conference organiser, and Paul Mafabi, who with 27 years under his belt was the most experienced.

Julie Greenwalt then informed participants that their mission was to work with cities in developing countries on cities-related issues, since CBA has focused on rural environments to date with the misconception that adaption challenges are only in rural areas. Marginal and informal communities in urban areas need special attention, and might actually be more vulnerable than rural communities.

Following this, the panellists discussed different aspects of CBA in urban settings. Paul Mafabi explained that one challenge is the fact that planning is erratic and the current status is unpredictable. There is no long-term or holistic plan that one can build on to strategise for adaptation. Attitudes are also challenging: people think that cities must be tarmac and buildings. Engineers who design cities are thus programmed to look at green as something to be destroyed to make way for the concrete. Even at a planning level, they do not factor in green spaces.

Sarah Nandudu described challenges related to adaptation in informal settlements. Land is a key issue. Slum dwellers squat on any available land where planning is a problem. For example, in Bwaise - a large slum in Kampala - people constructed shelters and houses on top of drainage channels. Flooding has resulted because of these blockages. Garbage and other social amenities are not planned for in informal settlements. When it rains, garbage is transported by runoff and blocks drainage channels, leaving large stagnant volumes of water in many places. Slum dwellers are not given the opportunity to receive practical planning and development with the urban authorities, something that would allow them to plan better. Slum dwellers do not get any attention from government, and therein lies untapped potential. They have a lot of information that could amply support planning, but is not collected. This gap has, however, been closed by useful partnerships, for example, IIED provides information from the data collected from slum dwellers and this is utilised for planning.

John Bosco Isunju described his PhD research on the wetland behind the hotel where the conference is. Focusing on human encroachment onto the wetland over a period of 12 years, it was an eye opener to see the level of change that the community had brought to the wetland. Challenges include the fact that the land belongs to absentee landlords who were willing to accommodate adaptation, but the sitting tenants had no desire to see the wetland improved, even though they were the current users. At a higher level, local authorities regard wetlands as gazetted areas so there is no plan in Uganda for their use. In coastal ecosystems, EbA is approved and implemented by planting recommended green cover, but here, displaced low-income earners live in areas where the papyrus reed is supposed to be planted. It is perhaps time to decide whether to protect the wetland or let the people stay.

In a plenary discussion after the first three speakers, Crispus Njeru, CARE International, Kenya, asked how we balance CBA with the corruption and impunity that faces our countries. Land can be gazetted for adaptation but a high ranking government official could then grab it. He asked how to handle this.

Previously, it was assumed that vulnerable people were located in rural areas so all adaptation response mechanisms were designed with this perception in mind. Now it is clear that the challenges of vulnerability are especially relevant for the urban poor. Adaptation challenges are clear, but people are unprepared for the urban population dimension to this. All plans have been made for the rural poor and now it emerges that the urban poor might be more vulnerable than rural people and it is unclear how to address this. Dev Gautam, CARE International, Nepal, remarked on the importance of being clear about what urban is and what rural is, because in some areas towns regarded as urban are actually rural. It is also important to remember that adaptation is not only about considering the environment but that a large portion of it must include social and economic issues. We should not limit ourselves to issues related only to the environment.

The session then resumed with the final three speakers. Julie Arrighi explained how the Red Cross focuses on scale when it addresses CBA. It works in 190 countries. A World Bank report indicates that an estimated one billion people globally live in urban centres, but in these areas, the disasters that occur are not well understood. It is also important to look at population growth rates in urban centres because they present a potential problem for CBA.

Ho-Ching Lee has spent five years in Taiwan engaged with an exercise similar to the Intergovernmental Panel on Climate Change (IPCC). She conducted a hazard mapping exercise and came up with a composite indicating that there are seven types of typhoons experienced in Taiwan. This composite was an attempt to design a classification system to enable faster responses. She called for a ministerial arrangement to promote self-governance in the community to empower it to do hazard mapping. Roundtable meetings were held to plan for these. Members of the community - as the smallest planning unit - have been recruited to help with hazard mapping. There has been a shift in approach: previously, the response was to make the city waterproof by constructing infrastructure such as concrete banks. Now, however, the move is to involve the population in ensuring that the city is safe. For example, competitions are conducted in different zones to determine the best disaster response mechanisms, and winners are rewarded. Operational manuals are now produced. After the death of 75 people, the central weather bureau is required to forecast not only weather updates but also issues relating to the volume of water expected so that community members can plan and respond swiftly.

Rebecca Carter has been focusing on urban resilience work including integrating urban resilience plans into city works plans, and including elements of equity and inclusion for vulnerable people. WRI has developed an Urban Community Resilience Assessment tool to map these two together. It is currently being tested in India. It tests urban people's resilience, asking 'how often' questions, as well as what resources people have to deal with shocks (for example, whether they have three neighbours they could count on in case of a flood, or whether they know how to evacuate or where to evacuate to). This is good for bringing community participation into urban planning, and it is evidence-based so city leaders can use it to decide priority areas. Basic preparedness levels in cities are often very low.

Julie Greenwalt remarked that discussions should focus on much more than the urban setting. She asked how many people have a disaster response kit in their homes. Or phone numbers of neighbours whom they can rely on in case of a disaster. Or whether they know if their home is in a floodplain. Raised hands were few and far between.

A number of interesting points were made in the plenary discussions that followed. Mark Kadigo, BRAC Uganda, emphasised the importance of embedding EbA principles in governance. Eddie Jjemba, Red Cross Red Crescent Climate Centre, stressed the need to calculate and evaluate the intangible benefits of natural resources to enable proper planning. He mentioned that Environmental Impact Assessments encourage the use of cost benefit analysis.

A number of practical tools for solving challenges were discussed. Julie Arrighi advocated for working in coalitions. For example, in Dar es Salaam, the Red Cross partnered with other institutions to draw a flood map. In New York, there is a programme to decide on whether to spend funds constructing a water purification plant with maintenance costs or to restore a degraded floodplain ecosystem that would cost substantially less with no maintenance costs. Ho-Ching Lee described an application that sends timely text messages on the weather, and makes communal flood maps available.

Paul Mafabi explained how Kampala is developing a climate change plan to climate-proof the city, bring in more buses and eliminate motorcycle taxis. Stakeholders are being engaged in the process of identifying wetland boundaries. Sarah Nandudu described how groups for lobbying and advocacy were formed in 14 municipalities in Uganda, and how they mobilised funds to support their activities, mobilise and share information. Data collection exercises are conducted at group savings meetings and these are used to provide amenities for slum dwellers, including sanitation units and water supply points, and foster inclusive development as well as enhancing sustainability. John Bosco Isunju stressed the need to reduce floods in cities by ensuring that 40% of water infiltrates in situ. Reducing the imperviousness of cities is key. Mapping out of critical protection zones to absorb waste-water and discharge it when clean, and allocating other areas to people for use, is needed.

Various people suggested issues that need to be taken into account for a city to respond to climate change: planning that keeps with development; the need for various taskforces and platforms that enable effective planning; inclusive planning; understanding climatic extremes to inform inclusive planning; understanding directions that cities are taking and deciding whether they are appropriate; improving coordination; and, making cities accountable for the plans they put in place.

The following take away points from the session emerged:

- To ban plastic polythene bags, investment in the provision of viable alternatives is needed.
- Ensure that people have information about the importance of green spaces. Research in Kenya comparing temperature variations between open space and green space emphasises this. Green spaces are needed to absorb and evacuate flood waters quickly.
- Build collaborations and partnerships.
- Ensure visibility. Responses are faster where the problem can be clearly seen. For example, in Bwaise, the slum dwellers rejected relocation. But when the floods came, they requested relocation.
- Document research findings and collect literature to review.
- Ho-Ching Lee explained how she is starting a course in Cities and Climate Change at her university next academic year.
- Change has to come: smallholder farmers and land users need to focus on climate change rather than just policy makers.
- Know your city, secure up to date data and perfect your work plans.

Julie Greenwalt wrapped up the session by reminding participants that the Intergovernmental Panel on Climate Change is co-organising a conference on cities and climate change science with Cities Alliance and other partners in March 2018.

Parallel session 7B: Ecosystem Adaptation

Facilitators

- Leulseged Asfaw and Aileen O'Donovan, Irish Aid
- Nikhil Advani, WWF

Session Speakers

- Tom Derr, Peace Corps, Uganda,
- Juanita Gonzalez, The Nature Conservancy
- Nthabiseng Majara, Global Environment Facility (GEF) Small Grants Programme, Lesotho
- Niguse Hagazi Gebremedhin, World Agroforestry Centre

Session Details

The session began with an activity that divided participants according to a variety of categories including gender, language and length of employment. Two presentations then addressed climate adaptation measures in Columbia and Lesotho.

Juanita Gonzales described experiences from the 'Ecosystem-Based Adaptation in the Magdalena River Basin' project in Colombia, and spoke about the importance of ecosystem services for community adaptation and how these services can be managed by communities according to adaptation objectives. This project is implementing adaptation measures in the Magdalena basin that seek to maintain floodplain ecosystem services to reduce the vulnerability of people and maintain ecosystem resilience. She explained the Magdalena basin context, expected climate impacts, the ecosystem services that floodplains offer to communities, and the importance of maintaining these to reduce climate impacts on people and ecosystems. She described the measures implemented under the project and how these contribute to community adaptation. One of these is forest restoration to support ecosystem services provision.

Nthabiseng Majara explained how GEF's approach in Lesotho has changed. Previously, grants were advertised in English in mainstream media, but this only attracted larger, urban civil society organisations, creating 68 dispersed projects with little overall impact. A new approach has been identified for the Orange Sengu river basin, whose river source is in Lesotho, and which includes a world heritage site. Lesotho is a mountainous country vulnerable to drought, desertification and run-off from hills. These are leading to freshwater depletion, crop production decline, forest depletion due to the use of biomass for energy, and soil fertility loss. Working with local civil society organisations, GEF has used baseline assessments to prioritise strategic programmes for this particular catchment. Projects supported include: community landscape conservation; climate smart agroecology; low carbon energy access; and a local to global chemical management coalition. The new approach has sought to incubate ideas from local communities, and find ways to enable participation from the resource stewards.

Questions from session participants enabled the presenters to highlight the multiple benefits of their interventions. For example, forest restoration has multiple benefits for ecosystem service provision. Private companies engaged in carbon offsetting need local people's knowledge and help to do this. There are, however, threats from climate hazards which force people to change their livelihoods or move elsewhere, and bring people into conflict with mining companies.

The session then encouraged participants to think through the process of observing changes in weather and climate, the impacts of these on livelihoods, the responses people have to those impacts, and the consequent impacts of these on ecosystems. For example, more extreme weather conditions may affect livelihoods through the loss of livestock or crops, leading people to respond by migrating or changing their crops. This in turn affects biodiversity (for example, monocultures reduce soil fertility). Nikhil Advani explained how the chain of events described above is often neglected, and stressed the importance of recognising that communities are harnessing natural resources to help them cope with climate impacts which then in turn affects biodiversity. For example, repeated crop failures in Tanzania are driving people to sell wood from local trees, which is affecting biodiversity.

Tom Derr introduced a WWF website designed to crowdsource knowledge on human responses to climate change and the impacts of this on ecosystems and biodiversity. The website provides a simple methodology using ethnographic tools for people living in communities to bridge the gap between their communities and policymakers, researchers and the public. Tom explained how in his village, water resources, healthcare and infrastructure were seen as greater priorities than agriculture. This can serve as a basis for planning adaptation investments such as perma-gardening and beekeeping.

Niguse Hagazi Gebremedhin introduced a short film identifying how CBA for livelihoods, resilience and ecosystem services was improving the Gergera watershed in Ethiopia. Previously degraded and infertile, Irish Aid invested with climate smart technologies to transform the landscape. A rural resource centre cooperative has been established enabling young people to return to the area, take over government tree nurseries and improve incomes year after year, as well as economic, ecological and social benefits.

Tibebu Assefa, Echnoserve Consulting, described use of the Tracking Adaptation and Measuring Development (TAMD) approach to demonstrate positive outcomes from the Gergera watershed work. Seven indicators had been used to track the quality of stakeholder climate risk management, with development outcomes also measured. Data showed that interventions had led to increased crop and livestock production, and improved vegetation cover and social protection outcomes, all contributing to increased resilience.

Parallel session 7C: CBA Short Films

Facilitators

- Hausner Wendo, VSF-Germany Kenya
- Shepard Zvigadza, ZERO Regional Environment Organisation, Zimbabwe

Session Details

This session showcased eight short films relating to CBA and EbA, and provided opportunities for questions, answers and brief discussions around the films shown. Each presenter introduced themselves, their organisations and their films before the film was played. Two films were shown back-to-back, followed by a question and answer session, and the session continued this way until all eight films had been shown. Session participants then discussed the films at their tables, focusing on their relevance to CBA and EbA as well as their presentation and format. Feedback, recommendations and suggestions for possible improvements to the films were then provided at the session end.

- Biocultural Heritage Territories in Peru, China, and India: Krystyna Swiderska, IIED

- A Mekong Delta Information System for Adaptation to Climate Change: Birgit Kuna, German Aerospace Center

Responding to a question about the costs of making photo films and whether there was a cheaper way of making them, Krystyna Swiderska explained that US$3000 was used to make her film but that within a year, US$180,000 had been raised from donations to the film. Asked about youth interest in bio-cultural heritage, Krystyna explained that the project tries to make activities such as festivals more appealing to a youth audience and it also attaches an economic value to outcomes, since youth are particularly interested in economic outcomes. In China, university students have started settling back home, which increases farm productivity.

- Radio and Mobile Phone Apps: tools for community adaptation: Evelyne Busingye, IUCN
- Drought resistant farmer: Barnabas Mawire, Environment Africa

Asked about the specific conservation agricultural practices promoted by Environment Africa, Barnabas Mawire explained how local open pollinated varieties are promoted despite the threat from hybrid seeds. A project study found that these local varieties are more drought-tolerant, mature in a shorter time and are not fertiliser intensive. Practices promoted include soil and water conservation, especially using live mulch. These are scaled out using the Farmer Field School approach.

- Building the resilience of communities and their ecosystems to the impacts of climate change in the pacific: Gabriel Kulwaum, The Nature Conservancy
- Integrity in climate finance governance: voices from Bangladesh: Mahfuzul Haque, Transparency International, Bangladesh

Responding to a question about what enabled the community to engage effectively in The Nature Conservancy project, Gabriel Kulwaum explained how the project engaged local communities during its planning and implementation stages. All stakeholders - youth, the elderly and women - were involved. This helped people define, own and suggest solutions to their problems.

- Bangladesh: Living on borrowed time: Nazria Islam / Mritjunjoy Das, BRAC
- Kutxintxa: Luis Artur, Universidade Eduardo Mondlane

Several general recommendations and suggestions to improve the films were made. Films should be clear on messaging and not deviate from their intended purpose. The message should be consistent from the start and flow to the end. Some films send out mixed messages depending on the audience. Some are designed to influence or inform and others are for campaigning. The importance of presenting issues chronologically was emphasised.

Emphasis was also put on film quality. Participants were torn between using sub-titles and interpreting non-English films. Challenges can emerge when the film does not synchronise with its audio or sub-titles. This is generally due to limited or absent resources for production. Another suggestion was to give credit to the producers and funders at the film end, and to use film to capture lessons learnt and challenges involved during project implementation. Climate actors need to prioritise and invest in documentation of this sort.

Securing additional feedback prior to CBA11 was also recommended, particularly encouraging viewing by audiences with no connection to the film. Films can be promoted on social media and YouTube, which allows for constant checking of reviews, comments and viewing numbers. This will secure good feedback.

Plenary 'out-of-the-box' session 8: Climate Data Cuisine

Facilitators

- Rebeka Ryvola, Red Cross / Red Crescent Climate Centre
- Roop Singh, Red Cross / Red Crescent Climate Centre

Session Details

Eating is one of our most personal and community-rooted experiences. Cuisines around the world are stitched together with threads of historical, cultural and environmental context. This session examined the nexus of climate, adaptation and data through a culinary lens.

Engaging in multi-sensory experiences can make complex and/or abstract climate-related CBA concepts personal, understandable and memorable. Departing from the highly technical, and acronym-laden environment that the CBA community of practice can feel like at times, this session helped participants stretch how they think about communicating their work by using the very personal topic of food to find new ways of connecting communities, stakeholders and diverse audiences with CBA work. Participants were encouraged to share their personal experiences with food and how it connects with their work. One participant shared a story of how she practices the same agricultural techniques in her home that she promotes to communities in her workplace in order to really 'walk the talk.'

This was followed by a cuisine quiz to test participants' knowledge of food-related climate data and illustrate the potential of designed food experiences, including 'data cuisine': the multi-sensorial representation of quantitative information that matters, embedded in food. For example, increasing carbon dioxide concentration in the earth's atmosphere could be represented by changing the concentration of red hot peppers in a hot sauce to help people see and taste the increase in CO_2 levels from the 1900s to the current day in different bottles.

Participants were challenged to communicate about their work in different, new, out-of-the-box ways through food by designing their own 'data cuisine.' Many creative ideas emerged to help people see, smell, touch and taste data that is central to CBA and EbA practices using cuisine. These included sharing vegetation loss over the years, changing community diets, and changing *per capita* water usage.

Charles Kabiswa uses food to show how community dietary intake has been reduced in terms of diversity and quantity due to climate change in recent years

'Data cuisine' can help practitioners connect to diverse audiences, stakeholders and community members. Bringing the personal practices of eating and cooking into the professional CBA world helps to break down barriers amongst stakeholders for more participation and inclusive, enjoyable and effective work.

Plenary session 9: Regional NAP Expo session: National Adaptation Plans

Facilitators

- Adrian Fitzgerald, LDC Expert Group
- Motsomi Maletjane, UNFCCC Secretariat

Session Speakers

- Benon Bibbu Yassin, Environmental Affairs Department, Malawi
- Douglas Nakashima, UNESCO
- Mohammed Semambo, Ministry of Water and Environment, Climate Change Department, Uganda
- Prosper Bonja, Geographic Institute of Burundi
- Sunil Acharya, Practical Action
- Obed Koringo, Pan African Climate Justice Alliance (PACJA),Southern Voices on Adaptation
- Shaban Mawanda, Red Cross / Red Crescent Climate Centre

- Gertrude Lungahi, Environment and Development Action in the Third World (ENDA-TM)

Session Details

Adrian Fitzgerald introduced the Least Developed Countries Expert Group (LEG) and the Regional NAP Expo, which is part of the support to the Least Developed Countries (LDCs) under the UNFCCC Conference of Parties. The LEG supports the LDCs in advancing National Adaptation Plans (NAPs). This first regional NAP Expo aims to reach beyond the global events held in Bonn, Germany, to engage a wider range of actors and stakeholders at regional levels. Furthermore, the intent is to harness the rich experience of the CBA community in dealing with vulnerable communities, groups and ecosystems on adaptation.[7]

Motsomi Maletjane gave a brief history of adaptation under the UNFCCC, dating from 1996 through to the present day. This included knowledge development (1996 - 2001), the establishment of the LDC work programme (which included the LDC Expert Group), the LDC Fund to support urgent and immediate adaptation needs, the establishment of the Nairobi Work Programme (2005) as a knowledge hub for adaptation, the Cancun Adaptation Framework—which encompassed the National Adaptation Programmes of Action (NAPAs) detailing medium and long-term action plans for adaptation, and more recently the Loss and Damage mechanism.

Benon Bibbu Yassin explained how NAPs seek to reduce vulnerability and build adaptive capacity through comprehensive national approaches, and to integrate adaptation into existing and new development policies. The LEG developed ten essential functions for NAPs, such as provision of national coordination and leadership, integration into development programmes and coordination of stakeholder reporting. The process of formulating and implementing NAPs provides a comprehensive and holistic approach for adaptation planning and implementation at the national level, engaging all actors and stakeholders. It should be country-owned, participatory and flexible, consider the vulnerable, recognise traditional knowledge and be gender sensitive. Civil society has a key role to play linking the local level to the national level, with experiences including the development of Local Adaptation Plans. Contact leghelp@unfccc.int for more information.

Questions enabled presenters to explain that the NAPs need to review existing adaptation activities to prevent duplication, and that their emphasis on operationalisation makes them distinct from Nationally Determined Contributions, which provide broader policy guidance. Civil society has a key role to play in embedding local needs in NAPs and providing learning on implementation.

Mohammed Semambo presented Uganda's experience of the NAP development process, which was guided by existing national and global frameworks including LEG Guidelines, Uganda's Vision 2040 and the National Climate Change Policy. Uganda followed a NAP road map (2015), producing economic assessments of climate impacts, vulnerability assessments, and reviews of NAPA activities. It received technical support from ActionAid and the Special Programme for Climate Resilience. Next steps are to support sector specific NAPs (for example in agriculture), and a nationwide vulnerability assessment.

Prosper Bonja explained how Burundi has begun to include native and indigenous populations, who previously had no farming land, into the constitution, and is encouraging educational support. There is competition over land as 90% of the population rely on farming, and population growth and density is high. Climate impacts exacerbate these challenges. There has been an awareness raising phase for all communities, and documents are being finalised to raise funds for the NAP from the Green Climate Fund.

Douglas Nakashima explained how the Intergovernmental Panel on Climate Change identifies the weakest economically as frequently vulnerable to climate change and susceptible to climate related

[7] More information can be found at the NAP Expo website: www.napexpo.org/kampala as well as through #NAPexpo and @NAP_central

damage. These people are often indigenous and rural communities. However, they also have high adaptive capacity, which is important for resilience. They cannot be classified simply as 'vulnerable,' because they often have a history of dealing with variability using accumulated indigenous knowledge.

The IPCC recognises the use of the 'best available knowledge' in adaptation planning, incorporating both traditional and scientific knowledge. For example, Andean farmers predict and plan for future harvests according to the brightness of certain stars with more accuracy than existing computer modelling. The perceived brightness relates to the presence of types of clouds that indicate the severity of Pacific El Niño conditions, which affect rainfall in the Andes. There are challenges, however, such as bridging quantitative and qualitative data and bridging the scale of data (local to regional). An emerging paradigm is co-production of knowledge from scientific and indigenous sources.

A panel discussion followed on how local needs can be linked to the national level. Major themes identified included methods for channelling community views into government planning processes. Local communities need to be given adequate access to relevant information and policies. Practical Action have supported nationwide climate change household impact surveys, and encouraged governments, NGOs and civil society organisations to discuss climate risk and future needs together. International Federation of Red Cross and Red Crescent Societies work through both national societies and their partners to feed community views into the NAP planning process. This includes working in cities to emphasise urban voices. The Kenyan Government worked through its devolved county-level governments to incorporate civil society views into planning, with inclusivity a key principle.

There are also challenges. There is a shortage of evidence-based knowledge to support planning. ENDA are investing in knowledge management, documenting community best practice to feed into NAP planning. ENDA also trains journalists on how to document resilience and feed understanding into the national agenda. In some countries, a key challenge is the need for adequate resources to launch the NAP process fully, and undertake comprehensive coverage of planned actions.

Final panel remarks noted the challenges of limited community capacity to incorporate both scientific and local forms of knowledge, and the need to build capacity. Panellists also noted the need for diversity amongst NAP stakeholders, and the need for platforms for communities to demonstrate their experiences with NAP delivery.

Parallel session 10A: Regional NAP Expo session: Building essential knowledge bases and awareness to support considerations of vulnerable communities, groups and ecosystems in NAPs

Facilitators

- Adam Harvey, Whave Solutions, Uganda
- Motsomi Maletjane, UNFCCC Secretariat

Session Speakers

- Jennifer Rubis, UNESCO
- Prosper Bonja, Geographic Institute of Burundi
- Richard Cong, Ministry of Water and Environment, Uganda
- Marilou Drilon, Plan International Australia
- Julius Ng'oma, Civil Society Network on Climate Change (CISONECC), Southern Voices on Adaptation

- Stella Gama, Department of Forestry, Malawi

Session Details

Adam Harvey asked session panellists to introduce themselves and then Jennifer Rubis made a case for seeing indigenous knowledge as a resource for adaptation. Indigenous knowledge can be pooled with meteorologists' data to construct information that is helpful for the community. She described a UNESCO study in which farmers were asked what they could do. Community members talked about what was important to them then organised and classified weather systems. This enriched scientific data and made it more relevant. Community knowledge holders worked well to document the details of weather patterns, and when researchers added their data there was productive peer-to-peer mentoring and learning.

Jennifer's key point was that indigenous and local knowledge systems are a major resource for adapting to climate change. They bring together different knowledge systems, and can form bridges between them. For example, pastoral knowledge from the Karamajong (in North Eastern Uganda) and Bahima (in South Western Uganda) was combined to develop a holistic understanding of pastoral community weather dynamics. Jennifer stressed the need to enshrine the community at the heart of CBA, and ensure effective knowledge transmission between communities.

Session discussions emphasised the need to collect information from the community to build a strong knowledge base. For example, in South Sudan local people know the winds, and when a certain type comes they know when to migrate. In the health sector, local medicines exist that medical doctors can confirm are curative.

Richard Cong then related that although he was accredited as a professional engineer, when he competed with his father to construct a hand-dug well it was his father - with his indigenous knowledge of the local setting - who was able to dig one that supplied water in a water constrained environment, while his own well failed. Local knowledge is sometimes a little inaccurate, but we have to harness it and make it relevant with input from the scientific field.

Other points made in the discussion included the fact that most soil and water conservation strategies in Ethiopia have their foundations on indigenous knowledge, but this is not acknowledged. A systematic study to link indigenous and scientific knowledge is needed in the agricultural sector to support adaptation. Indigenous knowledge and knowledge holders are crucial for climate change adaptation. For example, in Northern Uganda, the elders drew a resource calendar dating back 30 years, and the sequence of events they described matched with data held by the meteorology department for the same period. Indigenous knowledge is not for 'collection' as a one-off exercise, however. Going forward, its continuing systematic application and nurturing must be integrated into our adaptation activities permanently.

Prosper Bonja shared some insights on how to ensure inclusive planning in the face of climate change, especially the inclusion of elders and disabled people. He described one community where vulnerable people are encouraged to form groups, whose leadership is then able to advocate for inclusion in development. The effect is improved health structures, better access to school for the children, as well as better access to other social amenities. At a sub-national level, government has worked to stimulate economic growth and facilitate community management of its own natural resources, and thus CBA.

Richard Cong highlighted the achievements of one project in Uganda that resulted from the NAPA, the objectives of which included capacity building, water provision and building community resilience to climate change. The project led to a more than 10% increase in the number of stakeholders with knowledge on climate change, a more than 20% increase in the number of people who adopt climate resilience strategies, improved access to more permanent water sources, strengthened agricultural systems using the farmer field school approach, 553 hectares of planted forest cover / woodlots, and partnerships and collaborations built to continue strengthening community resilience. Session participants welcomed this information but expressed concerns about sustainability. Richard Cong explained, however, that the community has been trained to collect savings. A cost-benefit analysis has

indicated that if farmers do not maintain the water sources they would need to sell a cow per month to sustain every 20 cows per month with water in the dry season. Importantly, each planned activity is mandated to set aside three per cent of its investment for catchment management.

Marilou Drilon spoke about climate change through the eyes of children. Children go to places where adults do not go, so looking at vulnerability through the eyes of children grants us a fresh perspective. The perceptions of urban and rural children are also different. In the context of NAPs and CBA, Marilou spoke of children who recommended that their leaders should embody what they want done so that the children can emulate them. We have to nurture children's participation and inclusion in issues relating to adaptation because they are the adults of tomorrow. We must help them learn from their grandparents. We must also encourage them to speak about their views on climate change. A key challenge is how to involve children in our work.

Julius Ng'oma spoke about engaging minorities in CBA and pointed out that we must first understand the context of vulnerability. He shared the case of women that organised themselves into groups to feed into NAP stakeholder meetings and thus ensure their needs were captured and planned for.

Stella Gama called for the inclusion of gender issues in the formulation of NAPs. Participants made a case against this by pointing out that many projects reflect gender issues to secure funding but on the ground this is less apparent. How gender will be implemented in project work should be reflected in a gender action plan. Indicators are needed to prompt actual action.

Key points emerging from the session were as follows:

- Planners must note the issue of culture in gender analysis: Where decisions are made by men influence is needed to ensure gender balance.
- There is a strong reduction in bio-information; older people know a lot and younger people know very little. UNESCO could document indigenous knowledge sector by sector to help address this.
- Health-related vulnerabilities in the context of climate change are not sufficiently addressed. For example, epilepsy sufferers are more at risk when collecting water or firewood from afar. This should be incorporated into decision making.
- Climate change should be incorporated into the school curriculum.

Parallel 'out-of-the-box' session 10B: Education and Training for CBA

Facilitators

- Lynne Carter, FHI 360
- David Mfitumukiza, FHI 360

Session Details

This session explored the roles that education and training play in building capacity to support development and implementation of successful CBA plans, decisions and actions. The session advanced thinking on promoting education, training and research that empowers and supports communities to take action based on their own decision-making systems and processes. The facilitators explained that the session was interactive and that PowerPoint was not allowed. The session looked at what works and what does not work in the context of empowering communities to be resilient. Panellists shared their experiences on CBA. Questions from different tables were discussed.

The facilitators began by asking session participants to identify what they considered to be the top three critical elements for success in CBA-relevant or other adaptation efforts, and to explain why they chose these three critical elements. Participants provided a number of answers: community-based assessment to identify what is needed; resource mobilisation for awareness creation; aligned legal and institutional frameworks; experience sharing; embracing complexity; participatory approaches; holistic engagement; applying human rights-based approaches; cost-effectiveness of activities; participant ownership of knowledge and experience; feeling passionate about activities; recognising demand for the activity; making the activity relevant to participants; and, enthusiastic, robust, serious, dedicated and competent leadership for the activity.

The facilitators then asked session participants what strategies they used and what challenges for success they encountered. Strategies suggested included: training of trainers; peer-to-peer training; work in small groups for effectiveness; adequate representation of the whole community; use of mass media to disseminate messages; making training mandatory; and, fully engaging youth and introducing technical courses on education. Challenges included the low adoption rate of new education programmes and the concern that participants could quit the training at any time, thus reducing student and trainer morale.

The first question from one of the session tables was about how to involve people of different genders in training and education initiatives. Answers from around the room were varied and included:

- Hold adaptation planning workshops for men and women separately.
- Train all participants on gender issues.
- Depending on the local culture, men, women, elders and children could be trained together to share experiences.
- Make a video on key messages as a training tool to diffuse gender participation challenges.
- Offer training at a time that is suitable for everyone to attend, for example evenings.
- Make the training atmosphere safe and comfortable for all participants.
- Create different positions for participants to adopt during the training activities in order to motivate full participation by different genders.

A number of suggestions in response to a question about how to ensure quality control in training exercises were made. These included:

- Involve government and related agencies from the start to ensure quality control.

- Analyse and identify what is relevant and what is not.
- Create small games in the training session to help ensure quality control.
- Use participatory research approaches against a backdrop of scientific information.
- Involve researchers and academics in evaluating the quality of the training.
- Take information to researchers for analysis of training effectiveness.

Session participants made the following comments in relation to a question about how to monitor the impacts of training:

- It is difficult to monitor the impacts of training.
- A lack of long-term funding hampers monitoring the impacts of training because it can take time for benefits to emerge.
- Use monitoring tools to gauge the impacts during training (although few activities actually employ such tools).
- One way to monitor impacts is to follow up training with an assessment of how well individual commitments made during the training were implemented.

In response to a question about how training and awareness creation can improve livelihoods, comments included:

- Focus on building the participant's ability to analyse his or her own livelihood benefits.
- Involving participants in the monitoring and evaluation process helps to make better-informed decisions about how to improve livelihoods because it helps ensure indicators are appropriate.

Suggestions for how to make training fun included:

- Let it be student-centred most of the time.
- Introduce hands-on activities during the training.
- Use indigenous knowledge during the training.
- Make the training participatory and use games (many games are available on the web).

The session concluded with a number of questions to the panellists. Responses to a question about the most effective ways of disseminating information included blogs, webinars and podcasts to reach a broader listening audience. A question on whether policy makers need training elicited the suggestion that increasing their knowledge once would encourage them to provide funding for CBA actions.

Finally, session participants shared their experiences of strategies that they had found effective in the context of education and training for CBA. One suggestion was the use of budget lines that are already being funded to share experiences in community areas. Indigenous knowledge needs using and incorporating into the scientific arena. Increasing skill sharing amongst participants was favoured, as was taking community members to other places for training and observation purposes.

Parallel session 10C: Mainstreaming Adaptation at Sub-national Levels

Facilitators

- Angie Dazé, International Institute for Sustainable Development (IISD)
- Margaret Barihaihi, Africa Climate Change Resilience Alliance (ACCRA)

Session Speakers

- Aditya Bahadur, Action on Climate Today, Oxford Policy Management
- Ced Hesse, International Institute for Environment and Development (IIED)
- David Bynoe, GEF Small Grants Programme, UNDP
- Hya Sintus Lama, Lembata District Development and Planning Agency, Indonesia
- Joseph Epitu, Ministry for Water and Environment, Government of Uganda

Session Details

Angie Dazé introduced the session by explaining that there is a call for mainstreaming of adaptation at sub-national levels, based on direction from the UNFCCC, as well as the recognition that locally driven approaches are needed to be effective. The NAP process emphasises participation and consideration of vulnerable groups, communities and ecosystems. This presents an opportunity to strengthen links between local and national levels. This 'vertical integration' implies national and local level adaptation plans and actions that are connected in a two way process. Enabling factors for this include institutional mechanisms for dialogue and coordination, capacity development for all actors to engage, and sharing of information on the NAP process and climate change. Sub-national governments play a key role in bridging the gap between community adaptation and knowledge, and national level decision-making.

A panel discussion then addressed a series of questions about mainstreaming adaptation at sub-national levels. Challenges to mainstreaming include: the need to embed variability and unpredictability of dryland landscapes into planning; the challenge of linking rural communities and informal institutions to government planning; and the fact that variability being a positive influence is counter-intuitive for many government planners. In particular, the timing and spatial scale of planning that governments and communities both need are not synchronised. Tools and methods don't exist to bridge knowledge gaps and enable meaningful engagement between communities and government. Successful mainstreaming must also recognise the politics of decentralisation, in which different parties may hold power at different levels, perhaps reaching deadlock on key issues, or regularly replacing key officials and therefore knowledge.

One panellist, drawing on experiences in the Caribbean region, identified the following enabling factors for mainstreaming: access to finance for NAPs; previous experience from mainstreaming disaster risk reduction strategies, which has similarities to the NAP process; and strong national level policy. However, financial and technical resources to implement adaptation strategies are needed to motivate local government officials to consider mainstreaming.

Some of the biggest achievements in mainstreaming adaptation in India have been in the field of financial planning. State budgets now allocate 2% of domestic revenue to adaptation. In Pakistan, a screening process has been established across all sectoral department proposals to ensure appropriate consideration of climate change.

Decentralisation offers significant opportunities on paper for mainstreaming. The challenge is implementation, and the maturity and degree of decentralisation. Local politics may include conflicting

local, community and customary political interests that can go back hundreds of years. IIED found that mainstreaming was easier in Kenya where decentralisation is new and local government officials are open to new ideas. To be effective, mainstreaming requires a significant degree of decentralisation, including the ability to generate and use financial resources for local needs. Examples include Wajir and Makueni Counties in Kenya, which have legislated to deliver 1% and 2% of development budgets to adaptation respectively.

Finance is important to facilitate mainstreaming, but external finance is really a catalyst. Identifying the 'adaptation gap,' and how state governments can mobilise resources to fill this gap is key, as is bringing in private sector support. External finance is the 'carrot' to encourage mainstreaming that brings richer resources.

Civil society organisations have a role in keeping government accountable and keeping the Sustainable Development Goals on the agenda. They can also contribute to building capacity, changing power dynamics and the flow of information so that adaptation mainstreaming at sub-national levels is effective and inclusive.

Margaret Barihaihi described how ACCRA targets decision makers and political leaders by conducting timely context analysis and action research. Analysis needs to target the government planning cycle, bringing in a wide range of stakeholders to create an evidence base. We need to encourage government to look at long-term planning cycles and at how short-term plans feed into those. ACCRA has created models on how to bring different experts together to deliver climate information in local languages.

The room then split into smaller groups to discuss enabling factors for mainstreaming climate change into local government planning. These included:

- Make climate change part of local government performance indicators to incentivise adaptation mainstreaming.
- Work with local languages as far as possible.
- Availability of financial resources.
- Strong communication between communities and government, capturing indigenous and local knowledge.
- Improving political will and the political economy around power at the local level.
- Strong policy and institutional frameworks to guide and resource adaptation mainstreaming.
- Devolution of planning and implementation in a meaningful way to local governments.
- Multi-stakeholder forums for planning and budgeting.
- Strong staff capacity to recognise climate change and how it can be mainstreamed.
- Breaking mainstreaming into actionable interventions.
- Working with the planning cycle, and enabling strong communication between central and local government. Central government guidelines are rarely well communicated in a structured way to help local governments.
- Two-way communication.

Joseph Epitu closed the session, summarising the discussions and noting the importance of effective institutional arrangements.

Parallel session 11A: Regional NAP Expo session: Protecting vulnerable ecosystems from climate change

Facilitator

- Vositha Wijenayake, SLYCAN Trust / Southern Voices on Adaptation

Session Speakers

- Prosper Bonja, Geographic Institute of Burundi
- Adrian Fitzgerald, Least Developed Country Expert Group (LEG)
- Moumini Savadogo, IUCN Burkina Faso

Session Details

This session addressed the implications of climate change for vulnerable ecosystems such as forests, inland waters, mountains, semi-arid regions and protected areas. It shared best practices regarding various adaptation approaches or solutions addressing the needs of vulnerable communities and groups at different scales, based on the latest science, including indigenous and traditional knowledge.

Vositha Wijenayake gave an introduction to NAP processes and ecosystems, highlighting the importance of EbA implementation. The major focus is on addressing key vulnerabilities and risks while prioritising vulnerable communities and/or societal systems.

Moumini Savadogo shared some of his experience on protecting vulnerable ecosystems. Burkina Faso managed to have its NAP ready two years ago in 2015. Ecosystems identified as being at very high risk include agriculture. Burkina Faso is a Sahelian country receiving about 800mm of rainfall each year with a lot of variability, yet much of the population relies on agriculture. IUCN in Burkina Faso supports a number of issues such as capacity building. It provides information on climate change, trains people to assess vulnerability using tools such as CRiSTAL, develops planning toolkits, and conducts evaluation and monitoring. IUCN also launched a competitive grant scheme where many applications with a number of good practices were funded. It documents and publishes findings from these projects. Key practices that have been effective include riverbank stabilisation.

Adrian Fitzgerald spoke of the role of the LEG in the NAP process, and the support provided through technical expertise. He also mentioned the ongoing capacity building workshops, where ecosystem-based adaptation forms part of the training.

Prosper Bonja then shared experiences from Burundi, where a plan was made to restore a major catchment area in the country. A key activity under this was to establish forest plantations to protect catchment lakes using indigenous trees. The government of Burundi also committed to implement a land restoration plan, with a strategy to combat degradation through the sustainable use of land and the restoration of degraded areas. They gazetted protected areas and set up management systems to reduce pressure on the protected areas.

The session then divided into groups to discuss three thematic areas: agriculture, water and forestry. Discussions centred on identifying risks, solutions and best practices.

Risks discussed in the agriculture group included: consistent dry spells, especially in Malawi; increased incidence of new pests and diseases, most notably the fall armyworm; demographics that increase pressure on arable land; contradictory policies on agriculture that lack coherence; limited access to information and extension services; limited private sector engagement, especially financing; land tenure systems; flooding in some landscapes; and, loss of indigenous seed varieties due to the introduction of

improved/hybrid seed varieties. Best practices and solutions for dealing with these challenges included: irrigation farming and learning best practice farming activities; using indigenous knowledge for pest control, for example using ash to halt the spread of the fall armyworm; disaster risk reduction plans for communities to invest and control risks; linking research to extension services and ultimately the farmers; training and equipping model farmers to pass on knowledge to other farmers; and, radio programmes and other mass media to provide and communicate information.

The water group discussed the following risks: droughts and floods / inundation; changing seasonality; saline water intrusion; subsistence farming practices; pollution / waste management; lack of data; conflict; drying up of springs; glacier / ice melt; outdated policies; groundwater depletion; catchment degradation; invasive aquatic and other species; inadequate institutions / policies / enforcement; changes in flow rate / discharge outflow; and, too much hard engineering. Multiple solutions were suggested for these risks, including: rainwater and run-off harvesting; integrated water resources management, ecosystem catchment restoration to enhance groundwater recharge, climate-informed planning and infrastructure design; early warning systems for floods and droughts; weather data collection; community-based natural resource management; behaviour change around water usage; multiple use water systems to ensure efficiency and conservation; and, regulating water use by enacting effective policies.

The forestry group arranged risks into climatic and non-climatic induced risks. Climatic risks included: invasive species, community encroachment, forest fires, pests and diseases, drought, flooding and species shifting / migration. Non-climatic risks included urbanisation, natural resource extinction and community encroachment. Solutions identified included land zoning, agroforestry, climate smart agriculture, domestication of species, REDD+, education and sensitisation, promoting eco-tourism, rural review of protected areas, climate centred environmental impact assessment; and, ensuring sustainable community livelihoods through forest management.

Following the group work, participants shared best practices and discussed evidence-based modelling, which could be implemented for ecosystem-based adaptation.

Parallel session 11B: Prioritising participation: Emphasising the ‘C’ in CBA

Facilitator

- Okke Bouwman, CARE Netherlands / Partners for Resilience

Session Speakers

- Mrityunjoy Das, BRAC Bangladesh
- Diane Husic, Moravian College, USA
- Tibebu Assefa, Echnoserve Consulting, Ethiopia
- Jane Nyanjom, Family Heath Options, Kenya

Session Details

The session set out to share experiences of CBA in practice, to discuss what works and how to ensure meaningful participation, as well as what the necessary ingredients are for this. We need to understand elements in the community that are diverse, as well as the limitations in indigenous knowledge that are not immediately evident. Using indigenous knowledge is good in principle but not all indigenous knowledge is useful, neither is it good all of the time. Likewise, not all top-down planning is wrong.

Mrityunjoy Das described a programme that he felt exemplified resilience. The programme distributed agricultural inputs to farmers, who used 25% of the outputs to build a local fund, which was used to disburse interest-free loans to flood disaster victims. The fund is managed by the community. The take home message is that it is important to empower the community to manage CBA itself.

Diane Husic's unique approach linking art, science and community dialogue addressed the challenge of how to involve a community that does not acknowledge the existence of a problem. Her approach was to get people in focus group discussions by using art to talk about their environment and what concerns them. Communicating in this way can engage people who would otherwise shut down if they heard words related to climate change. People were asked to draw what concerned them, and associated changes seen. For example, one can draw a picture of a bug, then the bug behaving strangely. In the focus group sessions, policy makers listen to people's concerns and attempt to address them. Scientific data supplements these discussions and the concerns they have raised, then community members make their own judgments and choose what to prioritise. Getting data that makes sense to people is a key priority.

Tibebu Assefa explained how to use indigenous knowledge for planning – through seasonal calendars, as well as hazard mapping. This was complemented by scientific data relating to the context, and then submitted to government. Tibebu Assefa likened the process to a doctor – patient relationship in the context of CBA. In northern Ethiopia, the government has outlined about 41 adaptation measures for agriculture and forestry. Changes to these have since been made in partnership with Irish Aid. There are improvements in soil fertility, and soil and water conservation, and communities are able to see changes in water provisioning. The key message is that we can use indigenous knowledge for planning.

Jane Nyanjom highlighted the value of integrating sexual and reproductive health issues into climate change planning and development. She emphasised that holistic participation (men, women and youth) is key in both development and CBA. Women are key players in climate change issues, but unless men can understand the impact of having many children, women will not be able to plan for a smaller family.

An interesting discussion on linking resilience and agency in the context of protecting livelihoods ensued. Suggestions included linking farmers to extension services to give them the skills to adapt. Improving community member livelihoods has multiplier effects amongst intervention communities. Lobbying and advocacy by community members can also contribute. Diane Husic explained how she had noticed a shift. Previously, communities were waiting for the government to provide solutions, whereas now people are looking for ways to ensure that policy level analysts know about them, and the solutions they have that actually work.

Conditions necessary for successful CBA were then discussed. These included: gender inclusion, community participation from the beginning, understanding the problem and the community context, monitoring and evaluation, mutual respect between all actors, and core coordination to avoid overlap and duplication.

Several recommendations were made for working in a holistic way to counteract the challenges of inclusion. New innovations need mixing with local knowledge. For example, Mrityunjoy Das described how one community in Bangladesh refused to adopt a house that BRAC had designed to be typhoon proof. When consultations were held, community members re-designed the house, which they then actually adopted. Diane Husic argued for designing alternative approaches to reach communities in order to pass on vital scientific knowledge to them. Social networking structures can be used, for example interested members can post a time and place when they first see something that interests them that relates to change, such as a migratory bird. Diane explained that the community should be

involved right from the beginning. This will teach them, and provide them with useful items such as rain gauges, which they can use for monitoring if they find this interesting. Then monitor where they post their findings, as this information can be used to build databases in a participatory way.

On handling sensitivities around sexual and reproductive health, Jane Nyanjom recommended using an integrated model, incorporating family planning training into an agricultural workshop about, say, productivity of improved seed varieties. Using model community homesteads to replicate services can also help.

To ensure sustainability, Tibebu Assefa recommended building community engagement and participation by using community-based organisations to run project activities. Utilising community memories can also promote sustainability.

Parallel session 11C: Foundations for Resilient Development in Dynamic Dryland Systems: Planning, scaling and learning

Facilitators

- Ced Hesse, International Institute for Environment and Development (IIED)
- Jesse DeMaria-Kinney, Adaptation at Scale in Semi-Arid Regions Programme (ASSAR)

Session Speakers

- Victor Orindi, Adaptation Consortium
- Sam Greene, IIED
- Alemayehu Zewdie, ASSAR - Oxfam
- Elizabeth Carabine, Pathways to Resilience in Semi-Arid Economies (PRISE)

Session Details

This session focused on fostering resilient development in dryland areas through climate-responsive planning, scaling up and learning from practice. In recognition of the disproportionate climate risks faced by over two billion people globally living in drylands, and their reliance on ecosystem services for survival, discussions in this session targeted tools and mechanisms to enhance climate-resilient development. Discussions were conducted in five break-out groups, each led by one speaker to focus on the key components of a generic planning and finance framework and how it interfaces and engages with structural disequilibrium and risk.

The first group was led by Victor Orindi and focused on devolved climate finance mechanisms. One key point from the discussion was that having a dedicated climate fund is good to ensure climate finance is used for the intended purpose (climate work) rather than being mixed with other monies and ending up in other areas. It was noted that it is important to sensitise those involved in making decisions to pay sufficient attention to improved governance. Issues such as conservation agriculture have also been overlooked because they are not as visible as infrastructural investments.

The second group under the leadership of Sam Greene discussed tools for participatory data collection on adaptive and governance strategies and resource conditions. Discussions were based on participatory digital community mapping of key livelihood resources with examples from Kenya and Tanzania. The emphasis was on participatory mapping and the role of communities as information owners and in knowledge generation while working with other stakeholders. The key points from this discussion were that maps provide powerful information that can influence policy for land use planning.

For example, in Isiolo County in northern Kenya, the mapping process enabled pastoral communities to show County planners those critical areas reserved by the community for wet and dry season pastures and as drought reserves. This information was subsequently legitimised in the Isiolo County Customary Natural Resource Management Bill (2016). Good maps generated using participatory processes are also instrumental in building understanding between government and community knowledge bases for planning processes. For example, the mapping process has challenged common perceptions held by government planners that the rangelands are empty spaces without 'owners' and now they understand rangelands to be carefully managed community-regulated landscapes with different uses depending on the season.

A third group, led by Jesse DeMaria-Kinney, presented Oxfam's Vulnerability and Risk Assessment approach within the context of its use in the Adaptation at Scale in Semi-Arid Regions (ASSAR) consortium in Botswana and Namibia. One important lesson was about the subjective nature of vulnerability assessments and the need to ensure the inclusion of credible data during the analysis phase. Another key point was that the 'richness' of the analysis comes out in the process itself, which must be well facilitated to ensure effectiveness. Jesse indicated that Oxfam's approach paid attention to power dynamics and that a well-facilitated multi-stakeholder process, such as this, is essential to ensure inclusivity and accountability as well as validated information.

Alemayehu Zewdie led the fourth break-out group, which deliberated on tools for enhanced multi-stakeholder participation in analyses and decision making. The most notable point was that active community participation across all levels of analysis, planning and decision-making in Northern Kenya has helped realise quality livestock production and improved productivity when compared to other approaches. This is particularly true when valuable indigenous knowledge is brought on board. Other key observations included the need for participatory scenario analysis to more explicitly show diverse issues related to socio-economic, political and environmental dynamics. This will build in greater flexibility to decision-making, and better address economic aspects, such as value chains.

Elizabeth Carabine chaired the last session group to explore how the private sector interfaces and engages with structural disequilibrium and risk in the drylands, with a focus on livestock value chains. One of the key take-away points from this discussion was that to be effective, a value chain analysis methodology for livestock marketing has to bring into context factors such as gender, climate risk and sustainability, as well as issues such as land use and tenure, conflict and resource management. The Value Chain Analysis for Resilience in Drylands (VC-ARID) methodology tries to do this. Secondly it was clear from the discussion that when building the business case for livestock value chains in drylands, providing economic evidence that demonstrates the value of extensive livestock production is very important if stakeholders such as policy makers, the private sector and donors are to be convinced. Adding a climate adaptation lens can strengthen the case. A final key message was that there is evidence that medium to large private sector actors will invest in the drylands to provide opportunities for inclusive economic development if barriers to entry are lowered and an enabling environment created.

Plenary session 12: Integrating Climate into Development Planning

Facilitators

- Adrian Fitzgerald, Irish Aid - Department of Foreign Affairs and Trade, Development Cooperation Division
- Tracy C. Kajumba, Irish Aid - Department of Foreign Affairs and Trade, Development Cooperation Division

Session Speakers

- Koeti Serodio, Embassy of Ireland, Mozambique
- Mwiya Mundia, Irish Aid
- Josephina Rocha Rebello, Irish Aid, Malawi
- Sam Barrett, International Institute for Environment and Development (IIED)
- Charles Nyandiga, UNDP-GEF Small Grants Programme

Session Details

Adrian Fitzgerald explained that the session aimed to improve understanding of mainstreaming climate change into development programmes, focusing on approaches, processes and tools. He also shared the Irish Aid / IIED Climate and Development Learning Platform.[8] Tracy C. Kajumba then introduced the panellists and moderated the panel discussion, which shared experiences from different countries including Malawi, Mozambique and Zambia, and the UNDP-GEF Small Grants Programme.

Koeti Serodio shared experiences of how Irish Aid has worked with different stakeholders including government, civil society organisations and other donors at macro, meso and micro levels, to integrate climate change and disaster risk reduction into development programmes. Use of research under the Climate and Development Learning Platform, implemented with IIED, was also highlighted, especially a study on how to link social protection and climate resilience objectives and interventions to benefit poor vulnerable households. Tracy concluded by explaining how Irish Aid is using research outcomes by working with governments to design adaptive social protection approaches. It is developing Local Adaptation Plans linked to government planning, and working on a prototype intervention design, which is coordinated by local authorities and relevant line ministries.

Mwiya Mundia then shared how Irish Aid Zambia, working with government line ministries, research institutes, civil society organisations and the department of meteorology, has supported integration of climate risk management into agriculture programmes in Zambia. Case study research supported by IIED focused on climate resilience through experiential learning by farmers and those supporting them. The aim was to understand the unique climate risks smallholder farmers experience, and help them learn to use seasonal forecast information to design and implement climate resilient cropping strategies. Key to the process is Participatory Climate Risk Assessments (CRA), identification of crop-hazard interactions and adaptive measures practiced by the smallholder farmers. The evidence will be used by smallholder farmers in making decisions on the mix of crops to grow—taking into account the weather information (not just the market information). The institutions supporting the farmers have acquired knowledge and skills in conducting climate risk assessments and their use for farmer cropping decision making. The adaptive capacity of the farmers will improve, and the results will also help Irish Aid incorporate climate resilient agricultural strategies into the new Zambia Country Strategy (2018-2022). The Zambian Government - specifically the Ministry of Agriculture, Zambia Agriculture Research

[8] See www.climatelearningplatform.org/

Institute, Meteorology Department and the Climate Change Secretariat - are also using the evidence to design smallholder farmer programmes that are sensitive to climate risks.

Josephina Rocha Rebello then shared experiences from Malawi on integrating climate change into work focusing on energy access for the poor, and reduction of ecosystem degradation and deforestation for energy needs. Irish Aid is working with IIED on a longitudinal case study research project to develop evidence around the utility of the sustainable energy business model that would generate useful evidence within the development context in Malawi in relation to coverage of energy products. The study aims to assess the performance of using social cash transfers under the social protection programme to distribute improved cook stoves to the poorest households. It is tracking indicators such as coverage, pro-poor access and biomass usage. Irish Aid and its partners are using the learning to inform the revised National Energy Policy and the Renewable Energy Strategy. This contributes to the drive to roll out two million energy efficient stoves by 2020, which the Government of Malawi has committed to. The work is also aligned to the resilience pillar of the Irish Aid Malawi Strategy, thus strengthening the integration of climate change internally but also informing national and local integrated development planning, taking into account climate change and impacts on ecosystems.

Sam Barrett summarised three lessons from using evidence to manage climate risks and integrate climate change into development programming in different countries. The first point was to recognise the importance of context when approaching the integration of climate into development programming. Institutions, countries and societies vary over time and space, so principles must be broad to be applicable in a range of settings. Once each context is clear, decisions need to be made on an *ad hoc* basis about the precise nuances of implementation. The second point related to the reality of integrating climate into on-going development programming. It is often assumed that climate can only be included at the start of development planning, but there is sometimes a need to consider inclusion whilst plans and programmes are in motion. This requires accommodation to support institutions, and their representatives and objectives. Thirdly, the technical aspects of climate risk management need to be understood and adopted in order for climate integration to really happen. This is about including climate trends, events, knowledge and forecasts into everyday decision-making on development programming to reduce losses from climate, as well as finding new and beneficial opportunities.

Charles Nyandiga and Abu Wandera then presented on how to plan and mainstream CBA at local, sub-national and national levels, with specific focus on small grants. The Small Grants Programme approach focuses on developing and demonstrating effective and innovative community-based actions to reduce climate impacts. It aims to complement national, regional and global level efforts to ensure resilience. Charles shared the following key steps for mainstreaming into national level processes: stocktaking of existing national adaptation priorities and action plans, and local adaptation plans; an enabling environment and political will; ensuring upscaling opportunities at the call for proposals stage; understanding the links between the outcomes and objectives of national and local level programmes or projects; ensuring CBA innovations are part of the national level outcomes; awareness-raising and capacity building sessions; and, establish partnerships.

Another key issue was integration into financial processes, including budgets, sectoral strategies and plans, and national and local level thematic strategies and plans. Specific suggestions included: working within existing government planning processes; continuous engagement in the policy framework, institutional arrangements and finance mechanisms; and identifying key entry points, which vary and depend on the country context.

Adrian Fitzgerald then explained how the second half of the session would look at possible entry points for integrating climate into development planning. He shared two questions for discussion and divided session participants in half to answer each:

- What should be considered when identifying entry points to integrate climate into development planning and decision making (at local and national levels)?
- How do we reconcile development needs with ecosystem needs?

Participants suggested different approaches to question one in relation to the national level:

- Re-visit policy frameworks to prioritise climate change development projects in them.
- Strategic level stakeholder decision making in relation to development planning should prioritise climate change issues.
- Plans, budgets and finances should be geared towards mainstreaming climate change issues alongside priority development issues.
- Re-visiting existing national legal frameworks, policies and strategies to incorporate climate change issues can help.
- Concrete information and evidence on climate change impacts can help strategic planners consider incorporating these impacts in their plans.

At the local level, the following points were raised:

- Multi-stakeholder platforms should be established to engage various stakeholders in discussions about how to handle climate change related issues.
- Local climate change impacts on communities should be thoroughly analysed.
- Existing community adaptation practices should be reviewed and strengthened to enhance natural resources and ecosystem adaptation.
- Community needs and vulnerabilities should be taken into account to realise successful adaptation strategies.
- Community level projects need finance for implementation, which should be followed by strong monitoring and evaluation measures to ensure sustainability.
- Understanding the local community social, economic and cultural context is important.

Regarding reconciling development and ecosystem needs, the following points were shared in relation to the national level:

- Unsustainable practices need reconciling with those that promote sustainable natural resource use and ecosystem integrity.
- Environmental and social impact assessment should be conducted to integrate development with climate change issues.
- Climate change sensitive impact assessments should be conducted.
- Budget allocations from national development projects should prioritise climate change mitigation and adaptation practices.
- Laws and regulations should be put in place to manage natural resource exploitation.
- Transformation of the economic system to value ecosystem services is needed.

Suggestions for reconciliation at the local level included:

- Local level zoning of areas for ecosystems and development.
- Local level multi-stakeholder engagement and involvement of different sectors for sharing views regarding climate change adaptation.

Plenary session 13: Provocations – Is ecosystem-based adaptation really new? CBA12 planning

Facilitator

- Saleemul Huq, International Centre for Climate Change and Development (ICCCAD) Bangladesh; International Institute for Environment and Development (IIED) UK

Session Speakers

- Melissa de Kock, WWF
- Brian Harding, SNV Netherlands Development Organisation
- Rebeka Ryvola, Red Cross / Red Crescent Climate Centre

Session Details

This session shared a variety of provocative perspectives on ecosystem-based adaptation. It explored how the various 'alternative' approaches to running sessions and activities at CBA11 can facilitate learning, and it provided all participants with an opportunity to provide feedback on CBA11 and join a discussion about the future of the CBA conference series. Suggestions from participants included the need to bring more farmers to the conference to share their voices and experiences, and the need to also bring more people from government agencies to the conference because integrating or mainstreaming adaptation into planning is their prerogative. More representation from the media was also suggested.

Melissa de Kock then gave a brief talk about synergies between community-based natural resource management (CBNRM) and CBA. CBNRM is based on sustainable and wise natural resource use where communities make their own decisions on resource use and try to involve many people. She shared lessons learnt from CBNRM for EbA. CBNRM: enables participation and community ownership; integrates community knowledge; includes traditional authorities; provides direct, tangible benefits; distributes costs and benefits equitably; advocates for enabling policies (through work with government); builds trust (although this takes time); supports regional cross learning; and provides long-term support for people.

Next, Brian Harding shared his thoughts on how CBA can engage better with the private sector. The private sector is one entity that can lead action on the ground, but for it to be involved and invest its money in CBA or EbA, it needs to do a cost-benefit analysis. One of the ways it can participate is by providing micro-financing to farmers. SNV has a programme that supports the incubation and acceleration of company activities that work on climate change. Activities are always evaluated for their climate readiness and smartness. Those that are ready are considered for Green Climate Fund support.

Next came a surprise song from the youth that had earlier attended the parallel CBA11 youth conference. The key song message was about encouraging people affected by floods to always be mindful of personal protection, family and documents during evacuation. They should leave assets behind since these are bulky and may endanger them further.

CBA11 flashmob, organised by the Red Cross, Red Crescent Society

The session then consulted on the future of the CBA conference series. Participants were asked to give their views on how to make the next CBA conferences better. They were asked to address four guiding questions. These are listed and a synthesis of emerging participant recommendations and comments now follows.

What is our ambition? What are we trying to achieve? What are the messages and audiences to accelerate local climate action?

- There are multiple ambitions for the CBA conferences. Given that this is the 11th conference, there has been a lot of progress with CBA and many projects and models now exist. But has CBA become standard practice? Is it time to consider a wider context or a larger scale?
- We need strategies on how to bring messages to key stakeholders.
- How do we aim for a total transformation within sustainable development?
- How do we address the tension between sustainable development and ecosystem protection, and bring in the necessary issue of population control?
- How do we secure long-term support for CBA as an ongoing effort?
- Sensitising people through flashmobs, plays and songs, provides opportunities.
- We need to bring policymakers closer to local actors.
- Collecting ideas and lessons from our work at the local level to influence policy makers and donors is important.
- We are preaching to the choir and dumbing down the conversation. We don't need to convince each other. We need to get governments (high political level), media and the private sector involved; we need them to hear us. However, the reality is that it is hard to get them to attend the CBA conferences, so it is up to us to take what emerges from the conferences to them. Participants and organisations at the conferences should make commitments on what follow-up actions for engagement they will undertake (for example: sending a delegation to parliament; high political level engagements; training or workshops targeting those who don't understand the conversation). We need to seek our audience out; they are not at the conference.
- We must learn from each other and gather feedback to fine-tune our concepts and methodologies.
- Show policymakers that climate change is crosscutting and should be integrated and mainstreamed.

- Develop a strong resilient community linking bottom-up and top-down approaches.
- Co-ordinate implementation of climate change interventions.
- Communities must be able to respond to climate change impacts and increase their resilience.
- Sharing practices is important. Field visits are very useful in this regard.
- Development and sharing of CBA tools is key. Focus this on content; generic information is not so useful.
- CBA is useful for coalition farming and thinking of ways to work together.
- The conference provides an opportunity to learn from failure.
- The conference is a good space for practitioners to have dialogue with government.

What are our learning journeys? What challenges do we want to reflect on for more than one year, and what issues need a 'deep dive'?

- We have enough examples and experience now to know that not all projects or efforts will work. How long should money and effort be poured into something that will fail (for example, saving a tiny mountain ecosystem or trying to grow food in an area that has undergone extreme desertification)?
- Are we examining the resilience of adaptation actions?
- Connect science and practice to inform policy.
- Without political backup, whatever you are working on is probably futile in the long run.
- In some regions there is frequent government turnover. This requires continuous education. Often resources are channelled in new directions.
- What exit strategies should be considered and when?
- Often community members with local knowledge end up in urban areas and their knowledge is effectively lost.
- There is a lack of representation from beneficiaries and community members on conference panels. We need to involve and learn from communities.
- We need to learn from failures as well as successes.
- There can be trade-offs between ecosystems and development.
- Embed these issues more into education systems and school curricula. Educators can also provide lessons on how to get messages across and help with training.

What structural changes to the CBA conference would help deliver our purpose? Should we have field trips or training days? Should we link to other events (for example, Development and Climate Days, COP23) or share lessons during the year?

- Field trips to see the application of indigenous knowledge in practice are very valuable.
- Include a session to reflect on field visits.
- Allow participants to manage the structure of some of the agenda, for example include open spaces in the agenda for issues that arise and allow for spontaneous discussion groups to form and work during these times.
- Thematic working groups (eg on climate finance, or monitoring and evaluation) that meet throughout conference to discuss issues more deeply would be good.

- Let participants choose suitable discussion topics.
- During the year, webinars can share information with a larger audience. Organisations may want to share what they have learned since the conference.
- The conferences should consider global power dynamics. For example, it would have been ideal to hold CBA11 in the USA because of the current Trump administration's position on climate change issues.
- Experiences from the conference can be turned into capacity building and formal training.
- Improve communication. There is still a language gap at the conference. Perhaps there could be translators and better access for the deaf. Communication should be in the language understood by most people.
- At the end of each conference, choose a winning adaptation strategy that can be implemented. This can be reviewed at the following conference.
- How can local community voices be heard better? Inviting more local people to attend the conferences would be good.
- Offer discounts to relevant practitioners, for example to researchers to share findings.
- The hosting country should be given more slots to attend. This would lower conference costs for host country.
- The conferences should be bi-annual.
- A combination of sessions (or days) could be dedicated to applied tools, methodologies and training. Then follow this with strategy level sessions on what and how to broadcast messages. Under this format, tease out crosscutting themes from more applied / hands on sessions and bring them to the higher-level sessions.
- Ensure sessions are more focused and have clear themes.
- There is still too much emphasis on panels. Some were very good but most sessions would benefit from more interaction with participants.
- Think about new ways of delivering information: storytelling and discussion; banning PowerPoint; short sharp presentations; videos; not all-male panels; focus groups.
- Pick a location that is more accessible to enable community stakeholders to attend.
- There is no link between CBA conferences and the COPs. Can the conference take place alongside the COP?
- We need to address the outcomes of previous CBA conferences.
- More gender balance on the panels is needed.

What other issues should we look at?

- It would be good to have more academic researchers here too. And perhaps more examples of CBA and EbA from developed nations.
- What are the gaps in the conversation? For example, gender and people with disabilities? Perhaps put out a call for posters on these themes or others that are missing.
- A CBA conference in Latin America is a good idea.
- Integration of indigenous knowledge is key.
- The issue of CBA as a whole is too broad and too generalised.

- We need more links with specific contexts. Breakout groups based on more specific issues would be good (eg how to work in drylands or how to do vulnerability assessments).
- Everyone discusses their results and outputs, but there is not enough focus on how people got there and what didn't work. More emphasis is on successes than failures, but emphasis should be on projects not outcomes. The emphasis should be the other way around.
- Practical sessions should be about approaches and tools for practitioners, not for project promotion.

Plenary session 14: Conference Closing Session

Chairperson

- Joseph Epitu, Ministry for Water and Environment, Government of Uganda

Session Speakers

- Edwin Muhumuza, Youth Entrepreneurs Uganda
- Daphne Stella Nansambu, International Water Management Institute (IWMI)
- Saleemul Huq, International Centre for Climate Change and Development (ICCCAD) Bangladesh; International Institute for Environment and Development (IIED)
- Musonda Mumba, UN Environment
- Felix Ries, International Climate Initiative, BMUB (Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety in Germany)
- Revocatus Twinomuhangi, MUCCRI, Makerere University, Uganda
- Paul Mafabi, Government of Uganda

Session Details

Joseph Epitu opened the closing session by welcoming and introducing the speakers. Daphne Nansambu shared youth perspectives with session participants at CBA11. She explained that Uganda has the second youngest population in the world, and that climate change will affect employment. She shared feedback from the parallel CBA11 youth conference, which had 150 participants, some of whom were new to climate change. Young people are innovative trend-setters and risk takers, willing to get involved to combat climate change. Youth involvement is needed in policy design and implementation as it is youth who will be implementing those policies, for example in agroforestry. Daphne concluded with a Ugandan phrase meaning, "the young trees in a forest strengthen and thicken it" – a metaphor emphasising the need for young people to be involved in responses to climate change.

Edwin Muhumuza also represented a youth voice at CBA11. He echoed the sentiments above, noting young people's stake in the sustainable development agenda. Their voice needs to be heard throughout project planning, implementation and monitoring. Thanks, and recognition for the space given to youth participation in CBA11 was given. He urged participants to share young peoples' views in their own countries.

Revocatus Twinomuhangi welcomed participants to Uganda and to Makerere University. Appreciation was given to the conference organisers and speakers. He observed that Makerere University had launched the Least Developed Countries Universities Consortium on Climate Change (LUCCC) on the sidelines of CBA11. This will be instrumental in capacity building. It hopes to keep expanding networks and innovations on climate change. He also observed that in the future the youth conference should be

held before the main CBA conference so that youth conference outcomes can inform discussions at the main conference.

Musonda Mumba stated that the idea of 'leave no one behind' applies to adaptation, but that many of the same people are at the conference compared to previous years. She asked whether local people knew anything about the conference and argued for the need to communicate adaptation better. This could be through visual methods, using traditional foodstuffs, and targeting very young people. Musonda was excited to see engagement with the private sector and emphasised the need to engage with different constituencies. She referred to the WWF Living Planet report identifying species loss and habitat loss, posing the question of what we are doing to change that curve.

Felix Ries described how CBA11 sessions have raised the importance of trust and mutual respect between communities and government agencies, and the need for adaptation to be mainstreamed. More efforts are needed to design projects that encourage people to take up ideas by themselves. The International Climate Initiative (ICI) believes ecosystem-based adaptation works and provides benefits to people and ecosystems. It can contribute to both the international climate change agenda and other declarations on biodiversity and the environment. EbA and CBA are natural partners but won't be successful without buy-in from local communities who can encourage long-term natural resource management perspectives.

Felix called for more discussion about trade-offs. Seeking to support ecosystem services for adaptation might not produce the cash crops necessary for investment and consumption. Communities need enabling framework conditions: know-how, technical support and climate finance. We need more evidence on EbA effectiveness and measurement, as well as economic tools to build a stronger case for EbA. Monitoring and evaluation needs to be strengthened for a systemic understanding of the changes being made.

Felix explained that ICI has embraced a 'think locally, act globally' approach. He noted that the multibillion dollar commitments made on climate finance need to ensure adaptation projects can benefit communities through innovative finance, small grants facilities and scaling up. Cooperation, coordination and exchange are needed to demonstrate the value of our approaches, such as through the 'Friends of EbA' network and global and regional communities of practice.

Saleemul Huq then thanked the organisers and noted the diversity of delegates, discussions and types of engagement for practitioners and the public to understand CBA11. He synthesised key messages he had collected as follows:

- There is a strong recommendation to continue the conference series albeit in a modified form. There is debate on the name and the exact future of the series.
- Since the conference series started, many NGOs and international NGOs have now developed comprehensive CBA programmes. The challenge now is how to scale out to tens of millions quickly. This will need advocacy with governments and funds to scale up local adaptation. Advocacy should move from assessing vulnerability to tackling climate change by scaling up good examples.
- Researchers have internalised the need to collaborate with communities to produce knowledge, but engagement with policymakers and practitioners needs to be better. Integrating EbA and CBA is a key priority and there have been discussions on how to do this.
- The experimental merging of the NAP Expo with CBA11 was a great success and both sides have agreed to work together in the future.
- CBA11, the CBA11 youth conference and the First National CBA Symposium held prior to CBA11 all indicate that there is a need to invest in the youth as an asset more, and for stakeholders to work together more effectively.

- One reflection is that early CBA conferences were attended mainly by NGOs who knew little about climate change. Every one of them now has a climate change programme, but we still need to scale up support to billions of dollars, with NGOs helping other actors to channel support.
- Educators need to be innovative and inclusive when it comes to education on EbA and CBA. The Least Developed Countries Universities Consortium on Climate Change (LUCCC) is a major south-south adaptation-specific capacity development initiative with MUCCRI and ICCCAD. It will help implement Article 11 of the Paris Agreement on Climate Change calling for greater investment in capacity building.

As the final speaker, Paul Mafabi thanked the organisers and the Ugandan Government. He hoped that participants had gained something at CBA11 that they could not have found elsewhere. He invited delegates to share their learnings with colleagues, and said that resources are needed to disseminate conference outcomes. He then formally closed CBA11.

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