

## NEWSLETTER

*May 2015*

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### **Global Soil Week 2015**

*By Noel Oettle and Siyabonga Myeza*

The United Nations declared 2015 as the International Year of Soils, which added to the relevance of the 3rd Global Soil Week Conference that was held in Berlin, Germany, in April. It was hosted by the Institute for Advanced Sustainability Studies (IASS), and attended by more than 600 participants from 80 countries. This included a cadre of 22 young professionals who participated in the Young Professionals Programme, an extended programme that was organised by GIZ, IASS and WOCAT with the intention of connecting young scientists and practitioners with senior experts in all soil-related fields (*see photos below*). The Environmental Monitoring Group's Siyabonga Myeza was part of the Young Professionals Programme.



Soils are an issue of cross-cutting concern and the secretariats of UNCCD\* and UNFCCC\*\* took an active part in the discussions. Globally, modern agricultural techniques have led to vast expanses of land being converted to arable cropping, creating soils that are deprived of natural fertility and generally dependent on the continued application of fertilisers. In the semi-arid areas of the world, this is contributing to desertification at a rate of 12 million hectares each year, or 23 hectares per minute. Not only does this threaten local food security and economies, but it also contributes significantly to global climate change.

The discourse at GSW acknowledged that sound soil management has huge potential for increasing soil organic carbon content, thus contributing to both adaptation and mitigation of climate change, while increasing productivity. One gramme of humus can hold 20 grammes of water, which illustrates

that building soil fertility not only increases the potential of soils to store carbon, but can also significantly improve ecosystem resilience to drought and flooding, of which we can only expect to see more in the future.

Klaus Topfer, chairman of Global Soil Week and Executive Director of IASS, noted in his closing comments, "In the anthropocene - our age of mankind - the degradation of natural ecosystems often goes undebated. This is especially true for the non-renewable resource, soil". The conference concluded that there is an urgent need to link short-term action with a long term strategy to build up resilience.

\* United Nations Convention to Combat Desertification

\*\* United Nations Framework Convention on Climate Change

## Community Based Adaptation Conference

*By Noel Oettle*

In late April more than 400 representatives from governments, civil society, the scientific community, and non-governmental organisations gathered in Nairobi, Kenya, at the 9th International Conference on Community-Based Adaptation (CBA) to climate change. Appropriately, the Adaptation Network was well represented at the conference.

CBA is a participatory, community-led and environmentally sustainable approach to adaptation that aims to strengthen the resilience of poor and vulnerable communities. The theme of the 2015 conference was 'Measuring and enhancing effective adaptation'. IIED senior researcher Susannah Fisher led the opening plenary which addressed the issues of 'measuring, linking and learning about adaptation effectiveness across scales'. The key challenges raised were around supporting CBA in the context of national planning and global frameworks, which are not usually well-attuned to community dynamics and needs.

Based on the engaging discussions, lessons learned, and outcomes of this conference, participants of CBA9 drafted the Nairobi Declaration (*see box below*).

### **Nairobi Declaration on Community Based Adaptation to Climate Change**

Climate change has and will continue to have disproportionately negative consequences for the poor and vulnerable. These groups are already adapting and enhancing their resilience to the adverse effects of climate change. **It is the responsibility of developed countries to support the adaptation efforts of poor and vulnerable groups.** To this end, governments should promote approaches to climate change adaptation that build the capacity of local actors. They should also ensure that vulnerable groups are included in the process of developing goals, strategies for implementation, indicators and evaluative frameworks for adaptation.

Consistent with the 2014 Kathmandu Declaration agreed at CBA8, the CBA community reiterates the importance of securing additional, adequate and transparent adaptation financing, especially for community-level adaptation efforts. **Global agreements must increase and accelerate finance for adaptation in poor and vulnerable communities and establish transparent mechanisms for monitoring adaptation finance.** Governments should prioritize the needs and interests of the poorest and most vulnerable in their national adaptation planning processes and provide clear, timely and accurate reporting on the extent to which adaptation finance reaches vulnerable groups.

World leaders will meet this year to draft agreements on Sustainable Development Goals, Financing for Development and Climate Change under the UNFCCC. **Leaders must ensure that these agreements reflect the needs and interests of the poorest and most vulnerable.** Local, regional and national governments should also incorporate the principles of inclusiveness, community leadership and environmental sustainability into all of their plans for adaptation and development.

The conference reflected the wide range of approaches being pursued by a range of actors, and perhaps the most insightful session was an “out of the box” plenary session facilitated by Adaptation Network member Bettina Koelle (*see photo on right*) that focused on learning from failure. It enabled participants to open up and recognize that adaptation initiatives frequently go wrong, but we fail to learn effectively from these experiences because they are not what donors or bosses want to hear. The discussions in round-table format were energized and honest, and surfaced many valuable insights. Participants were not identified in reporting.



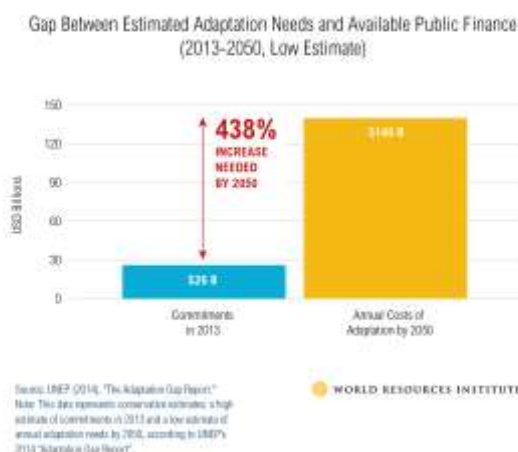
More information about the conference is available at:  
<http://www.iied.org/cba9-9th-conference-community-based-adaptation-climate-change>

## Africa’s Adaptation Finance Gap

*By Rehana Dada*

For a warming pathway of 4°C by 2100, Africa’s adaptation costs could rise to USD100bn/year by 2050, according to the Africa Adaptation Gap 2 report. Published by the United Nations Environment Programme (UNEP), it provides an understanding of the resources that are needed to address adaptation in Africa, the potential for African countries to close the gap, and the extent to which international climate finance is necessary.

The continent is already experiencing higher annual-mean temperatures, especially over central Africa, and sea level rise along its coastlines are higher than the global average, with particularly high numbers of people at risk of flooding in some coastal countries such as Mozambique and Tanzania. For a 2°C scenario, adaptation costs are about USD50bn/year by 2050, and by 2100, costs could rise to 1% of Africa’s GDP. For a 4°C world, costs in 2100 could sit at 6% of GDP. UNEP’s 2013 Africa Adaptation Gap report has already put the cost of adaptation at USD7-15 bn/year by 2020, and even this is considered conservative by some.

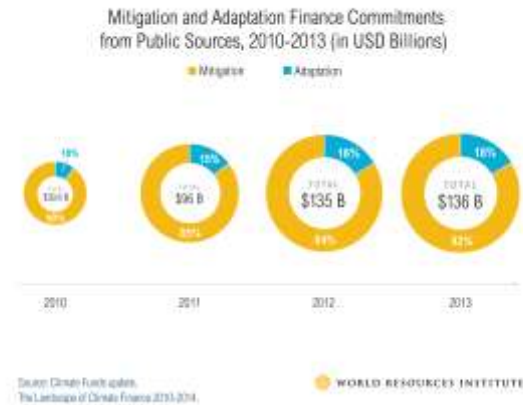


The new report states that the first line of defence against disruptive climate change is strong mitigation action, and that that the Cancun finance commitments must be met, along with a better distribution of finance for adaptation. It encourages governments to explore the potential for and feasibility of mobilising new sources of domestic, regional and international finance, warning that the funding provided through existing channels such as the Green Climate Fund may not be sufficient or effective.

*(Graphic on left by Lisa Dougherty-Choux)*

Africa does not have adequate domestic resources to respond to the damages and impacts projected, and therefore scaled-up international support is “critical”. The estimated USD1-2bn that flows to Africa for adaptation each year is not adequate. The gap in adaptation finance can be bridged through increasing disbursements of adaptation funding from developed to developing countries, however these disbursements need to “continue to grow rapidly to keep pace with warming”, more so if warming is not limited to below 2°C by 2100.

The report also states that even if all cost-effective adaptation is realised, there will still be large “residual damages”. However successful mitigation and adaptation actions are, it will not be possible to completely avoid damage from climate change, and these costs are estimated to be double adaptation costs between 2030-2050. African countries are already committing resources towards adaptation, and there are opportunities for increasing the level of commitment.



(Graphic by Lisa Dougherty-Choux)

The options presented for bridging the adaptation gap include scaling up commitments and channelling through the Green Climate Fund, and imposing a levy on transactions in the extractive industries, financial and banking transactions, international trade and transportation, and tourism. It also encourages countries to source funds domestically.

The report, *Africa's Adaptation Gap 2 : Bridging the gap - mobilising resources*, was released in early March at the African Ministerial Conference on the Environment (AMCEN) in Cairo. It is available at : <http://www.unep.org/publications>

### **New Paper : Challenges in achieving socially just adaptation in sub Saharan Africa** By Candice-Lee Arendse

A recent paper published in WIREs Climate Change discusses the challenges of achieving socially just adaptation in Sub Saharan Africa.

Climate change impacts will worsen socio-economic and environmental distress, affecting food and water security, extreme weather events, and health. Adaptation is a complex process that involves moving towards a system that prevents or reduces the current and projected influences of climate change, thereby improving the quality of the livelihoods of those most vulnerable. Numerous adaptation projects have been implemented in Sub Saharan Africa, but although these projects are usually seen as effective tools to increase resilience, they face a set of circumstances that can influence or stagnate adaptation processes. The paper reviews 64 case studies from the region, focusing mainly on agriculture dependent communities and their perceptions and approaches to climate change.

The authors use the concept of barriers to define the reasons for unsuccessful project implementation. In this context, barriers are defined as climate and non climate factors and conditions, that can occur together or reinforce each other, and that inhibit the ability of a community to respond successfully to climate change impacts. The literature reviewed identified four common factors that act as barriers, including : information; financial; biophysical; and institutional. The barriers identified were grouped and discussed under four distinct categories : physical; financial and technological; social-cultural-informational; and contingent-cumulative. The categories included barriers that are recognizable (such as finance and capacity) and hidden (such as social-cultural).

The challenge of achieving and addressing socially-just adaptation lies in the fact that these barriers do not occur as a constant individual factor affecting all levels of adaptation in the same way. Barriers occur simultaneously with stressors unrelated to climate change, such as economic globalization; they are intensified by factors such as political conflict; and they can reinforce each other, impacting people and environments differently. The article also discusses the effects of cross scale barriers which impacts implementation at a local level due to the lack of policy and planning coordination at higher levels of decision making.

The authors recommend extensive research on addressing and ultimately removing barriers from the adaptation process, and emphasize a further look into the causes of these barriers within the different sectors and environments. The article highlights inequality as one of the most influential barriers affecting the process of adaptation, and states that critically examining this specific barrier will support the ability of the most vulnerable to adapt.

The paper is titled, *Why is socially-just climate change adaptation in sub-Saharan Africa so challenging? A review of barriers identified from empirical cases*. It is authored by Sheona Shackleton, Gina Ziervogel, Susannah Sallu, Thomas Gill and Petra Tschakert, and published in WIREs Climate Change.

## **New Research : Accelerated glacial melt on Southern Antarctic Peninsula**

*By Rehana Dada*

Research published in Science in May shows a sudden increase in glacial melt in the Southern Antarctic Peninsula since 2009. This is a region that had previously not shown signs of change.

Satellite measurements were made of the elevation of the Antarctic ice sheet, using the European Space Agency's CryoSat-2, and this was combined with observations of changes in Earth's gravity. The research team showed that, around 2009, multiple glaciers along about 750 km of coastline suddenly began to shed ice into the ocean at a rate of about 55 trillion litres of water each year. Some of the glaciers were seen to be losing ice surface by as much as 4 m each year.

The researchers attribute the accelerated melt to warmer oceans. Ice shelves that float on the ocean alongside the land mass slow down the flow of glaciers into the ocean. But more vigorous winds have pushed warmer waters towards the pole, and this melts the ice shelves and glaciers from below. The ice shelves in the region have already lost nearly a fifth of their thickness in the past twenty years. According to team leader, Dr Bert Wouters of the University of Bristol, it is possible that around 2009 the ice shelf thinning and subsurface glacial melt reached a critical threshold that triggered sudden ice loss from that point onwards. Much of the bedrock in this region is below sea level, which means that as the glaciers retreat, warm waters will follow them inland and cause even more melt.

This research, coupled with a number of other research results released over the past two years on ice melt in the Antarctic and Arctic, indicate that sea level rise could be more severe and occurring faster than previously projected. This adds even more urgency to the need for preparedness among coastal cities.

The paper is titled *Dynamic thinning of glaciers on the Southern Antarctic Peninsula*. It is authored by Bert Wouters, Alba Martin-Español, Veit Helm, Thomas Flament, Melchior van Wessem, Stefan Ligtenberg, Michiel van den Broeke and Jonathan Bamber, and published in Science on 21 May 2015.

## **EU imposes limit on food crops used for fuel**

*By Rehana Dada*

In late April, the EU parliament voted in new legislation, to be enacted by 2017, that caps the use of first generation agrofuels in transport fuel to 7%. In 2009, the EU had set a target for the use of renewable energy in the transport sector of 10% by 2020. It was believed that the bulk of the target would have been met by first generation agrofuels, and this sparked years of debate stemming from concerns that indirect land use change would result in increased emissions.

First generation, or conventional, agrofuels are produced from traditional food crops such as rapeseed and maize. When land use is changed from food crops to fuel crops, alternative lands then need to be made available for food cultivation. This is often land that was previously uncultivated, and the change in land use results in increased greenhouse gas emissions.

There are also concerns from many quarters that conventional agrofuels compete with food crops, which affects food sovereignty, and impacts on biodiversity and environmental health. In many parts of Africa first and second generation agrofuels are grown on lands that were previously used for crops

or grazing, removing or reducing viability for natural resource based livelihoods in many communities, and effectively preventing access to previously productive communal land.

Second generation agrofuels rely on non-food crops or materials such as straw and tree seed, and third generation agrofuels are produced from algae. According to EurObserv'ER, agrofuel use in the transport sector in the EU was at 13,6 Mtoe (million tonnes of oil equivalent) in 2013.

The April EU parliamentary decision, which also sets a 0.5% limit for second generation agrofuels, will avoid emissions of about 320 million tonnes of CO<sub>2</sub>. Friends of the Earth supports the cap, expressing hope that the EU will completely phase out the use of food crops for fuel. A paper by the Global Environment and Development Institute that discusses the impact of biofuel mandates and targets can be downloaded at : <http://ase.tufts.edu/gdae/Pubs/wp/15-01WiseMandates.pdf>

## Training Courses : Practical Adaptation for Vulnerable Communities

We are pleased to announce that the Adaptation Network will be offering a series of two-day training courses in 2015 entitled "Practical Adaptation for Vulnerable Communities". The courses will provide a broad foundation that will enable practitioners, officials and activists to gain greater insight into climate science and to facilitate effective adaptation processes for members of vulnerable communities.

Attendance at the courses is free for members of the Network. All non-members will be required to pay a R200 registration fee. The Network will be able to provide accommodation and/or travel to and from the venue for a limited number of participants who would otherwise not be able to participate. If you believe that you would qualify, and would like to apply for a bursary to participate, please contact Rehana Dada at the Network Secretariat on [dada@seawitch.co.za](mailto:dada@seawitch.co.za).

Training Courses				
Course title	Date	Location	Venue	Registration
Practical Adaptation for Vulnerable Communities	25 & 26 June 2015	KwaZulu Natal Durban	Diakonia Conference Centre, Diakonia Avenue, Durban	Registration by 10 June 2015 Registration for members free*
	12 & 13 August 2015	Gauteng, Pretoria	SALGA, Waterkloof Glen, Pretoria	Registration by 1 August 2015 Registration for members free*
	25 & 26 August 2015	Western Cape – Cape Town	Kirstenbosch Research Centre, Newlands, Cape Town	Registration by 10 August 2015 Registration for members free*
	1 & 2 September 2015	Eastern Cape, Grahamstown	Rhodes University, Grahamstown	Registration by 15 August 2015 Registration for members free*

\*For Adaptation Network members FREE, All other participants R 200 registration fee

### Registration:

The registration form is available on the Adaptation Network website. Please download it and fill it in, and mail to Candice Arendse at the Adaptation Network Secretariat at [candice@indigo-dc.org](mailto:candice@indigo-dc.org)

### Newsletter Credits

#### Contributors

Candice-Lee Arendse: Indigo Development and Change

Rehana Dada: Environmental Monitoring Group

Siyabonga Myeza : Environmental Monitoring Group

Noel Oettlé: Environmental Monitoring Group

Photographs in the article, *Global Soil Week 2015* : Noel Oettle

Graphics in the article, *Africa's Adaptation Finance Gap* : courtesy of Lisa Dougherty-Choux of the World Resources Institute.

*Candice Arendse facilitates the production of this Newsletter. To comment on the newsletter or contribute to future newsletters, please email [candice@indigo-dc.org](mailto:candice@indigo-dc.org)*

**Deadline for submissions for the next newsletter : 18 June 2015**

**Please remember to give us your input on our newsletter and website (questionnaire attached in the same email). Warm thanks for your help, the Adaptation Network Secretariat**