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News and Events

Adaptation Network reflections on 2016  
By Candice Arendse

The Adaptation Network had a fruitful and dynamic 2016 with valuable contributions from our members and Steering Committee. On 29 November 2016 the Network held its Annual General Meeting (AGM) at the National Botanical Gardens in Pretoria, with 23 participants in attendance. Participants reflected on the activities of 2016 and envisioned plans for 2017.

Other key agenda points that were discussed included a report back from the Steering Committee on Network activities and plans, the forthcoming Mid-term evaluation, the election of the Steering Committee and the appointment of the Network Secretariat.

The Network Steering Committee (SC) plays an integral role in supporting and enhancing the functionality of Network activities. The elected members of the Steering Committee for the current year are Claire Davis (CSIR), Felix Donkor (University of Witwatersrand), Kgaugelo Chiloane (WWF), Mpumi Mhlalisi (GenderCC), Mxolisi Nyuswa (KwaZulu Regional Christian Council), Nick Hamer (Rhodes
University), Penny Price (African Climate and Development Initiative), Sarshen Scorgie (Conservation South Africa), and Victor Indasi (Climate Systems Analysis Group).

The Environmental Monitoring Group was reappointed as the Secretariat of the Network. Secretariat Manager Noel Oettlé thanked the outgoing SC members for their commitment and for the valuable input they had provided in the course of the year, and welcomed the newly elected SC members.

The SC members are individually assigned to four portfolios that underline the key performing areas of the Network. Through these portfolios, SC members guide the strategy and activities of the Network, engaging the knowledge and enthusiasm of individual members. SC members reported to the AGM on the activities of each portfolio in the course of the year, as well as challenges and future opportunities.

Mark New reported on fundraising, informing the meeting that the Fundraising Portfolio aims to provide a strategy to make the Network financially sustainable. This will enable the Network to continue with future planned activities beyond the three years funded by the Government of Flanders. The portfolio also aims to assist organisational members to secure funding for adaptation related projects and work, and will thus include Fundraising Capacity Training Events to support the members through a variety of capacity building activities such as writing workshops to improve the writing of good concept notes and full funding proposals. The proposed strategy includes items such as a Fundraising Toolkit, Fundraising Digest and an Action Plan for 2018 and beyond.

The outgoing Chair of the Steering Committee, Bettina Koelle, reported on capacity development activities. The Network hosted three well attended and successful workshops during 2016. The two-day workshops were hosted in Cape Town, Tzaneen and King Williams Town, and were attended by participants from government, local communities, private organisations and non-governmental organisations.

She thanked the co-organisers of the successful Adaptation Colloquium, held at the University of Witwatersrand on 7 & 8 July 2016 provided a platform for integrated knowledge sharing and learning in the field of adaptation. The Network was a co-organiser of the event and awarded travel bursaries to several members to enable them to attend. Discussions regarding the next Colloquium are currently taking place.
Noel Oettlé presented an overview of the activities, income and expenditure of the Network during 2016, as well as planned activities which includes continuity and improvement of the communications within the Network, and engaging in local and national policy and governance processes.

A monitoring and evaluation plan for the Network was also discussed during the AGM. This will be linked to a midterm review that will focus on identifying gaps and areas where additional focus is needed. The midterm review will involve interviews with Network members and role players. The process and structure of the midterm review and the monitoring and evaluation plan will be facilitated by Penny Price and Alicia Okeyo.

A final session provided a platform for participants of the meeting to discuss and report back on suggested future plans for the Network. In addition, participants were able to provide feedback and suggestions on the information being received during the meeting. Participants were fully engaged during each session and gave insightful concrete input into the planning.

Member suggestions include:
- Knowledge exchange at local level;
- Increased student engagement;
- More social science approaches such as knowledge exchanges, dialogues and narratives;
- Improve communication of opportunities within the Network;
- Contribute to implementation of adaptation aspects of the Paris Agreement in South Africa.

The Network aims to produce a brief annual report for 2016, outlining its activities, expenditure and budget.

**Capacity development opportunities offered by the Network in 2017**

This year the Network will again offer practitioners opportunities to enhance their skills as facilitators of effective adaptation.

**Practical Adaptation for Vulnerable Groups** will be offered at three different locations around the country, on the following dates:
- 16th & 17th May 2017: Cape Town (2 Days)
- 20th & 21st June 2017: Nkomazi, Mpumalanga (2 Days)
- 25th & 26th July 2017: Durban (2 Days)

This 2-day training course will provide practitioners from government, research institutions and NGOs with a sound grounding in climate science, the developmental context of climate change adaptation and participatory adaptation approaches. Practical methodologies and tools will be provided, illuminated by examples from adaptation practice. The learning methodology is experiential and interactive and is aimed at enabling participants to design and facilitate adaptation processes for vulnerable communities.
The course will be facilitated by Noel Oettlé and Shannon Parring. Please register if you would like to reserve a place on the course. The closing dates for registration: 1 May 2017 (Cape Town), 1 June 2017 (Nkomazi) and 1 July 2017 (Durban).

**Adaptation for Extreme Events** will be presented on 29th May 2017 in Grahamstown (2 Days). This innovative training course will be held immediately before the 2017 Adaptation Colloquium, and will explore the specific context of enabling planners and practitioners to support potentially affected communities to adapt effectively to minimize the impacts of extreme weather events. The context of the course will be the realities and opportunities of government support for adaptation, and how research partnerships can contribute to generating necessary data and appropriate knowledge.

- Facilitators: Nick Hamer, Sheona Shackleton, Noel Oettlé
- Closing date for registration: 1 May 2017

**Adaptation Retreat: A journey of discovery** will be held 3rd – 6th April 2017 in Nieuwoudtville. This retreat is aimed at more experienced adaptation practitioners who would like to reflect on their practice and explore innovative approaches and reflective spaces. The retreat will include some reflection in nature, course modules taught by community members and facilitation training.

- Closing date for registration: 1 July 2016

Travel and accommodation while attending these courses is at the cost of each participant. However, the Adaptation Network is able to provide a limited number of bursaries.

**For more information about the courses and bursaries please contact:**
Noel Oettlé: dryland@global.co.za
Candice Arendse: candice@emg.org.za

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Participants at a 2016 Adaptation Network training workshop

Image: Candice Arendse
Makhaza celebrates International Wetlands Day 2017
By Candice Arendse

According to projections provided by the International Panel on Climate Change (IPCC) there will be an increase in the frequency and severity of extreme weather events as the climate continues to warm. Extreme weather events such as floods, droughts and cyclones will cause destruction to economies, affecting vital sectors such as agriculture, water and tourism.

Climate impacts will consequently influence food security, population displacement and health. The impacts will vary spatially and effective risk management will be influenced by the financial capacity of affected countries.

![Image: Magen Munnik](image_url)

Karsrivervlei in Bredarsdorp, Western Cape: A drainage system dug out to enable water abstraction for irrigation. Cattle graze in the fields on the right.

In many parts of the world, wetlands have been reduced to dumping grounds and affected by urban encroachment, industrial development, and unsustainable agriculture practices. In recent decades, the significant ecosystem services of wetlands have been recognised, most notably through the 1971 Convention on Wetlands (Ramsar Convention). In light of the proven value of wetlands to providing ecosystem services that are essential to human well-being, the scientific community generally encourages and supports the rehabilitation and conservation of wetlands.

Wetlands are known for their remarkable functions in nature and have been recognised as an important and inexpensive tool in disaster risk management, particularly in the face of climate change. Wetland functions include the stabilisation of shorelines, flood control and regulation of water flow, all functions that can contribute to climate change adaptation planning.

Peatlands and mangroves, which are two types of wetland ecosystems, act as carbon stores. The protection of peatlands and mangroves thus plays a vital role in mitigation of climate change. In addition, wetlands provide habitat, food and other products for domestic animals and humans, thus contributing to building resilience and enhancing the sustainability of livelihoods.

The theme for World Wetlands Day 2017, *Wetlands for Disaster Risk Reduction*, highlights the role of healthy wetlands in reducing the impacts of extreme weather events and building resilience. The Environmental Monitoring Group (EMG) and the City of Cape Town (Department of Recreation and Parks), in collaboration with GenderCC, Makhaza Wetland and Food Growers, and Khayelitsha Canoe Club, organised an event to celebrate World Wetlands Day on 02 February 2017.
The celebration was held at the Khayelitsha Wetlands Park in Makhaza and included a facilitated interactive session for 55 Grade 7 learners from Mpendulo Primary School. Learners were taught about the significance of wetlands and the role their local wetland can play in their community and in disaster risk management.

The Khayelitsha Wetland is a lovely image of natural beauty and tranquillity. The park was established in 1997 and since then concerted efforts by many role-players have contributed to achieving the healthy status it has today. Before restoration, the wetland had been highly polluted with discharge from industries and wastewater treatment works upstream. In addition, the area had been filled with waste from the surrounding residential area, and had become a hiding place for criminals and a hazard for children. The community of Makhaza took a stand and, with the support of EMG and Coalition for Environmental Justice, worked with local government departments and other partners to restore the wetland.

The rehabilitation initiatives undertaken included fencing the wetland, replanting fynbos plants, removing alien vegetation, and litter clearing by volunteers. Despite these interventions, the water quality of the wetland is not up to standard and the wetland cannot be used for water abstraction, livestock, or water recreation. The community of Makhaza, however, still uses the wetland for collecting medicinal plants, traditional ceremonies, and as practice ground for the canoe club.
There is an increasing global demand for food, water and energy. All three are inter-linked, a fact that has increasingly become the focus of attention for policy makers and governments.

One initiative has been the Water-Energy-Food security nexus developed in Bonn by Holger Hoff under the auspices of the international climate change conferences of the parties (COP). The aim was to improve management of the complex links between water, energy and food systems. It is increasingly being used by international organisations to evaluate whether approaches to meeting development targets set out under the Sustainable Development Goals are coherent.

Understanding the connections between basic food demands and accessibility to water and energy is also important when it comes to climate change and its impact on agriculture and livelihoods. This issue featured prominently at COP22 in Marrakech in 2016.

The approach can play a massive role in reducing resource loss and maximising benefits. For example, countries like South Africa and Tanzania have started using the approach to develop policies around water, energy and food production.

In South Africa the Water Research Commission has begun to use the model in national discussions on managing the effects of climate change.

Tanzania applied integrated water resource management in its water sector and African Union strategy on climate change. But very little progress has trickled down to actual policy development.

Regions like southern Africa need to move beyond simply having a framework for understanding the connection between the three. This is only the first step. Now more case studies are needed to see how the three components interact and also how policies can be successfully implemented.

**Why and where is the nexus important?**

The problem is that water, energy and food systems are often treated independently. Most countries have isolated water and energy policies. But policies that ignore the link between them can be inefficient and even counterproductive. The nexus approach can help transform isolated policies into integrated development plans.

Countries with severe water constraints, particularly in the Middle East and North Africa, have started to develop policy that looks at all three factors. These regions have become testing grounds for the practical application of the nexus approach. Solutions, such as the development of multi-functional productive systems to improve natural resources use, have been implemented.

In Jordan, these have been developed to include water, energy and food. A pilot system has been implemented around the Sahara Forest Project. This includes solar energy farming in water scarce regions.

There are others signs of progress. Awareness about the challenges posed by climate change has led to the better allocation of resources through careful planning, savings and recycling. Some countries have developed national policies around these issues.

And governance patterns and language in policy development have started to reflect the linkages between water, energy and food.
But attempts to integrate water, energy and food management still have a long way to go. Most institutions – like the various water, energy and agriculture departments or organisations – operate under a complex system of unclear mandates and obscure funding and don’t consult with others.

This doesn’t mean that efforts to shape resources management are doomed. But there is a clear need to improve how it’s done.

**Bringing the nexus to fruition**

In southern Africa the nexus approach has been discussed by the Southern African Development Community in the water sector. One of the biggest challenges for the region is that water is distributed very unevenly. But it is short of electricity and some countries are highly dependent on hydro-power. What this means for food production is a challenge given that the over-allocation of water resources for food production would have a detrimental impact on energy production.

To integrate water with food and energy, the regional body has taken steps to raise awareness of the issues.

But each member state faces very different challenges. For example, South Africa is a middle-income country and has a fairly developed industrial sector that produces food. This requires concentrated investment in energy and water infrastructure, which the country has maintained partly due to its economy’s size and maturity.

Malawi, on the other hand, lacks the basic infrastructures to supply its population with water and access to energy. It is also much more vulnerable to the impact of drought and flood.

Tanzania’s economy relies heavily on agricultural production. It is therefore particularly vulnerable to changes in weather patterns. In addition, it doesn’t have the capacity to adapt to these changes, which limits agricultural productivity.

**What’s needed**

For a policy to be effective it must take into account what infrastructure is available in a country and a region. It must also be backed up by proper data collection and institutions must be strengthened to overcome bottlenecks. What’s also important is that interventions must be designed with the involvement of all stakeholders, including consumers.

A common mistake is that governments are solely responsible for managing resources. Cooperation is key. Governments, institutes, and consumers must build relationships. Discussing their needs is crucial to success.

There is no one-size-fits-all approach. One common factor is that investment in innovation and technical support is vital so that a range of solutions can be developed.

The nexus approach has the potential to help African countries meet sustainable development goals. This can only happen if the approach is turned into actions, like policy development and implementation.

This article was first published in The Conversation and can be accessed at: https://theconversation.com/africa-needs-to-manage-food-water-and-energy-in-a-way-that-connects-all-three-70422
The World Food Programme estimates that about 795 million people worldwide - approximately one in nine people - lack enough food to lead healthy active lives. Developing countries host most of the world's hungry people, with 12.9 per cent of the total developing country population undernourished. In Sub-Saharan Africa, the region with the highest prevalence of hunger (percentage of population that experiences hunger), one in four people is undernourished. Rising food insecurity in South Africa has translated into a situation where 14 million plus South Africans go to bed hungry each night, and where even people on social grants are unable to cope due to food price inflation.

It is in the face of these grim realities that Goal 2 – Zero Hunger of the Sustainable Development Goals (SDG) aims to end hunger, achieve food security and improved nutrition, and promote sustainable agriculture. Several organisations that support the Zero Hunger goal are rolling out interventions to address this global issue.

The South African Food Sovereignty Council, one of the organisations at the forefront of fighting food insecurity in the country, hosted an open forum in mid December to enable participants to deliberate on ways to reduce food insecurity. The event was attended by representatives from a number of organisations, including from countries such as Malawi, Zambia, and Zimbabwe.

The forum opened with a People’s Parliament that afforded ordinary citizens, youth groups, child based organisations, and other civil society organisations to voice their concerns on the state of food insecurity and related issues, as well as share their potential contributions to addressing the problem. The grievances were compiled into a report with the intention of making a submission to appropriate authorities for redress.

The Food Sovereignty Act was launched at the forum as a blueprint to help civil society and government better address food insecurity. The Act, which received wide acclaim, integrates lessons on frameworks and laws that govern food sovereignty, taken from comparative studies in international best practices in Senegal, Bolivia, and Ecuador. It also incorporates aspirations of small-scale farmers and other grassroots organisations. It addresses most of the pertinent issues on the local food insecurity landscape.
such as: use of indigenous seeds; rights of producers in relation to land; rights to water governance, use and ownership by small scale farmers; diets and cultural foods; promotion of local food supplies and community markets; participatory systems; corporate food systems; and the repeal of laws that are counter-productive with regards to food security.

The forum included panel sessions where individuals and representatives of grassroots organisations gave presentations on their work in addressing food insecurity. At a session titled Food Crisis in Africa, Rex Chapota of Farm Radio Malawi talked about overcoming information poverty in agriculture. A representative of the Inala Food Sovereignty and Climate Justice enlightened participants on how her student based organisation was addressing the issue of hunger on campuses. Other presentations touted the value of indigenous systems and way in which the physical, spiritual and natural realms support each other, emphasising the need to maintain balance between the three realms and therefore to integrate traditional knowledge systems into food production systems.

A common narrative that ran through all the presentations was that there is a need for us to rethink how we grow, share and consume our food. Efficient and appropriate agriculture, forestry and fisheries practices can supply nutritious food for all and create decent incomes, while supporting people-centred rural development and safeguarding the natural environment. Ultimately, immense transformation in the global food and agriculture system is required if we are to be able to feed today’s 795 million hungry and the additional 2 billion people expected by 2050. The food and agriculture sector offers key solutions for development, and is central to hunger and poverty eradication.

**Designing the South African Green Climate Fund small grant project proposal**

*By Candice Arendse*

The Green Climate Fund (GCF) is a financial mechanism created by the United Nations Framework Convention on Climate Change (UNFCCC) that aims to finance projects around the world that promote low-emission and climate-resilient development. The GCF invests specifically in Least Developed Countries (LDCs), Small Island Developing States (SIDS), and African Nations.

In 2016 the South African National Biodiversity Institute (SANBI) was accredited by the GCF as one of 44 National Implementing Entities, a significant milestone in the climate change adaptation finance landscape of South Africa. SANBI is currently implementing two projects funded by the Adaptation Fund (AF). Based on the concept developed for one of these projects, A Small Grant Facility (SGF) - for adaptation projects addressing the needs of most vulnerable groups in Namakwa and Mopani District.
Municipality, SANBI has developed a project concept for the GCF aimed at expanding the work of the SGF. The significance of this approach for affected communities is that it is based on the concept of Enhanced Direct Access to climate finance, meaning that members of rural communities can access funding more directly “The concept was approved for the full project proposal stage before the GCF accreditation process of SANBI was completed,” said Mandy Barnett of SANBI.

As part of the process of developing a detailed project proposal, SANBI and the Department of Environmental Affairs (DEA) hosted a national stakeholder workshop on 16 February 2017 at the Birchwood Hotel & OR Tambo Conference Centre in Johannesburg. The workshop brought together about 100 individuals and organisations, including representatives of local and national government, non-governmental organisations and the private sector who have been involved in the Adaptation Fund SGF projects and other small grants programs in South Africa. It was a platform for sharing experiences and lessons learned in order to inform the structure of the GCF project proposal.

Tlou Ramaru of DEA gave an overview of the GCF project concept within the national policy framework. He emphasised the importance of aligning the proposal with current adaptation planning and outputs, and using research that is already available, such as the Long-Term Adaptation Scenarios Flagship Research Programme (LTAS).

Mandy Barnett gave an overview of the GCF and AF, and emphasised that the GCF project proposal should be innovative and not a “business as usual” project. Questions from participants on specific project locations and groups of interest could not be answered at that stage.

Mike Jennings of SANBI introduced the GCF Project proposal which is aimed at enhancing South Africa’s SGF. He explained the three components of the proposal, which are: 1) Small Grants 2) Institutional Capacity, and 3) Learning.

The meeting included a Donors Panel, Facilitation Agencies/Intermediate Panel, and a Grant Beneficiary Panel. Each panel gave overviews of their experience of small grant programs in South Africa.

Carl Wesselink of SouthSouthNorth (SSN), the Executing Entity for the SGF projects, presented key learning points from a donor’s point of view. He said that it is challenging to comply with the rules and ensure integrity of the system while addressing the gap between grassroots and decision-makers. Another challenge for applicants is completion of the required adaptation risk benefit, which can ultimately lead to discouragement. He proposed a shorter proposal process that includes an aspect of integrated expert involvement. Wesselink added that it is important to recognise that the rules of global funding might exclude direct funding to specific grassroots recipients and that other kinds of mechanisms should be developed to enable GCF funding to meet the needs of its target audience.

Annie Sugrue shared her experience with Luhlhaza/EcoSasa Small Grant Facility, saying that it has a very simple governance structure but there are still challenges and lessons that had to be learned. She recommended user-friendly templates, said that technical support staff is crucial for helping to complete documents, and encouraged collaborative approaches through requests for co-investment. Sugrue added that ownership of projects by the community ensures sustainable project output.
SGF recipients shared similar challenges and recommendations. Nyasha Chagwanda from World Vision recommended a mentoring and coaching program to involve the grantees in meetings/interviews to ease the reporting process, conduct of a skills audit of the grantees, simplification of financial reports, and providing the procurement policy as a checklist. Nyasha added that the SGF project has a WhatsApp Group that helps with communication, saying that the partner interaction is very good.

Chawana Khanyisa from Tsogang Water and Sanitation said that the project is well understood and supported within the community, and the community shows ownership of the project by investing through cash and in-kind contributions. She suggested that quarterly meetings with grant recipients would be helpful to support each other and build individual and organisational capacity. Setsoto Women’s Empowerment gave great examples of the river cleaning projects they are involved in using their small grant funding. Mary Raletoooane indicated that the women involved in the project work on a volunteer basis with great enthusiasm.

Innovations for the GCF proposal based on what was presented during the meeting were discussed during group sessions. Some key ideas that emerged include:

- **Capacity-building**: There was an overall agreement that technical support and hand-holding is essential at all phases of the process. Emphasis was placed on climate workshops for project development, grant-writing, report-writing, financial management, understanding a contract, environmental safeguards, leadership, and governance, all offered through a community level learning facility.
- **Project selection**: Include video interviews in response to five set questions that can be submitted via a cell phone video that shows the project site and the community being served, to help distant decision-makers get a feel of the projects. Site visits prior to short-listing were also suggested.
- **Project reporting**: Photo reporting included in the assessment of the report, real time photo submissions of activities, quarterly calls with an interview panel that goes through key questions. The responses can be drafted by the interviewers into the quarterly report with their assessment of the report included simultaneously.

The meeting gave those that are not directly involved with small grant projects insight into the internal complications that recipients and the donors face. SANBI will compile the suggestions and comments that were given during the meeting and include them when developing the GCF proposal.

On the way forward, SANBI representatives said that the next steps would include further learning conversations with stakeholders, engagement with DEA to identify targets and investment windows, and finalisation of institutional arrangements before submitting a proposal.

### News and Events

**IPCC selects experts for Special Report on Global Warming of 1.5 degrees Celsius**

In late February, the Intergovernmental Panel on Climate Change selected the team of experts who will work on SR1.5: *Global Warming of 1.5 degrees Celsius: an IPCC special report on the impacts of global warming of 1.5 degrees Celsius above pre-industrial levels and related global greenhouse emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development and efforts to eradicate poverty.*

Debra Roberts, Co-Chair of Working Group II said: “The selection of the authors for the report is the first step in the critical journey started at COP21. This special report will facilitate this important journey by assessing the available science and highlighting the policy options available to support the achievement of a climate safe, equitable and sustainable world”. 

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Over 560 nominations were received, with 86 experts from 39 countries selected to undertake the assessment. Of the team members, 38 per cent are women, 51 per cent are from developing countries and countries in transition, and 26 per cent are new to the IPCC process. Co-Chair of Working Group I, Valérie Masson-Delmotte said: “There is great interest in the scientific community to contribute…. The selection process was challenging as we could on average only retain one expert out of 6–7. We will bring together a strong team to the first Lead Author meeting”.

From South Africa, three experts were selected: Francois Engelbrecht of the Council for Scientific and Industrial Research was selected to work on Chapter 3: Impacts of 1.5 degrees Celsius global warming on natural and human systems; Anton Cartwright of the African Centre for Cities at the University of Cape Town was selected to work on Chapter 4: Strengthening and implementing the global response to the threat of climate change; and Adaptation Network member Penny Urquhart, independent climate-resilient development specialist was selected to work on Chapter 5: Sustainable development, poverty eradication, and reducing inequalities.

**Adaptation Colloquium 30th & 31st May 2017 in Grahamstown**

The Adaptation Network in collaboration with Rhodes University, the Global Change and Sustainability Research Institute (GCSRI) at Wits University and the African Climate and Development Initiative (ACDI), will be co-organising the 2017 Adaptation Colloquium. The Colloquium is planned for the 30th and 31st of May and will be hosted at Rhodes University, Grahamstown.

For further information please contact Noel Oettle of the Adaptation Network Secretariat: dryland@global.co.za

**Civil society court challenge to assess climate change impacts before granting environmental authorisation for coal power plant**

Hard on the heels of a civil society court case to prevent nuclear procurement in South Africa, Earthlife Africa Johannesburg (ELA Jhb) will challenge the Minister of Environmental Affairs in court in early March for her decision to uphold the environmental authorisation for the proposed Thabametsi coal-fired power plant.

When ELA Jhb previously appealed the environmental authorisation for Thabametsi, the Minister required the power company to conduct a climate change impact assessment, the draft of which indicates that the power station will have “significant” greenhouse emissions and climate change impacts, and that water shortage as a result of climate change will impact on the operation of the plant and water availability for surrounding communities that cannot be mitigated by the power station.

Subsequently, the Minister upheld the environmental authorisation prior to the climate change impacts having been assessed. ELA Jhb instituted proceedings in the Pretoria High Court in 2016 to challenge this decision, saying that the authorisation should have been set aside pending adequate assessment of the climate change impacts.

This case is thought to be the first in South Africa when a judiciary will consider the importance of and need for a climate change impacts assessment before granting environmental authorisation to a coal-fired power station. ELA Jhb will be represented by the Centre for Environmental Rights.


To comment on the climate change impact assessment (deadline 27 February 2017):
Improved Housing a potential tool against malaria

A study published in *PLOS Medicine* shows that houses with metal roofs and finished walls are associated with a greater than 9 per cent reduction in malaria risk in children compared to thatched houses. The research analysed data on malaria prevalence and housing using data collected in 29 surveys carried out in 21 African countries between 2008 and 2015. The malaria status was known of about 140,000 children under the age of five living in about 84,000 households.

Malaria was detectable in between 0.4 per cent and 45.5 per cent of children living in modern housing, compared to between 0.4 per cent and 70.6 per cent of children living in traditional homes. After controlling for household wealth and use of insecticides, modern housing was associated with a 9 to 14 per cent reduction in the odds of malaria infection, in comparison to a 15 to 16 per cent reduction of risk for children using insecticide-treated bed nets.

Lead author Lucy Trusting of Oxford University says that mosquitoes can be prevented from entering houses if they are well built. Malaria transmission outdoors is not affected, and in many locations outdoor transmission is more common. The study was undertaken by the University of Oxford, London School of Hygiene and Tropical Medicine, Durham University, and the University of Southampton.

Climate change promotes selenium deficiency

Selenium is an essential micronutrient, with the selenium content of food dependent on selenium concentrations in the soil. In a new study entitled *Selenium deficiency risk predicted to increase under future climate change* scientists from Switzerland, Germany and the UK explore the complex factors that are likely to affect the prevalence of this micronutrient in soils, and thus in crops and people’s diets.

The findings of the research indicate that climate change could result in selenium loss in two thirds of croplands by the end of the century. With up to a billion people thought to be already affected by low selenium intake, there are potential impacts for human health. The researchers say their study serves as an early warning for humanitarian organisations and the agro-industry.

Climate-soil interactions play a dominant role in controlling soil selenium concentration. Changes in climate are likely to impact on soil organic carbon content, and indications are that decreases in soil carbon will lead to overall decreased soil selenium concentrations, particularly in agricultural areas. These decreases could in turn increase the prevalence of selenium deficiency. As a result of climate change, selenium levels are expected to decrease overall, with areas of Europe, India, China, southern South America, southern Africa, and south-western United States being particularly affected. Selenium levels may increase in parts of Australia, China, India and Africa under moderate climate change. The research is published in *Proceedings of the National Academy of Sciences*:

http://www.pnas.org/content/early/2017/02/14/1611576114.full

Third Global Coral Bleaching Event

Surface ocean temperatures during the 2016 El Niño resulted in a major coral die-off in the Maldives, causing reef growth rates to collapse. Erosion of the reefs by some reef species has also increased. Reef structure is reported to be now eroding faster than it is growing. Similar detrimental impacts are thought to be widespread, including reefs in other parts of the Indian and Pacific such as the northern Great Barrier Reef, and the 2016 event was therefore dubbed the *Third Global Coral Bleaching Event*.

There is concern about how long it will take for the reefs to recover. In the past, reefs in the Maldives have taken 10 to 15 years to recover from such disturbances, but bleaching events are expected to become more frequent, which could lead to long-term loss of reef growth. Prior to the 2016 El Niño, the Maldives reefs had been growing rapidly. The research is published in *Scientific Reports*
Credits
This newsletter is produced by the Adaptation Network Secretariat, which is hosted by Environmental Monitoring Group.

Contributors to this edition:
Agathe Maupin: South African Institute of International Affairs
Candice Arendse (Co-editor): Environmental Monitoring Group
Felix Kwabena Donkor: PhD student at University of Witwatersrand
Mercy Mwanikah Ojoyi: South African Institute of International Affairs
Moeketsi Monaheng: Midrand Solidarity Economy Education Communication Cooperatives
Noel Oettlé: Environmental Monitoring Group
Rehana Dada (Co-editor): Adaptation Network Secretariat
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Articles do not necessarily represent the views of all Adaptation Network members.
To contribute please email: dada@adaptationnetwork.org.za
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www.adaptationnetwork.org.za
info@adaptationnetwork.org.za / Tel: +27 27 218 1117
1 Neethling Street, Nieuwoudtville, 8180, South Africa