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Learning to unlearn: My defining journey with the SA Adaptation Network

By Christopher Mabeza

In a publication, *Unlearn: Let Go of Past Success to Achieve Extraordinary Results*, Barry O'Reilly proposes the following three-step system to achieve success:

1. Unlearn the behaviours and mindsets that prevent you and your businesses from moving forward.
2. Relearn new skills, strategies, and innovations that are transforming the world every day.
3. Break through old habits and thinking by opening up to new ideas and perspectives to succeed

The O'Reilly three-step system rang a bell when Dania Petrik, the SA Adaptation Network Coordinator, suggested that I write an article on my experience in the network. I mulled over how my journey with the network has helped me unlearn deeply entrenched narratives about the story of human adaptation to climate change. I could not help but reflect on my association with the network.

But how did it all begin? It all started when I enrolled for a PhD at the University of Cape Town (UCT). One of my supervisors, the affable Prof Gina Ziervogel introduced me to the world of adaptation to climate change. Under her tutelage, the most important thing I learned was to challenge what sociologist Arlie Russel Hochschild calls the "deep story". According to Hochschild, the deep story is a sustained narrative in a community. I remember that prior to this, my thinking was characterised by rigidity. Thus, started the journey of learning to unlearn.

After UCT, I felt like a boiling kettle removed from the burner - a blissful release from the intense pressure of my PhD journey. The SA Adaptation Network could not have come into my life at a better time. I first met the SA Adaptation Network team - Noel Oettle, Siya Myeza and Shannon Parring - during my brief stint at Rhodes University in 2015. This was during a workshop under the auspices of the Network at Rhodes. What came out of the workshop was the need to unlearn the narrative of the silver bullet solution to climate change adaptation. This helped consolidate the insights on adaptation I already had from my days at UCT.

I got to meet more people associated with the network in subsequent workshops organised by the network. These include Bettina Koelle (Indigo), Candice-Lee Arendse and Thabang Phago (CSA). I recall how welcoming they were when we met in Noordhoek, Cape Town for the facilitation workshop in October 2017. Prior to this workshop, I had facilitated at several conferences in my native Zimbabwe. But after the workshop I realised I had undergone some kind of metamorphosis. I had unlearned several pre-conceived notions I had about facilitation. Also, what came out was what I would call the workshop 'Rule-of-Thumb': when facilitating always have a few tricks up your sleeve to energise workshop attendees, a rule I have taken to heart. In fact, I have used a few of the tricks during workshops I have facilitated back home.

The SA Adaptation Network also sponsored my trip to Malawi for the 12th Community Based Conference (CBA) in 2018 held in Lilongwe, Malawi. During the conference, I learned about the precarious status of communities who live on the margins of survival and how they are retooling their capabilities so as to ensure food on their tables. For these communities, 'retooling' means to unlearn long held narratives. This helped me to question my own narratives in the climate change discourse, that there is need for novel thinking as we try to address some of the challenges that confront humanity today.

To that end, the Adaptation Network is working round the clock to reach out to researchers, academics, and civil society in the southern African region working on adaptation to climate change initiatives. This is highly commendable. Thus, the Network has spread its tentacles across the region as seen by the attendees at its conferences. I am one of the beneficiaries of these initiatives by the Network and am very indebted to the Network for the gesture.

I appreciate those who have been with me on this amazing journey - my friends in the SA Adaptation Network. These friends have helped me to learn to unlearn pre-conceived ideas. Unlearning is a continuous process of replacing old ideas and models with new ones in order to adapt to an ever-changing environment. This is evident as shown by how communities in the region are ever retooling their strategies. But, any attempt to engage with the community must first engage with their deep story, and yours, too, as O'Reilly would say.

Key 'Takeaways' from the SAIIA-hosted Policy Conference on Marine & Coastal EBA in Southern Africa

By Dania Petrik

On the 24th January 2019, the South African Institute of International Affairs (SAIIA) hosted the 'Policy Conference on Marine and Coastal Ecosystem-based Adaptation (EbA) in Southern Africa' at the SAIIA head offices at Wits University, Johannesburg, in order to facilitate peer learning and policy engagement around this theme.

Ecosystem-based adaptation (EbA) supports the sustainable management, conservation, and restoration of ecosystems, which in turn provide services that enable communities to adapt to climate change. The conference sought to strengthen the Southern African region's climate resilience by sharing knowledge on the adoption of EbA approaches, specifically as it relates to coastal and marine environments. A focus was on how to tap into marine and coastal resources, while at the same time ensuring the sustainability of these resources – as well as how EbA practices can enhance equitable access for local communities dependent on such resources. The project is therefore also relevant for the region's increasing focus on promoting a sustainable Blue Economy. Focus countries include South Africa, Mozambique, Tanzania and Seychelles as case studies to inform national and regional engagement on EbA responses.

The conference began with a panel discussion around regional perspectives on EbA in marine and coastal environments, with high-level representation from the Indian Ocean Rim Association, UNECA, UN Environment and the AUC speaking on flagship African programmes, policies and conventions that feed into COP decisions, support delivery of the Sustainable Development Goals (SDGs), and enhance the regulatory environment of ocean governance for the 38 coastal countries in Africa.

This was followed by a panel discussion showcasing how the four case study countries (Mozambique, Tanzania, Seychelles and South Africa) approach EbA differently. While an understanding of the different policies and country positions on the Blue Economy and how EbA practices are being implemented was explained, the emphasis was on similarities between countries and what has been successful in practice. Links were made with the huge economic spin-offs of successful EbA projects; for example, where Tourism, closely reliant on the health of the environment to add value, becomes a sustainable source of payments for ecosystem services – found to be up to ten times higher than that of fisheries. Technical expertise, engagement with communities and community ownership, education and capacity building were pointed out as being critical pillars to the success stories of EbA projects in these four case study countries.



Elissa Lalande, Senior Policy Analyst, Ministry of Environment, Energy & Climate Change, explains the country position of Seychelles on marine & coastal EbA – a country dependent on its rich ocean resources (Source: SAIIA).



High-level delegates to the conference engaged on issues related to EbA, such as how to ensure inclusivity & improved governance for the Blue Economy, while conserving precious marine & coastal resources (Source: SAIIA).

Following this, the appointed country researchers of the project presented findings related to specific case studies – drawing on the socio-economic circumstances of

coastal communities most reliant on ocean resources to highlight not only how such resources could be depleted, worsening climate vulnerability, but on how EbA responses empower and uplift these communities. At the same time, the case studies demonstrated the benefit of conserving the resource base through improved governance and community-ownership, which in turn has huge economic advantages – such as the preservation of mangroves for protection against ocean swell and action, or reef recovery which allows fish and octopus stocks to replenish as food and trade sources.

A discussion on the sustainable financing of marine & coastal EbA in Southern Africa was moderated by Ameil Harikishun (SouthSouthNorth), asking significant and meaningful questions of the delegates:

- What does 'value-for-money' mean in the implementation of an EbA project?
- How can EbA projects best be justified in financial terms (for example, through cost-benefit analysis)?
- How can social capital gains from successful EbA projects be quantified?
- How best can EbA projects be financially structured such that community ownership and the success of the project is guaranteed?

A robust and interactive conversation followed, with inputs from many of the experts in the room – with a crucial conclusion: buy-in and trust underpin every successful EbA project and are critical to the longevity of marine and coastal resource management.

The day's proceedings were closed with a final synthesis discussion. Delegates left with a profound glimpse into how regional collaboration and knowledge sharing can catapult efforts towards greater climate resilience, improved livelihoods and better governance from national to local scale.

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Sustaining African water resources under climate change: Emerging adaptation measures from UNFCCC national communications

By Prof. Godwell Nhamo & Shepherd Muchuru

The low adaptive capacity of the African continent makes it very vulnerable to the changing climate (Callaway 2004). Water resources are at the epicenter of the projected changing climate impacts. Climate change and its impacts on the water sector are projected to persist into the future (Eriksen and Watson 2009) and sub-Saharan Africa (SSA) is already experiencing water stress compounded by increased drought occurrences and water stress conditions resulting from climate change. Climate change also exacerbates water pollution due to increases in temperature, precipitation intensity and long episodes of droughts (Kundzewicz et al. 2008).

The rising sea levels have the potential to cause salt intrusion, especially into aquifers in coastal areas, and a decreased water table. In addition to climate change, sustainable water resources management faces challenges from increasing water

demand as well as water quality deterioration from human activities. It is therefore imperative to employ appropriate intervention strategies to increase resilience and adaptive capacity for sustainable water resources management (Eriksen and Watson 2009).

Both supply- and demand-side adaptation measures are essential to ensure continuous and sustainable water supply during drought conditions. Supply-side strategies commonly involve increasing storage capacity, water transfers, and abstraction from water courses and underground sources (Arbués and Barberán 2004). The changing climate, therefore, can affect the operation and function of water-related infrastructure, hydropower production, structural flood protection, irrigation and drainage systems and water management practices (Hallegatte 2009). Demand-side water resources management can be attained through increased water use efficiency, development of a market-based water allocation framework, and effective law enforcement, along with water pollution control (Arbués and Barberán 2004).

Continent-wide studies (Collins 2011) reiterate significant annual mean surface temperature increases. Future projections have concluded that SSA, in particular, central Africa, the interior of southern Africa and the Sahel region, is likely to get hotter and drier (Arbués and Barberán 2004). Rainfall changes were predicted by Shongwe et al. (2009) who found a major decline in precipitation of 10% between 1900 and 1994.

In Africa, agriculture is the biggest water user responsible for almost 65% of total water use (Arnell 2003). Domestic use account for 25%, with 15% shared by other sectors. The availability of water resources in Africa heavily depends on rainfall which is severely threatened by droughts as discussed earlier.

As a result, water consumption and demand for use by different sectors often surpass the available fresh water. Moreover, the prolonged years of drought, reduced precipitation and high evapotranspiration often lead to the direct over-exploitation of underground water resources (aquifers) (Desanker and Magadza 2001) and surface water depletion (especially from extended periods of irrigation).

In southern Africa, the quality of water resources, particularly groundwater, is vulnerable to deterioration (McMullen 2009 M). This is significant in coastal countries where increased pollution is mainly caused by sea water intrusion into coastal aquifers due to a rise in sea level. In addition, surface water bodies, which make up most of the storage reservoirs, experience reduced inflows even during summer periods. Arnell (1999) estimated a 26–40% reduced runoff in the Zambezi River basin as a result of high evaporation and low rainfall totals by 2025. While all this is taking place, many water policies in African countries (Arbués and Barberán 2004) have not mainstreamed climate change resulting in national programmes that are not climate-compatible in terms of putting in place appropriate adaptation strategies.

Adaptation can be regarded as the 'ability of a system to adjust to the changing climate and its impacts, in order to reduce adverse effects or to utilize opportunities' (Papadaskalopoulou et al. 2015, 96). This leads one to the concept of adaptive capacity, which is the ability of a system to respond to the impacts caused by the changing climate as well as prepare for the expected changes. Intervention measures in the management of water resources can be divided into supply-side options, dealing with the availability of water and demand-side options, those aimed at reducing water demand through efficient water use (Papadaskalopoulou et al. 2015). According to Hallegatte (2009), the cost of implementing reactive adaptation measures is normally higher, and therefore proactive measures are more sustainable and better positioned.

In sustainable water resources management, adaptation measures should be of no regret, reversible, flexible, iterative and collaborative, and should consider conflicts and synergies with related and essential policies (Hallegatte 2009). However, implementation of appropriate adaptation measures in sustainable water resources management faces challenges in Africa. Some of the challenges include institutional structures, the lack of financial resources, differentiated values, poor information flow and fragmented decision-making (Clarvis and Engle 2015). In addition, water resources are often transboundary and involve multiple jurisdictions. Thus, proper collaboration and coordination are crucial in the adaptation process.

Adaptation options to increase freshwater supply include measures such as reservoir construction, rainwater harvesting and the transfer of water (Clarvis and Engle 2015). In Africa, there are few perennial rivers and therefore groundwater becomes an alternative source for irrigation and drinking water. Over-exploitation of groundwater sources often results in aquifer depletion (McMullen 2009). It is thus important that governments should invest in increasing storage capacity and water availability (Olmstead 2014). However, one form of adaptation, large-scale dam construction has received political resistance of late (Olmstead 2014). Besides providing many benefits to people and the economy, dams can cause environmental damage due to downstream flooding. They also have negative socio-economic effects like population displacement, including destroying their livelihoods they earn through agriculture. Dam construction can also modify flow regimes downstream thereby affecting biodiversity and other economic activities of the areas (Ghassemi and White 2007) and can lead to coastal erosion and related environmental problems (Andredaki et al. 2014). Other adaptation measures in water resources management include: inter-basin water transfer, which takes water from places endowed with enough water-supply reserves to scarce water resources areas (Lin, Suh, and Pfister 2012).

This paper provides insights for many stakeholders such as policymakers, water managers, engineers, and the general public on the need to institute climate change adaptation measures for sustainable water resources management in Africa. The work stresses 'win-win' strategies obtained from the UNFCCC National Communications reports. Such adaptation measures will benefit present and future generations if implemented regardless of the severity of the impacts of climate change. The question then arises, what adaptation measures exist in the water sector in response to the changing climate in African countries?

For the full article, click [here](#).

**Adaptation Futures 2018:
Conference Proceedings & Insights from Africa Report now
available**

Following the successful Adaptation Futures 2018 conference, held in Cape Town in June 2018, the conference organisers are pleased to announce that the Conference Proceedings and the Africa Report are now available online:

<https://adaptationfutures2018.capetown/>

The Conference Proceedings contains over 40 extended abstracts of new research first presented at the conference. Well done to the authors!

The *Insights from Africa* Report collates the Africa-specific insights and opportunities from over 377 individual reports by adaptation experts attending the conference. Our sincere thanks go to all the rapporteurs who contributed their notes from the sessions. Key messages from an African perspective can be found in the Executive Summary.

Please note: The report focuses only on reflecting those issues that were seen as relevant and reported on by the rapporteurs. The report does not aim to cover the conference comprehensively or to capture all aspects of adaptation that were discussed at the conference.

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