



Luc Hoffmann  
Institute

**PREFERENCES AND PATHWAYS:  
STRENGTHENING FUTURES  
CAPACITY IN AFRICA**

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**On the cover:** This image by Simon Stålenhag comes from the Radical Ocean Futures project, an example of the use of science fiction prototyping to develop scientifically grounded narratives of potential futures. Science fiction prototyping is one of the tools described in Chapter 3 of this report, among those that can help us to explore what the future could be, including alternatives that we are not really thinking about today.

The image shows an imagined underwater community beneath the Pacific Ocean in the distant future. It is reproduced with the kind permission of the artist, the Radical Ocean Futures Project, and the Stockholm Resilience Centre.

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## FOREWORD

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**Alice Ruhweza**  
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The African Union's Agenda 2063 is a blueprint for transforming Africa. Its vision is “an integrated, prosperous and peaceful Africa, driven by its own citizens, representing a dynamic force in the international arena.” This is the Africa that Africans want. This report focuses on some of the key tools that Africa might need to deliver the vision of Agenda 2063.

Africa needs to develop to realise its economic potential, but a 2015 WWF report called *African Ecological Futures* highlighted the negative impact that such development could, without careful planning, have on nature and on the benefits that Africa's people derive from nature.

If we look 50 years into the future, when Africa has become a prosperous and dynamic force internationally, what ecological infrastructure would African societies want to see left? How much of Africa's forests, watersheds, wildlife and traditional lifestyles should be protected and fostered in the drive for economic development? And how should that be done? It is important to ask the right questions, but it is equally important to ask them in the right place. Unless the thinking about Africa's future is happening in Africa, it is happening in the wrong place.

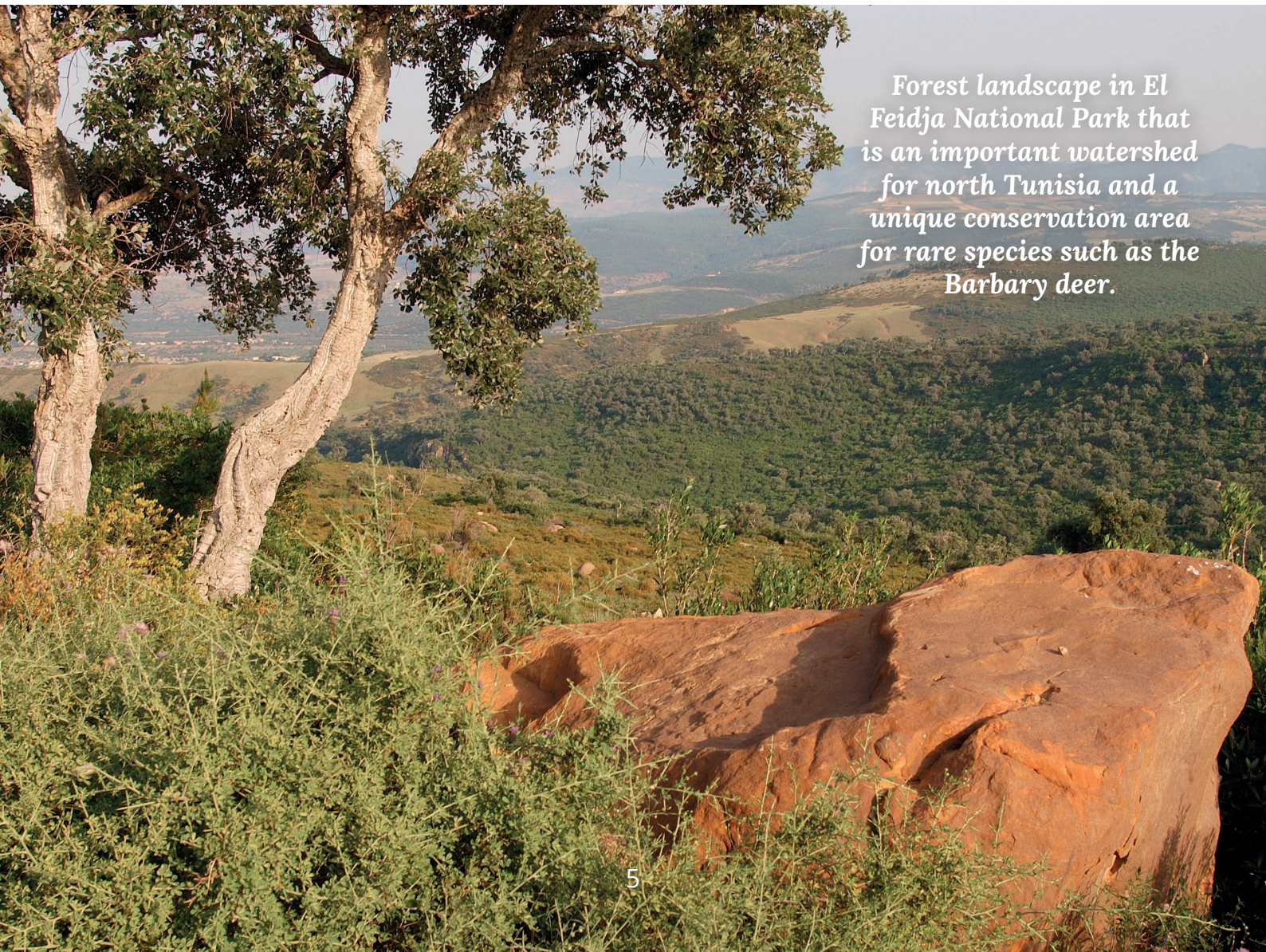
When we talk about ‘capacity’, we usually take it to mean individual capacity, but if you really want to build something sustainable then it is institutional capacity that counts. As reported in these pages, Africa already has important pockets of expertise in futures thinking. There is also a significant history of using futures: the successful transition in South Africa to a post-Apartheid world owes much to what has become known as the Mont Fleur scenario exercise that, in 1991–92, brought people together from across organisations to think creatively about the future of their country.

Nevertheless, even though a valuable baseline capacity exists, the institutions on the continent that are working with futures thinking remain relatively few and far between. And of those that do exist, not many are dealing with environmental futures. Do these efforts need bolstering, and if so, how best to achieve this?

It would be possible to bring in external expertise, but inevitably they would project their values and ideas into the system. Instead, the core values and ideas that underpin Africa's future need to come from within.

The Luc Hoffmann Institute acts as a catalyst and an incubator for new ideas, trying to identify where systems are not functioning as they could. When we looked at the original African Ecological Futures report, we were struck by the scale and intensity of well-meaning external expert inputs that were trying to answer important and complex questions about Africa. As a result, we decided to support indigenous efforts to strengthen futures capacity in Africa.

An investment in futures thinking on the continent is an investment in the future that Africans want.



*Forest landscape in El Feidja National Park that is an important watershed for north Tunisia and a unique conservation area for rare species such as the Barbary deer.*

# EXECUTIVE SUMMARY

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For Africa, finding ways to develop while maintaining the integrity of its diverse environment is fundamental to the continent's prosperity and resilience. Its development goals, underpinned by the African Union's Agenda 2063, should be driven by visions of the future desired by Africans.

Imagining the many possible futures for Africa and identifying the actions required in the short term to reach those futures is work that must be undertaken by Africans and on the continent itself. For this to happen, it will be necessary to develop the continent's capacity for futures thinking and to make greater use of a range of futures tools for decision-making.

## Africa's futures capacity

This report describes the baseline of existing futures-thinking capacity in Africa. This capacity is primarily found within a small, but significant, set of networks dotted around the continent. These networks and the individuals behind them can

be the seeds that grow both to become more widespread and to firmly establish institutional futures capacity on the continent.

In addition to identifying the networks in Africa that use and promote futures-based approaches, the report also examines which sectors are currently employing futures thinking and where opportunities exist on the continent for the education of new generations of futurists.

## Futures-thinking tools

There are several reliable tools that can be used in a futures-oriented approach to strategic planning in Africa. A selection of the most relevant tools are described in this report, along with the kinds of questions they are best placed to answer. Some are specific futures-thinking tools, while others are more general cognitive tools that make use of the systems thinking required when considering futures.

A distinction is also made between tools that help to understand the implications of processes that are already under way – existing futures – and tools that enable the exploration of alternative longer-term futures so that better decisions can be made now.

## Engage now with the future

Futures thinking and the tools that it uses are not proposed as a silver bullet solution to Africa's development challenges. By engaging with futures thinking, Africa can gain more clarity on the impacts that today's decision-making will have on the lives of Africans in the future. Investing in Africa's futures capacity will not only benefit the long-term strategic thinking of the continent, but will also help the world to come up with new and different ways of overcoming future challenges.



# 1. WHAT IS THIS REPORT ABOUT AND WHY?

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This report is about Africa and its people being able to imagine and therefore take control of their own future. Its twin aims are to situate a need for futures thinking within Africa and define a baseline of the continent's existing futures-thinking capacity on which to build.

Maintaining the integrity of Africa's diverse environment is fundamental to the continent's prosperity and resilience. As such, it needs to be managed strategically. Existing ecological infrastructure must be protected, maintained, and restored, while minimising the negative impacts of new infrastructure developments. This will lead to a more equitable, inclusive, and sustainable future for the African continent.

## Visions of Africa's future

This report offers a starting point. It recognises a need both to create awareness of the value of Africa's environment and to change the behaviour of key actors to ensure future sustainability. Development goals should be driven by visions of the future desired by Africans.

In addition to establishing the context in which futures thinking is important for Africa, this report outlines a selection of futures-thinking tools that can help to navigate the complex problems that the continent faces.

## Existing capacity for futures thinking

In defining a baseline of futures-thinking capacity in Africa, this report provides an overview of relevant networks based on the continent. These networks bring together futures-thinking practitioners and contribute to broadening futures literacy.

The report ends with some reflections on Africa's future and the role that futures thinking must play. The future is uncertain and can be neither predicted nor controlled. Futures thinking provides a means of learning to work with it rather than trying to control it.

By setting out existing knowledge, this report hopes to chart ways forward. The ultimate aim is the development of an African futures capacity that can both provide and use information to advocate for improved governance and decision-making around the long-term future of the continent and its environment.

### *Futures and futures thinking*

"When the future is predicted from the probable and knowable, it is often derived from outdated assumptions." (Miller, 2007)

An all-encompassing term, 'futures' comprises a range of different techniques to think about the future, but does not attempt to predict it. There is no one correct future and therefore we use the plural form – futures.

Futures thinking is a way of inspecting our beliefs, disrupting the constraints of current conceptions, and revealing assumptions about what we believe can and cannot happen.

Most futures work has a 10- to 15-year horizon, so that people can be motivated to act now. National governments are elected in shorter cycles, so it is difficult to encourage them to take a long-term approach when they don't have political incentives to do so. Futures thinking therefore requires a balance between long-term thinking and decision-making in the present.



## *African Ecological Futures (AEF II)*

This Luc Hoffmann Institute report on Strengthening Futures Capacity in Africa is part of the institute's commitment to the African Ecological Futures programme, now in its second phase (AEF II). The programme aims to understand the constraints holding Africa back from a sustainable developmental trajectory and find ways to minimise the perceived tension between development and environmental goals.

The AEF II projects encourage policymakers, investors, planners, and development finance institutions to bring futures thinking into the mainstream for planning and investment decision-making in key institutions.

In publishing this report, the Luc Hoffmann Institute hopes to contribute to the creation of an engaged group of futures specialists with whom key stakeholders such as the African Union or the Southern African Development Community can connect. Secondly, it aims to contribute to planning efforts for the development of futures-thinking capacity in Africa.



## 2. THE NEED FOR FUTURES THINKING IN AFRICA

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Africa's rich and diverse ecosystems generate flows of goods and services that are essential in providing for the continent's food, water, energy, health and secure livelihood needs. Furthermore, the continent is largely free of the infrastructural lock-ins that characterise many Western countries. These include, for example, roads, electricity pylons or dams as aspects of systems that persist over time, shutting out alternatives. Sustainable development with such lock-ins often means expensive and incremental renovation versus the freedom to implement more sustainable, innovative alternatives. In Africa, the absence of lock-ins provides a rich context within which to envision new approaches to development, especially around infrastructure and how it is financed.

However, the erosion of biodiversity is reducing nature's contributions to people in

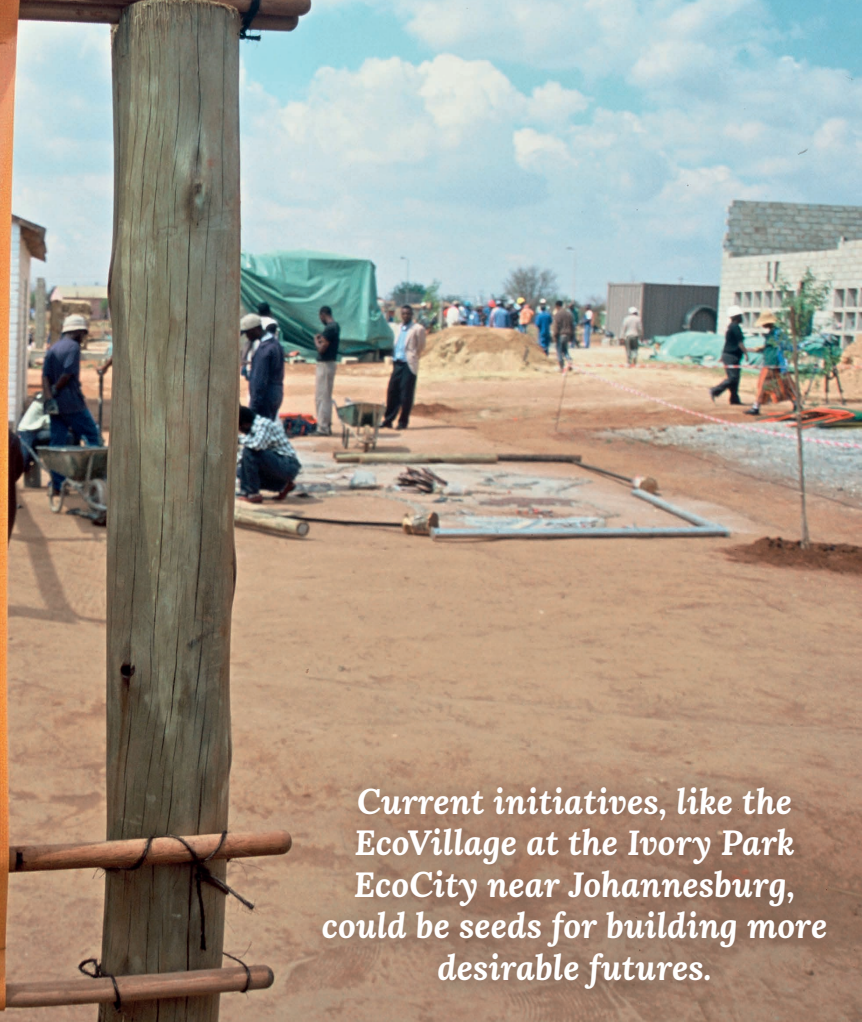
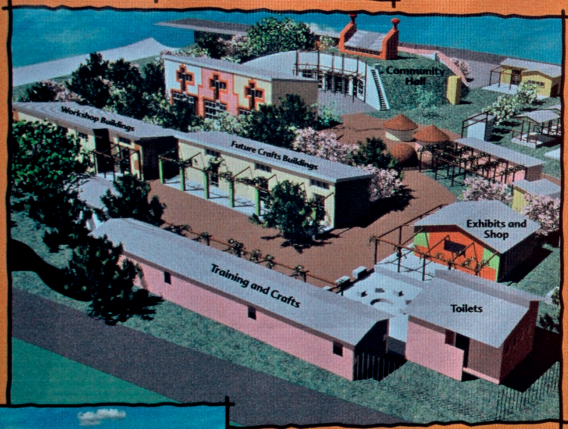
Africa, affecting daily lives and hampering the sustainable social and economic development targeted by African countries (IPBES, 2018). The loss of biodiversity and its contributions to well-being have been accelerated by indirect drivers such as rapid population growth and urbanisation, inappropriate economic policies and technologies, poaching and illegal wildlife trade as well as socio-political and cultural pressures (IPBES, 2018).

There is an urgent requirement to understand the importance of ecological infrastructure and the need to build, among other things, climate resilience on the continent. Ecological infrastructure refers to naturally-functioning ecosystems that deliver valuable services to people, such as water and climate regulation, soil formation and disaster risk reduction (SANBI, 2020). Achieving this understanding



*Futures thinking  
can help unlock  
development that  
addresses historical  
inequalities rather than  
exacerbating them.*

# EcoVillage



*Current initiatives, like the EcoVillage at the Ivory Park EcoCity near Johannesburg, could be seeds for building more desirable futures.*

will require a broader investment in capacity-building to shift away from current business-as-usual thinking about what development looks like. The future is determined by the actions we take today. To have an impact, it is critical to start taking action now, while being realistic in acknowledging that there are already activities taking place that set us on a pathway that means we might not achieve this agenda. The physical infrastructure boom under way in Africa will have impacts on its ecological infrastructure. The continent must manage its ecological infrastructure strategically, rather than leaving its configuration and persistence to chance. This is the challenge to which futures thinking and tools must be applied.

## Achieving action on Africa's agenda

In a wider sense, this report provides a clue to how to bring about transformative change on the continent: we need a future vision of "the

Africa we want" (African Union, 2015) that can engage stakeholders to have conversations and ask tough questions about investment decisions and governance accountability towards achieving that vision.

The African Union has already agreed on Agenda 2063 as a tool to guide decision-making on the continent. It is therefore necessary to use that document and its ten-year implementation plans as a starting point from which to connect other related target-setting agreements. These include the United Nations Sustainable Development Goals (SDGs) and the Paris Climate Agreement, as well as the Aichi targets and what emerges to replace them in the post-2020 agenda of the Convention on Biological Diversity.

Moving the sustainability agenda forward requires knowledge around how to change the dominant development discourse. There is a need to enable more cross-scale, cross-sectoral and cross-disciplinary thinking that allows for long-term decision-making under conditions of complexity and uncertainty.

## Linking futures to current decision-making

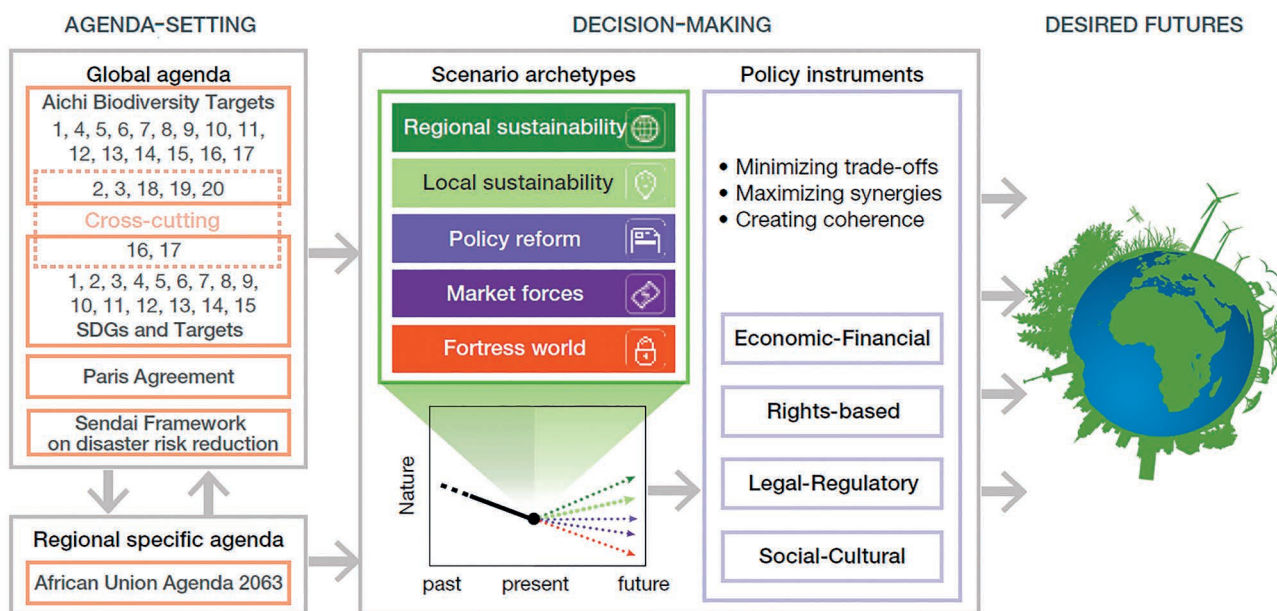
Achieving action on the basis of long-term visions can be difficult because it seems as if there is time to get there: even if the visioning work happens, there is often no link to action taken now. The leaders who make commitments now will not necessarily be around to see them come to fruition, so it is also important for these visions to be backed by milestones in the shorter term.

Successful anticipatory governance – using the future to make better decisions in the present – requires establishing pathways for getting to this desirable future. Progress reporting around the SDGs show that very little has changed over the past four years, suggesting that these pathways have not been adequately established (United Nations, 2019).

Furthermore, given the economic aftermath of the COVID-19 pandemic, expectations are that the likelihood of achieving the goals has fallen further (Naidoo and Fisher, 2020).

The IPBES regional assessment report (2018) found that scenario analyses are underused in decision-making processes in Africa. Eighty percent of the identified scenario studies were exploratory and relied mainly on climate change as a single driver of biodiversity change. The report noted that a concerted effort would be needed to build the capacity of African researchers, policymakers and institutions to understand, carry out, and make beneficial use of scenarios for intervention planning and informed decision-making.

As outlined in Figure 1, scenarios and futures thinking more generally can be extremely useful for both agenda-setting and informed decision-making towards achieving goals.



**Figure 1: Agenda-setting can be accompanied by effective decision-making that recognises future uncertainties. Thus relevant policy instruments can be employed to achieve a desirable future (IPBES, 2018: 39).**

*Solar panels could be revolutionary in providing off-grid access to energy, addressing an important development goal. Futures thinking provides a means of fully assessing the implications of such an energy revolution in terms of mining, human resources, ownership, etc.*



## Gaps in futures literacy

Currently, most futures outputs for Africa take the form of scenarios or horizon scans that extrapolate current trends. Examples include African Futures: Horizon 2025, a report from the European Union's Institute for Security Studies (Arnould et al., 2017), and the first African Ecological Futures report from WWF and the African Development Bank (2015).

While these are important documents, they do not adequately address the need for desirable narratives that can galvanise transformative change on the continent and for which there is buy-in from a diverse group of stakeholders (Pereira et al., 2018). This component – not only generating scenario outputs, but building futures literacy – has been recognised as an important endeavour globally for biodiversity and conservation (IPBES, 2016; Wyborn et al., 2020). The UNESCO Imagining Africa's Futures project is one initiative that aims to enhance futures literacy on the continent.

In a recent article, Kizito and Signs (2019) showed that youth inclusion, conflict resolution, and indigenous knowledge were missing from the scenarios literature in Africa. Added to this, there appears to be a sectoral gap: the engineering and infrastructure sectors on the

continent do not seem to be making use of the broad spectrum of futures thinking. They focus rather narrowly on risk as the one measurement of future impacts from development. However, there is evidence that futures thinking is being employed by these sectors in other parts of the world (Balfour Beatty, 2017).

Bridging the gap between the use of futures thinking and the achievement of continental goals could garner increased stakeholder involvement.

To uncover alternative solutions, it is necessary to engage with diverse voices and perspectives. But it is also critical to provide the tools that can allow those with decision-making power to engage with these alternatives in a meaningful manner, and this requires futures literacy and futures-thinking capacity. Depending on who is engaged, different alternative pathways towards the same futures will become apparent. It is necessary to be transparent about these and enable decision-makers to grapple with this uncertainty and diversity.

There are also different kinds of evidence that are used to help inform shorter- and longer-term futures. Being able to connect the more aspirational, longer-term visions with present decision-making requires a range of different tools.

## *The case of tourism*

Whereas built infrastructure such as a motorway or a dam has visible outputs, demonstrating the output and benefits from ecological infrastructure is notoriously difficult. Ecological infrastructure output and benefits might include water and climate regulation, healthy soil formation or disaster risk reduction, which are all but invisible to the untrained eye.

Tourism, as a benefit of ecological infrastructure, is one exception. With ecotourism, nature itself is the attraction. For example, tourism in Africa has largely been driven by the mega-fauna, which rely on ecological infrastructure for habitat and nourishment. Today, many communities in Africa are reliant on tourism to generate income to manage wildlife and their land.

However, tourism benefits tend to accrue to relatively few people. Moreover, all forms of tourism are extremely vulnerable to social, economic or political instability and changes in the international market. The COVID-19 pandemic and its impacts on travel and tourism will have long-lasting impacts on the nature conservation sector in Africa. Particularly in regions where there are few perceived incentives for conservation, exploring alternative futures is vital. This is especially the case in places where there is human-wildlife conflict.

Preparing for a future beyond tourism as a key mechanism for ensuring conservation requires understanding mindsets. Are there pathways that allow for nature to be an asset not just for the elite, but for all? Is there a better way to anticipate catastrophic events, for example through community-based conservation, and thus build more resilient development pathways? How can the outputs and benefits of ecological infrastructure be more tangible and relevant to people's lives and livelihoods? These are the kinds of questions that futures-thinking tools can help to anticipate and address.



### 3. TOOLS FOR FUTURES THINKING

The complex challenges that Africa faces can be addressed through the use of futures-thinking tools.

The outcome of any futures-thinking process will depend on the approach used and the associated choice of tools. The types of decisions that are to be made as well as the time frames involved are key considerations. In this report, the decision-making context is simplified into futures thinking to understand implications of processes under way

(existing futures) and tools for exploring alternative longer-term futures for better decisions in the present. This is called anticipatory governance (Vervoort and Gupta, 2018).

The tools described later in this chapter are grouped under these contrasting contexts of “navigating existing futures” and “enabling preferred futures” in Table 1. This grouping is, however, not clear-cut: each of these could be applied to either context if needed.

**Table 1: Grouping of futures-thinking tools according to the decision-making context.**

Navigating existing futures	Enabling preferred futures
<p>In this category are tools that help to reveal the likely impacts of the different options. They can also reveal how futures thinking can be used to make better choices.</p>	<p>Tools in this category help to explore what the future could be, including alternatives that we are not really thinking about today. They also help us to consider the behaviour change required to achieve our preferred vision.</p>
<p>Take the practical example of infrastructure where, on the African continent, things are happening; plans are being made and infrastructure projects are being developed. This is the situation now and it is necessary to be able to provide information to decision-makers about the range of risks and opportunities associated with these existing plans.</p> <p>Often, modelling based on a variety of scenarios can help provide this information, but it is also largely dependent on the measurements that are used. See, for example, Laurance et al. (2015).</p>	<p>Changing mindsets and building empowered narratives of how the future could be requires a different kind of futures thinking. Here it is important to understand that the future is uncertain and there are many pathways forward.</p> <p>For example, through participatory futures work it is possible to recognise and align a diversity of perspectives and opinions in order to negotiate what a more desirable set of futures could look like. These tools engage the imagination to develop mindsets that are open to diverse options and governance mechanisms that are more flexible and adaptive.</p>
<p><b>Tool examples:</b> Cynefin framework; iceberg modelling; futures literacy labs.</p>	<p><b>Tool examples:</b> backcasting; scenario planning; science fiction prototyping; Three Horizons framework; visioning.</p>



## The tools

The tools listed below are grouped into those that specifically use futures thinking and more general cognitive tools that feature the systems thinking required when considering futures.

In each case, we propose some sample questions that indicate how the tool could be applied to the challenges facing Africa.

Simple “how-to” guides for some of these tools can be found in “The art of systems change: Eight guiding principles for a green and fair future”, a WWF publication by the Fuller Systems Transformation Collaborative (2019).

## Futures tools

### Backcasting

Backcasting is a planning method that starts with defining a desirable future and then works backwards to identify policies and programmes that will connect that specified future to the present.

The methodology is proposed for scenario analysis of changes over 20 to 100 years into the future and can be applied to most areas of human activity (Robinson, 1990). The fundamental question in backcasting is: “if we want to attain a certain goal, what actions must be taken to get there?” (Dearden and Mitchell, 2016).

Futures under glass: A recipe for people who hate to predict by Robinson (1990) is a good resource for more information on backcasting.

#### **Questions one might ask about Africa using backcasting:**

*What does an Africa that meets the UN 2030 and African Union 2063 agendas look like? Working backwards from this future, what are the actions that we need to take to get there? What role is there for individual citizens, national government, civil society, business and international organisations in building this future?*



*Radical Ocean Futures, science-based stories about our future oceans.*

## Scenario planning

Scenario planning is an approach that encourages the framing and re-framing of possible futures to shape the understanding and actions of individuals or groups. Scenarios have been used by major companies, governments, and others to explore possible futures under conditions of substantial uncertainty.

While different methods and tools exist for scenario planning, most share common elements. These include identifying drivers, stakeholders, trends, constraints, and other important issues and ranking these by importance and uncertainty. Scenario planning uses this information to inform different understandings of the future. It is important to note that different scenarios methods will result in not only different narratives and insights, but very different experiences for participants (Curry and Schultz, 2009). Methods mentioned include the 2x2 matrix approach (Schwartz, 1991), causal layered analysis (Inayatullah, 2004), and scenario archetypes (Hunt et al., 2012).

More information on scenario planning can be found in Strategic Reframing: The Oxford Scenarios

Planning Approach by Ramírez and Wilkinson (2016).

### ***Questions one might ask about Africa using scenario planning:***

*What are some of the most important drivers of change on the continent and what outcomes might result from them? Can we test the robustness of our current policies in these possible futures, to see whether they can be improved to deliver impact irrespective of what changes might occur?*

## Science fiction prototyping

Science fiction prototyping refers to the idea of using science fiction to describe and explore the implications of futuristic technologies and the social structures enabled by them. The core methodology is the use of creative arts as a means to introduce innovations into science, engineering, business and socio-political systems.



This tool doesn't aim to forecast the future, but rather focuses on inventing or innovating the future by extrapolating trends from research or foresight activities. Radical Ocean Futures is an example from the field of sustainability. It applies science fiction prototyping to the future of fisheries, presenting four 'radical' and compelling narrative scenarios, each supported by a strong scientific evidence base.

Read more about the use of science fiction prototyping in Radical ocean futures-scenario development using science fiction prototyping by Merrie et al. (2018), and Wakanda forever: African science fiction for reimagining the Anthropocene by Pereira et al. (2020).

**Questions one might ask about Africa using science fiction prototyping:**

*What are the stories we tell ourselves about the continent's future? Are we talking about the possibility of creating a Wakanda, as in the movie Black Panther, or thinking through the implications of the Africa depicted in the movie District 9?*

## Three Horizons framework

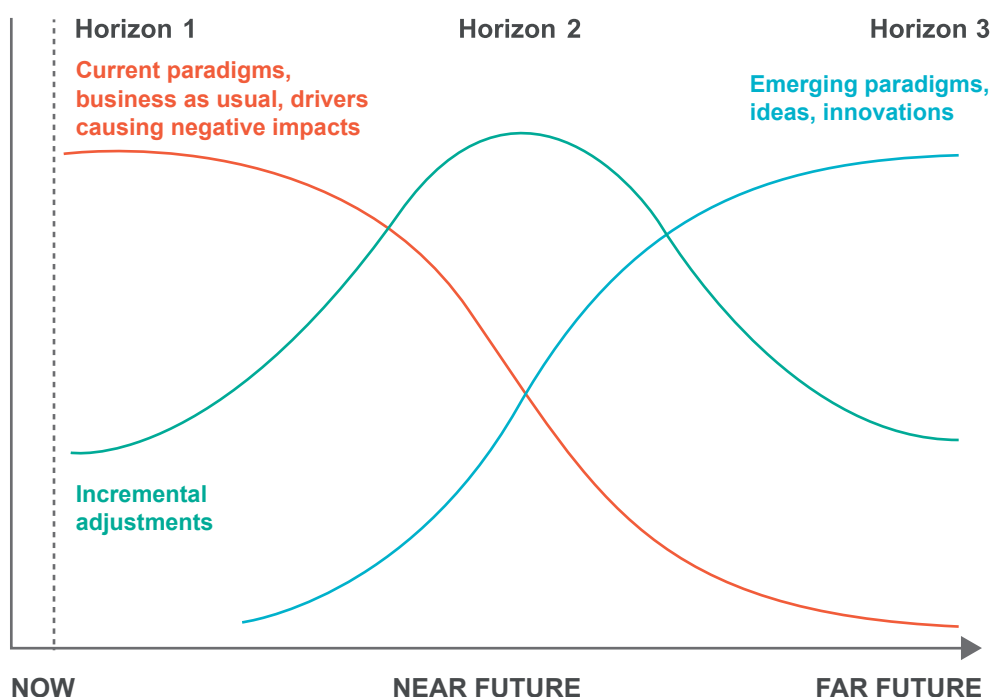
The Three Horizons framework (Figure 2) is a simple and intuitive framework for thinking about the future (Sharpe et al., 2016). When applied, the practice typically involves a facilitated conversation with diverse stakeholders to assist sense-making and strategic action.

**Horizon 1** – the dominant system at present. It is the system that we want to transform from and represents 'business as usual'. It is the starting point on the roadmap to transformational change.

**Horizon 2** – the necessary changes to (i) break the current dominant patterns of the system being transformed from and (ii) support beginnings of the system being transformed.

**Horizon 3** – represents the system being transformed into. It develops from disruptive innovations in the present that introduce completely new ways of doing things and that are much better designed for adapting to the system we want to become.

Figure 2. The Three Horizons framework illustrated (adapted from Sharpe et al., 2016)





**This African regional workshop in Rwanda used futures-thinking tools to discuss pathways to reach the SDGs (Aguiar et al., 2019)**

The framework is described in detail in Three Horizons: A pathways practice for transformation by Sharpe et al. (2016).

**Questions one might ask about Africa using the Three Horizons framework:**

*What does a transformed Africa look like in 2100 and how can we move from current lock-ins to a radically alternative system that meets all the needs of the continent’s citizens equitably and sustainably? Are there specific interventions or key leverage points that will be critical to build this future? What will need to decline or collapse for us to get there?*

**Visioning**

Visions of the future and the method of envisioning are common approaches for making claims about and for the future. Most futures practitioners confirm that a (shared) vision is needed for successful action, and the active development of vision is therefore to be encouraged.

In practice, the term ‘vision’ often does not refer

to a particular methodology, but to virtually any claim of what the future might, could or should be. As such, there are a variety of different methodological approaches for visioning, some more creative and imaginative than others.

Two sources of detailed information about visioning are The vision phenomenon: Towards a theoretical underpinning of visions of the future and the process of envisioning by van der Helm (2009) and Quality criteria for visions and visioning in sustainability by Wiek and Iwaniec (2014).

**Questions one might ask about Africa using visioning:**

*What are the diverse desirable futures that we can envision among different stakeholders on the continent? How can we be more inclusive in developing action plans that will lead us towards a better future for the continent?*

**Futures Literacy Laboratories**

Futures literacy is a capability that offers insights into both the reasons and the methods

humans deploy when they anticipate. Being 'futures literate' enables people, together, to appreciate the world more fully, to use the future to innovate the present (Miller, 2007, 2013). When the past is used only to make sense of the future, or the future is thought of only as a time or place to colonise by being clever about imposing today's ideas on tomorrow, it is more difficult to sense and make sense of the novelty-rich present (UNESCO, n.d.). Expanding why and how we use the future gives us more choices by expanding what we can see and what we might do.

Futures Literacy Laboratories have been co-designed and implemented by UNESCO around the world over the last seven years. These action-learning or action-research initiatives have enabled thousands of people to become familiar with futures.

Futures Literacy Laboratories are based on the methods described in Futures literacy: A hybrid strategic scenario method (2007) and Changing the conditions of change by learning to use the future differently (2013), both by Miller.

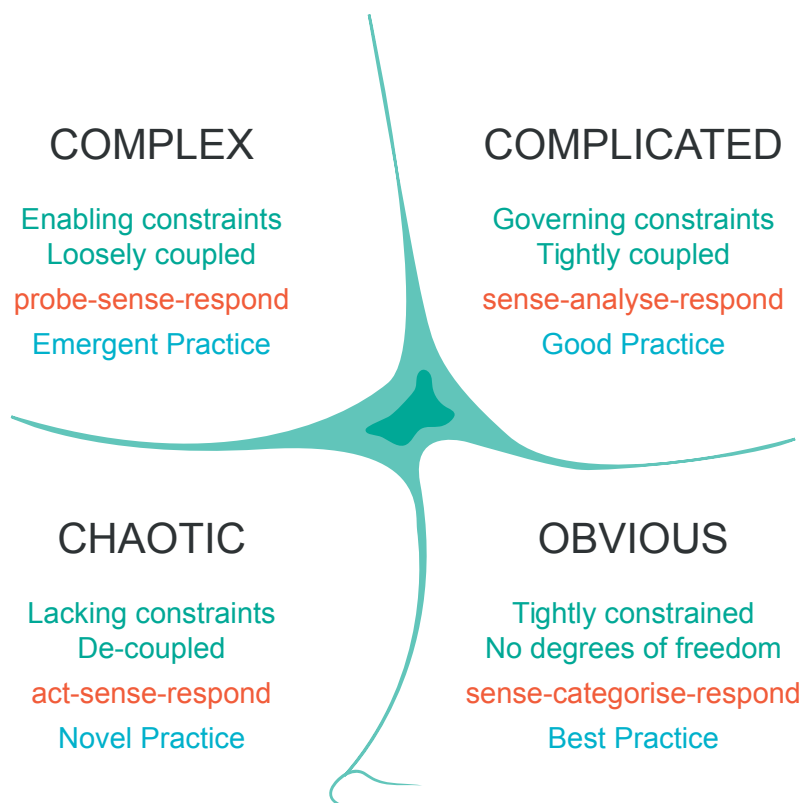
**Questions one might ask about Africa using Futures Literacy Laboratories:**  
*How can we come to terms with the uncertainty of the future to make better decisions in the present? What impacts could my actions now have on the future? What alternative types of planning are available?*

## Cognitive tools

### Cynefin framework

The Cynefin framework is a conceptual framework used to aid decision-making under complexity. It was created in 1999 by Dave Snowden and is named using a Welsh word meaning habitat, haunt, acquainted, familiar. The idea of the Cynefin framework is that it offers decision-makers a sense of place from which to view their perceptions.

**Figure 3: Domains of the Cynefin framework; the dark domain in the centre is disorder.** (Dave Snowden, released under CC BY 3.0)



Cynefin offers five decision-making contexts or 'domains' (Figure 3): obvious (or simple), complicated, complex, chaotic, and disorder. The framework helps its users to identify how they perceive situations and make sense of their own and other people's behaviour.

**Questions one might ask about Africa using the Cynefin framework:**

*What type of practice is best suited for the situation in which I find myself? What governance arrangements must we develop in Africa to ensure we have the capacity to respond to all types of different system states?*

## Iceberg model

To explore what makes any one component of a system complex, and how it contributes to a complex system, we must look below the surface. Using the iceberg model can help uncover differences in the ways people perceive problems, and the underlying causes of them (Figure 4). The further down we work on the

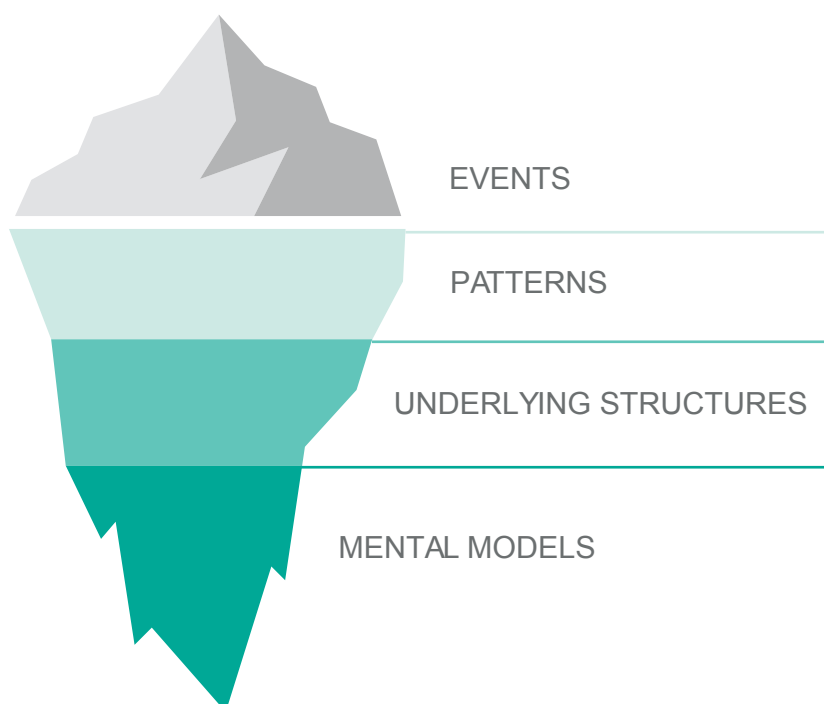
iceberg, the more transformational change will be (Fuller Transformation Collaborative, 2019).

The iceberg model can be used in a short participatory group exercise to identify patterns related to a problem, the systems structures related to those patterns, and the ingrained thinking that creates the structures. The steps of the exercise are set out by Fuller Transformation Collaborative in the 2019 WWF publication.

**Questions one might ask about Africa using the iceberg model:**

*What are the assumptions we make about how African societies function and are there different ways we could think of that would allow new solutions to current challenges to emerge? Are there different ways of determining what 'development' means in Africa if we unpack our mental models? How can conservation be decolonised? What are the underlying economic structures that perpetuate inequalities on the continent and how can we address them?*

**Figure 4: The iceberg model illustrated**  
(adapted from Fuller Transformation Collaborative, 2019).



## 4. AFRICA'S BASELINE FUTURES CAPACITY

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A recent Africa-focused issue of the Journal of Futures Studies showcased the capacity for futures-oriented research and thinking on the continent (Gatune, 2018). While not claiming to be a comprehensive review, it hoped to “stimulate researchers and practitioners to develop more articles and further deepen our understanding of Africa and more crucially point to levers for steering Africa to better futures.”

This chapter is a further attempt to define the current capacity for futures thinking in Africa. Table 2 outlines core futures-oriented networks based on the African continent, while Figure 5 provides a view of their geographical spread.

This table originated at the April 2019 AEF II workshop in Gland, Switzerland. Most of the networks were identified by the workshop participants, with subsequent research leading to the addition of others. Although based on the expert opinion of those in the field, it does not claim to be a definitive list. Rather it offers a starting point from which to build more information on this field.

While all of the initiatives mentioned in Table 2 are characterised as networks, they rely on key individuals. In many cases, the same people play a central role in more than one organisation.

*Africa's ecological infrastructure includes mangroves, such as these near Palma, Mozambique.*



**Table 2: Africa-based networks promoting or using futures thinking**

Name of network	Established	Locations	Sector of activity	Activities and objectives
Society for International Development (SID)	1957	Kenya, Italy	Development	<p>SID is a global network of individuals and institutions concerned with development that is participative, pluralistic, and sustainable. Through its programmes and initiatives, it plays a crucial role in promoting dialogue between different people, interest groups and constituencies, both locally and internationally.</p> <p>Since 2000, SID has been a pioneer in the use of futures-based methodologies to carry out public interest scenario programmes in East Africa. These initiatives have been critical in helping society dialogue with itself during complex moments and have contributed to reducing tensions between opposing political factions.</p> <p><a href="http://www.sidint.net">www.sidint.net</a></p>
Institute for Futures Research (IFR)	1984	South Africa	Education	<p>Based at the University of Stellenbosch, the IFR was the first futures institute of its kind on the African continent. It was restructured in 2016, resulting in the refocus of its research environments and service offering to strategically support organisations and government institutions to create their desired futures.</p> <p>It aims to deliver global impact research for innovative, long-range decision-making in Africa. One of the core objectives is to assist senior leaders to make better decisions by anticipating risk earlier and by sensing opportunities in good time.</p> <p><a href="http://www.ifr.sun.ac.za">www.ifr.sun.ac.za</a></p>
Institute for Security Studies (ISS)	1991	South Africa (HQ), Kenya, Ethiopia, Senegal,	Security	<p>The goal of the ISS is to enhance human security as a means to achieve sustainable peace and prosperity. It is an African non-profit organisation with offices in four countries. Its work covers transnational crimes, migration, maritime security and development, peacekeeping, peacebuilding, crime prevention and criminal justice, and the analysis of conflict and governance.</p> <p>The African Futures Project, launched in 2011, is an ongoing collaboration between the ISS and the Pardee Center (at the University of Denver) to develop a series of scenario-based, quarterly policy briefs. Covering topics such as the potential for a green revolution or for malaria eradication in Africa, the aim is to provide forward-looking, policy-relevant material.</p> <p><a href="http://issafrica.org">issafrica.org</a></p>

Name of network	Established	Locations	Sector of activity	Activities and objectives
African Women's Development Fund (AWDF)	2001	Ghana	Gender	<p>The AWDF is a grant-making foundation that supports local, national and regional women's organisations working towards the empowerment of African women and the promotion and realisation of their rights. It aims to strengthen and support the work of African women's organisations.</p> <p>In 2016, the AWDF embarked on a strategic planning process focused on the question of how the AWDF and African women's organisations can contribute to shaping the future of Africa. The project combines empirical analysis of future trajectories with the creative generation of scenario stories.</p> <p><a href="http://awdf.org">awdf.org</a></p>
African Futures Institute (AFI)	2004	South Africa	General	<p>The AFI was established in early 2004 to sustain prospective thinking in Africa by building on the achievements of the UNDP's African Futures project (1992–2003), set up to assist African countries to conduct perspective studies and develop a long-term vision for their development process.</p> <p>It is a non-governmental organisation whose main objective is to promote the adoption of a proactive attitude towards the future, being the only attitude capable of creating conditions that can enable African countries to take advantage of changes in a context characterised by the rise of uncertainties. It provides advice, training and research on long-term prospective studies.</p> <p><a href="http://www.africanfuturesinstitute.org">www.africanfuturesinstitute.org</a></p>
Southern Africa Node of the Millennium Project	2004	South Africa	General	<p>The Millennium Project is a think tank dedicated to exploring global futures to understand change and identify actions to reach the best possible future for humanity. Its Southern Africa Node functions as a free and voluntary association of individuals and networks that are interested in foresight in Southern Africa.</p> <p>The node's aims are to spread the culture of futures thinking in the region, to deepen expertise in futures among institutions and individuals in southern Africa, and to galvanise and mobilise southern African experts and networks to participate in the activities of the Millennium Project.</p> <p><a href="http://samnode.org.za">samnode.org.za</a></p>

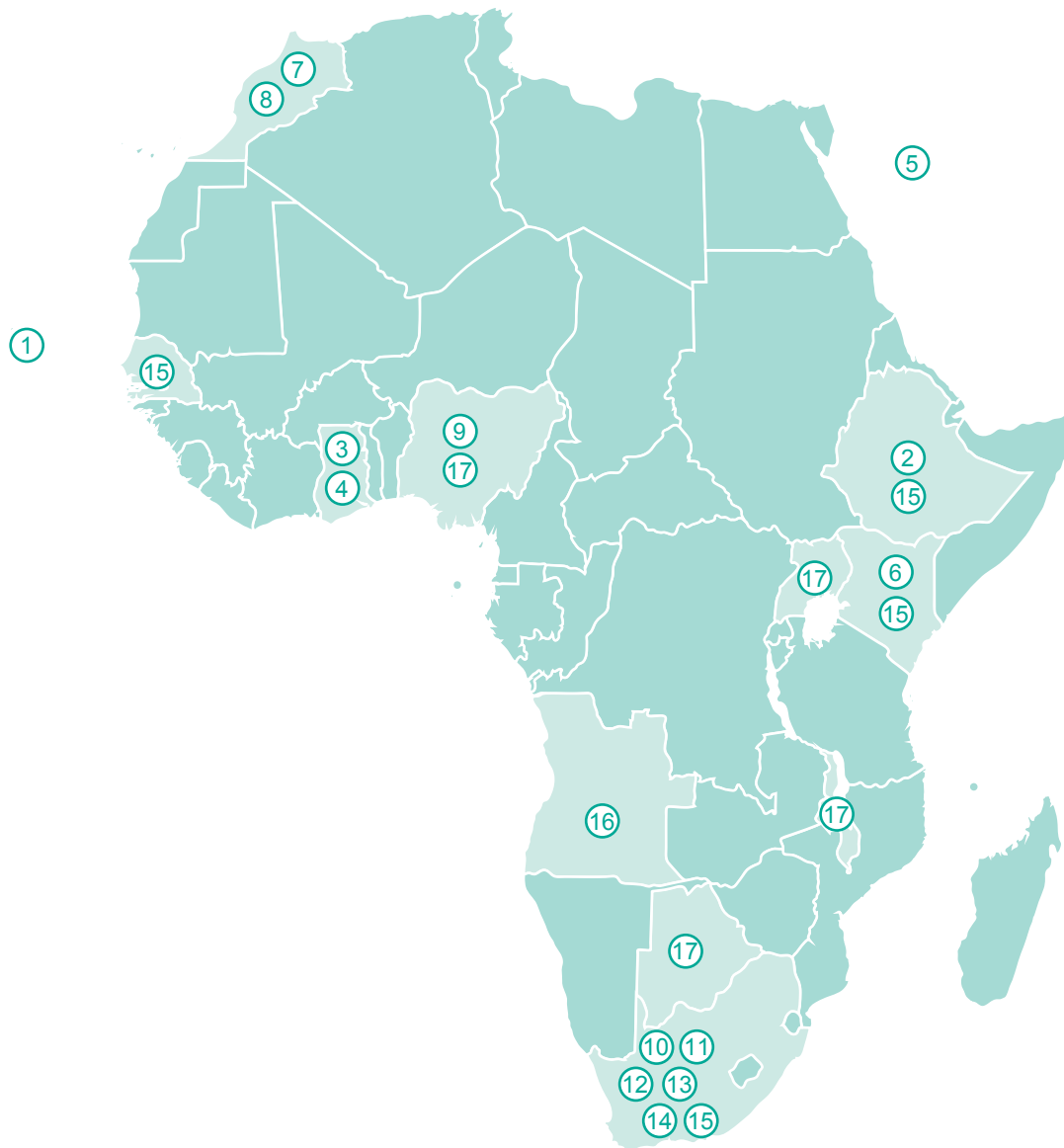
Name of network	Established	Locations	Sector of activity	Activities and objectives
African Center for Economic Transformation (ACET)	2008	Ghana, USA	Economics	<p>The ACET is an economic policy institute supporting Africa's long-term growth through transformation. Its mission is to help governments and businesses deliver economic transformation that improves lives.</p> <p>Aiming to address some of the policy and institutional barriers that hampered sustained economic growth on the continent, the ACET produces research, offers policy advice, and galvanises action for African countries to develop their economies, reduce poverty, and improve livelihoods for all their people.</p> <p><a href="http://acetforafrica.org">acetforafrica.org</a></p>
African Innovation Foundation (AIF)	2009	Switzerland, Angola	Innovation	<p>The AIF aims to mobilise innovation across the continent for the personal, cultural and economic benefit of all Africans, with a clear focus on transformation towards better futures.</p> <p>Its core programmes seek to support and strengthen innovation ecosystems, to promote governance and access to law, and to realise social impact.</p> <p>AIF Angola seeks to drive development by creating sustainable innovation-based impact in local communities and by catalysing the innovation ecosystem in Angola to solve pressing social problems.</p> <p><a href="http://africaninnovation.org">africaninnovation.org</a></p>
Foresight for Development	2009	South Africa	General	<p>Foresight for Development supports the effective use of foresight for Africa's future by aggregating, enhancing and promoting futures thinking and practice in Africa.</p> <p>It provides a digital repository of regional foresight content and aims to assemble a regional community of futurists and foresight practitioners. The network shares information such as case studies, methodologies, and tools, serving as a gateway to foresight products and resources in Africa.</p> <p>It was developed and is hosted by the Southern Africa Node of the Millennium Project.</p> <p><a href="http://foresightfordevelopment.org">foresightfordevelopment.org</a></p>



Name of network	Established	Locations	Sector of activity	Activities and objectives
Africa Innovation Summit (AIS)	2014	Cape Verde	General	<p>The AIS is an Africa-wide initiative aimed at harnessing the innovation potential of the continent. It aims to mobilise a coalition for collective action to promote and build an enabling environment for innovation in Africa.</p> <p>The AIS platform includes regular summits to promote dialogue, facilitate exchange of best practices, showcase what is happening on the continent, and share experience. The platform also includes engaging with African researchers and scholars to undertake case studies to facilitate learning by stakeholders.</p> <p><a href="http://www.africainnovationsummit.com">www.africainnovationsummit.com</a></p>
Futures Studies Forum for Africa and the Middle East (FSF)	2014	Jordan	General	<p>The FSF is a non-governmental organisation aiming to reconnect North Africa with Africa as a whole by demonstrating a shared future and rebuilding connections between Sub-Saharan Africa and the MENA (Middle East and North Africa) region. Its mission is to effectively contribute to the development, welfare, and economic-cultural integration of North Africa, the Middle East, and Sub-Saharan Africa via the successful utilisation of futures studies and futurists' experience. It works with partners in Egypt, Ghana and South Africa.</p> <p>The objectives of the FSF include supporting decision-makers, raising public awareness, establishing networks, building an intellectually robust forum of thinkers, innovators and researchers, and developing a strong base of human resources in the field of futures studies.</p> <p><a href="http://www.foresightfordevelopment.org/fsf">www.foresightfordevelopment.org/fsf</a></p>
Policy Center for the New South (PCNS)	2014	Morocco	General	<p>The PCNS is a think tank aiming to contribute to the improvement of economic and social public policies that challenge Morocco and the rest of Africa as integral parts of the global South. Focused on dialogue and partnership, it aims to cultivate African expertise and the excellence needed for the accurate analysis of African and global challenges and the suggestion of appropriate solutions.</p> <p>The PCNS brings together researchers, publishes their work, and capitalises on a network of renowned partners, representative of different regions of the world. It hosts gatherings of different formats and scales and is developing a community of young leaders for cooperation and networking between a new generation of decision-makers from the government, business, and civil society sectors.</p> <p><a href="http://www.policycenter.ma">www.policycenter.ma</a></p>

Name of network	Established	Locations	Sector of activity	Activities and objectives
Imagining Africa's Futures	2017	Morocco	General	<p>Initiated by UNESCO, this project aims to coordinate a reflection on the future of Africa and to strengthen the continent's foresight capacity.</p> <p>The project's strategy includes the creation of two futures-literacy centres (one in Morocco and one in Sub-Saharan Africa) to develop research and training programmes, engage different types of communities, and serve as regional hubs for futures-literacy practitioners in Africa and beyond. It also plans to organise Futures Literacy Laboratories around Africa, contributing to the establishment of communities of practice.</p> <p>One expected output is the production of new visions to illuminate specific local, national or regional challenges in Africa, across a broad range of topics.</p> <p><a href="http://en.unesco.org/imagine-africa-futures">en.unesco.org/imagine-africa-futures</a></p>
Sustainable Futures in Africa (SFA)	2017	Uganda, Botswana, Nigeria, Malawi, UK	Sustainability	<p>The SFA Network is an interdisciplinary collective that brings together researchers, practitioners, and communities of practice that acknowledge the situated and complex nature of sustainability. It aims to build understanding, research, and practice in socio-ecological sustainability in Africa.</p> <p>Specifically, the network includes the participation of researchers, third-sector organisations, and community stakeholders. Within each hub, the interdisciplinary team explores ways to engage and co-build the research agenda with communities and relevant stakeholders to ensure strong impacts.</p> <p><a href="http://sustainablefuturesinafrica.com">sustainablefuturesinafrica.com</a></p>
Future Africa	2019	South Africa	Research	<p>Based at the University of Pretoria, Future Africa is a research institute that aims to make possible fundamentally new approaches to research and innovation that span disciplinary fields and geo-political boundaries.</p> <p>Future Africa will take a future-oriented perspective on skills development for a new generation of transformation-minded science leaders in Africa. It will actively build networks between leaders of science across Africa and the rest of the world, developing interdisciplinary and multinational research teams. These teams, together with societal structures beyond academia, can engage in impactful and responsible research to find innovative solutions to complex problems in Africa.</p> <p><a href="http://www.futureafrica.science">www.futureafrica.science</a></p>

**Figure 5 : Map showing the countries on the continent where offices of Africa's futures-thinking networks are located.**



1	Africa Innovation Summit (AIS)	Cape Verde
2	Institute for Peace and Security Studies (IPSS)	Ethiopia
3	African Women's Development Fund (AWDF)	Ghana
4	African Center for Economic Transformation (ACET)	Ghana
5	Futures Studies Forum for Africa and the Middle East (FSF)	Jordan
6	Society for International Development (SID)	Kenya
7	Imagining Africa's Futures	Morocco
8	Policy Center for the New South (PCNS)	Morocco
9	Africa Economic Development Policy Initiative (AEDPI)	Nigeria
10	Foresight for Development	South Africa
11	Southern Africa Node of the Millennium Project	South Africa
12	Institute for Futures Research (IFR)	South Africa
13	Future Africa	South Africa
14	African Futures Institute (AFI)	South Africa
15	Institute for Security Studies	South Africa, Kenya, Ethiopia, Senegal
16	African Innovation Foundation	Switzerland, Angola
17	Sustainable Futures in Africa (SFA)	Uganda, Botswana, Nigeria, Malawi

## Coverage and scope

Although the headquarters of the networks listed in Table 2 are concentrated primarily in southern Africa, there is nevertheless a spread across the continent. Additionally, the majority have a pan-African scope for their objectives and activities.

While many of the networks do not focus on a specific sector of activity, there is at least one dedicated network that contributes to futures capacity for the following sectors: development, economics, education, gender, innovation, security and sustainability. There are some sectors on the continent in which futures thinking has been quite prominent. Table 3 highlights these sectors and gives examples

of organisations and relevant reports that use futures thinking for the continent.

Some sectors appear more likely to already employ futures thinking in their decision-making. For example, foresight is often employed in the food and agriculture sector through organisations like FARA (Forum for Agricultural Research in Africa), that hosts the African Foresight Academy. Through academic research that feeds into intergovernmental assessment processes with regional reports, climate and environment are also well represented. Technology, innovation and design are other sectors that appear to be better represented by futures thinking, through platforms like the Futur.e.s in Africa festival and the African Innovation Summit.

**Table 3: Sectoral organisations employing futures thinking on the African continent and related publications that illustrate futures thinking in practice**

Sector	Relevant Organisation or Network	Illustrative references
Food and agriculture	FARA (Forum for Agricultural Research in Africa)	Ajilore and Fatunbi, 2018
Climate and environment	IPCC (Intergovernmental Panel on Climate Change)	Boko et al., 2007; Niang et al., 2014
	IPBES (Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services)	IPBES, 2018; Biggs et al., 2019
	Global Environment Outlook from UNEP	UNEP, 2016
Fisheries	WIOMSA (West Indian Ocean Marine Science Association)	<a href="http://www.wiofutures.net">www.wiofutures.net</a>
Peace and Security	Institute for Security Studies Institute for Peace and Security Studies (IPSS)	Bello-Schünemann et al., 2018 IPSS, 2014
Cities and urban planning	ICLEI Africa	Spires et al, 2017
Technology, innovation and design	Futur.e.s in Africa festival African Innovation Summit	<a href="http://futuresin.africa">futuresin.africa</a> Adesida et al., 2017



It is important to note that there is an English language bias in this report and that while some French, Portuguese and Arabic speaking institutions have been included in the tables, others are likely to have been inadvertently omitted.

## The importance of individuals

There is a growing community of futures professionals throughout Africa. The networks listed in the table are connected through a web of key individuals who are often involved with two or more of the organisations. Many of them contributed to the current report.

The Association of Professional Futurists is a global community of futurists, dedicated to promoting professional excellence and demonstrating the value of strategic foresight and futures studies for their clients and/or employers. The association has more than 400 members from 40 countries, including several in Africa, who meet regularly and host active online discussions as practitioners. It offers one means by which stakeholders in Africa can identify relevant experts in futures thinking.

## A role for the private sector?

Participants in the AEF II workshop also identified some notable private sector actors that use

futures and foresight methodologies in Africa. These included management and development consultancies as well as providers in specific industries, for example insurance. Some are global concerns with a significant presence in Africa, while others operate in a given country on the continent.

Reos Partners is notable for the work it undertook on the South African post-Apartheid political transition scenarios, popularly known as the Mont Fleur scenarios. Pegasys is another consultancy based in South Africa whose work has included research for the first AEF ecological futures report (WWF, 2015).

## Futures training in Africa

A small number of the networks listed in Table 2 above include the provision of training within their stated objectives. Examples include the African Futures Institute and the UNESCO programme Imagining Africa's Futures. In general, however, there are few sources of training and education in futures thinking on the African continent.

## Universities

The opportunities for undergraduate and postgraduate studies in futures thinking on the continent are limited to a handful of institutions.

Stellenbosch University in South Africa, which hosts the Institute for Futures Research (see Table 2), offers a Postgraduate Diploma in Futures Studies. The course is designed to expose participants to:

- the nature of global change, its rapid pace and its ever-increasing complexity;
- an understanding of the forces and trends that shape the future; and
- managing organisational strategies so as to create a desired future.

This one-year programme consists of six modules: principles of futures studies; applied systems thinking; applied philosophy; measuring and making the future; understanding the world; and managing for change.

The African Leadership University (ALU), with campuses in Mauritius and Rwanda, aims to develop 3 million ethical and entrepreneurial leaders for Africa and the world by 2035. It uses a personalised, student-driven, project-based, and mission-oriented approach to create agile, lifelong learners who can adapt to a changing world. Although not specifically tailored towards futures literacy, the noted futurist Marina Gorbis sits on the ALU's global advisory council.

Future Africa, housed at the University of Pretoria, is the latest institute to offer leadership and research capacity in futures thinking for the

continent. The University of Pretoria established the Future Africa initiative as a platform to develop leadership in transdisciplinary research in Africa. It aims to position itself as a hub for African and global research networks to address the wicked challenges that hamper transformation towards a prosperous, equitable and sustainable future in Africa. While not focusing only on futures thinking, with the vision of “transforming the world through African research excellence” it is a hub where futures capacities are being built and fostered.

## E-learning

A six-part webinar-based course on Developing Foresight Capacity for Climate Resilient Agricultural Development was offered in June and July 2020 by the Southern African Development Community (SADC). The course, which was oversubscribed, was designed to prepare participants to apply practical and concrete foresight tools and methods to plan for climate resilience in agriculture and natural resource management.

The aforementioned SADC webinar series was a forerunner to the launch of the Foresight Training Resource Centre and a related SADC Futures foresight e-learning course. These would be made available via the website of the Centre for Coordination of Agricultural Research and Development for Southern Africa (CCARDESA).



## 5. BROADENING FUTURES CAPACITY IN AFRICA

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**“The human condition can almost be summed up in the observation that, whereas all experiences are of the past, all decisions are about the future. The image of the future, therefore, is the key to all choice-oriented behavior. The character and quality of the images of the future which prevail in a society are therefore the most important clue to its overall dynamics.”**

**Kenneth Boulding**, *economist. Foreword in The Image of the Future, Fred Polak, 1973 (from Miller 2007)*

This report has outlined a baseline understanding of futures capacity on the African continent, with a focus on the environmental sector. As well as showcasing the current capacity, it has provided examples of futures thinking in practice and identified the sectors that tend to deploy it most frequently. A selection of the futures tools that can be employed to help answer some of the tough questions that the continent may need to ask have also been outlined.

What is evident is that futures thinking is an important and necessary capacity for Africa, but that its application remains limited and the skillset remains concentrated among a few individuals and organisations. There is a need not just to increase the number of African futurists, but to improve the ability of decision-makers to internalise and take on board the insights from futures/foresight approaches.

Use of the future for planning is widespread – the range of strategic plans on the continent is evidence of this – but it must be done strategically.

**“I see it as a bit of a hygienic factor to do foresight. I really think it’s something one cannot dispense with. [...] For me it’s a question, especially the governance space, of how systematically and with what degree of deliberateness one does foresight. I think that’s what a number of us foresight champions argue for is that there is some value in thinking through things, understanding the tools you can use, seeing when and where you can use them and whether they will be adequate in terms of ensuring you have made the best decisions.”**

**Geci Karuri-Sebina**, *author, urban scholar and practitioner (SID, 2014)*

### **Futures thinking: a critical tool**

Given the sustainability challenges that Africa will encounter as we head towards the key milestone years of 2030 (UN Sustainable Development Goals), 2050 (Convention on Biological Diversity vision) and 2063 (African Union), it is increasingly important for the continent to build its capacity to engage with the future and to use it for more resilient decision-making.

It is evident that the current development trajectory is not meeting the needs of either the most disadvantaged citizens or the planet – transformative change is required. However, to understand the kinds of transformative actions that might be undertaken in the present, it is important to have a sense of what their implications might be and even to acknowledge that we have different conceptualisations of what a preferable future might entail. Futures thinking does not

provide all of the answers to Africa's concerns, but it is a critical tool that if harnessed and used appropriately could result in long-term benefits for decision-making on the continent.

***“By combining an openness to the potential of the future with a greater ability to invent stories that make sense of the present, futures literacy produces strategic insight without prejudicing the autonomy of people in the future to see different options and hold different values. Still, futures literacy is only a tool. And, like any tool, it can be used for “good” or for “bad”. Nor is the tool an end in itself.”***

**Riel Miller, Head of Futures Literacy at UNESCO (Miller, 2007)**

The future is not something that can be shied away from; it needs to be embraced in all its complexity and uncertainty.

Learning to be able to work with the future and thereby shape it, rather than trying to control

it, is an important skill for decision-makers. Futures thinking provides a way to address the unique challenges of the Anthropocene – our current era within which humankind has become the most dominant force shaping the planet (Crutzen, 2002). Building up Africa's futures capacity will not only benefit the long-term strategic thinking of the continent, but could also provide a shining example for the world in coming up with new and different ways of overcoming future challenges.

***“We owe it to ourselves and to our community, to show that there are alternative futures and to shed some light on what we see in them. For me this is simply a matter of ethics, a matter of responsibility to say and to share views about what is possible in expanding the horizon, that's the price you have to pay if you want to be a good citizen. To a large extent foresight is also about positioning oneself in life and having to appreciate life.”***

**Alioune Sall, African futurist (SID, 2014)**







### **Fred Swaniker**

*Founder and CEO, African Leadership Group*

The unprecedented emergence of COVID-19 has significantly impacted many sectors in Africa. In a world where the status quo has shifted and key players have been left exposed, the need for futures thinking has never been greater. Today, there is a critical need to:

1. Foster more collaboration between indigenous actors in African conservation.
2. Balance faster decision making in the short term with the need to keep a long-term view.
3. Manage our ecological infrastructure, despite uncertainty, so that we can build climate resilience.

In the conservation sector, the pandemic has illuminated the need for us to build capacity towards resilience, diversify risk and promote investment in natural resources. Forward-thinking is not simply to help us continue our consumption of these natural resources or to protect them, but more importantly, to help us promote greater sustainability for conservation and development.

However, it is important to note that futures thinking cannot be approached the same way as we have done before. The world's current situation calls for scenario planning and a complete reimagination of how we approach and manage conservation. As many say, "constraints drive innovation" and, therefore, we must take advantage of this moment to reimagine a new future. This report is a great step to shifting our paradigm towards how we plan for and imagine Africa's ecological future.

As we embrace futures thinking, we also need to empower and engage a new generation of conservation and environmental leaders who grow our natural resources through sustainable and effective investment. Conservation cannot only be viewed as a luxury for nature's sake but must be redefined as a great driver of Africa's growth. And we need to develop leaders who can drive this growth.

It is also imperative that these leaders tackle the future with a growth mindset driven by hard facts. This report is undoubtedly a great step towards uncovering the African ecological landscape and proposes futures-thinking tools as a starting point. However, we cannot stop here. This report should also serve as a catalyst to gather the data needed to better empower leaders to make decisions that lead to sustainability now and in the future. Ultimately the balance between long-term thinking and making decisions for the present will only be effectively managed with adequate data at our fingertips.

For a bright ecological future to emerge in Africa, governments, the private sector, NGOs, communities and academia can no longer work in silos. Today, the links between human health, conservation and development have never been clearer. Identifying these interlinkages will further fuel collaboration and the mainstreaming of futures thinking, and also empower us to create the impact needed to drive more sustainable conservation that benefits nature, people and the economy.

The late Nelson Mandela once said, “We can change the world and make it a better place. It is in our hands to make a difference.” This African Ecological Futures report serves as a great catalyst towards this journey of creating a more sustainable future and strengthening futures capacity in Africa.



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