



Africa Insurance Pulse 2022

**Climate change and its impact on
the African insurance sector**

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SUBSTANCE IS
OUR STRENGTH

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Cover illustration: Beautiful baobab avenue at sunrise in Morondava, Madagascar, photo by Yasmine Arfaoui

The Baobab tree is one of Africa's natural wonders. Also known as the «tree of life», the species can live for more than 2,000 years and its massive, water-storing trunks can reach a diameter of 9 meters and a height of 18 meters. Baobabs can store up to 120,000 litres of water in their trunks to survive harsh droughts. In many areas, the trees have cultural and religious significance. All baobab species are used extensively by local people. They serve as a renewable source of food, fibre and fuel, and as a centre of spiritual life. But now some of the largest baobab trees are dying and collapsing under their own weight. Scientists believe these ancient giants have dried up due to drought and higher temperatures caused by climate change.

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Foreword African Insurance Organisation



I am delighted to present this latest publication from the African Insurance Organisation (AIO) on the impact of climate change on African insurance markets.

Climate change is the biggest challenge that the world must address. Clear scientific evidence, more frequent and severe weather conditions, and increased public awareness have put climate change high on the global political agenda, including ours.

As we celebrate our 50th anniversary this year, we would like to shed light on this risk, which has, and will continue to have a profound impact on our African continent, in particular. The geography of our continent determines our climate regimes, which are predominantly tropical and subtropical, with extensive arid and semi-arid zones. Many countries are prone to recurrent droughts, others to floods. As a result, Africa is highly exposed to climate change. At the same time, our continent is also one of the most vulnerable to climate risks. According to the Intergovernmental Panel on Climate Change, Africa's vulnerability to climate change is attributable to several factors, including weak adaptive capacity and heavy dependence on ecosystems to provide goods and livelihoods.

Tackling climate change requires the integration of mitigation and adaptation strategies. Here, the African insurance sector is in an ideal position to shape the discussion based on our deep knowledge of climate risk. However, to do this, we must first understand the long-term implications of climate change on our industry and strategies, which will be felt primarily but not exclusively on the claims and investment side.

The African insurance and risk management industry can support the transition to a low-carbon future by aligning their risk knowledge with their strategy and investment decisions and helping their clients with relevant and innovative risk transfer solutions to reduce risk and increase climate resilience. This will ensure the insurability of climate risks in the years to come, but it will also mean that a major business opportunity is seized.

I firmly believe that it is within our power as leaders and representatives of the African insurance sector to play this vital role. I look forward to a fruitful exchange at the upcoming 48th AIO Conference and General Assembly in Nairobi, Kenya, on this critical topic that will shape the future of our industry and our continent and hopefully lead to a better life for future African generations.

Yours,

Tope Smart

President of the African Insurance Organisation

Methodology

Faber Consulting AG, a Zurich-based research, communications and business development consultancy, would first and foremost like to thank the African Insurance Organisation and the African insurance sector for the continuous support over the past seven years, which has made the Africa Insurance Pulse a recognised source of information on African insurance markets.

The findings of this report are based on both secondary research and in-depth interviews. For our latest edition, Faber Consulting interviewed 26 senior executives from 24 insurers, reinsurers and brokers on the African continent. The interviews were conducted from March to April 2022. The aim of our interviews was to assess the impact of climate change on African insurance markets. Our interviewees gave us fascinating and deep insights into their home markets and their views on the challenges and opportunities that climate change poses for the continent's insurance markets.

The companies that participated in our survey were:

- Africa Re, Nigeria
- African Trade Insurance Agency, Kenya
- Aon Reinsurance Solutions, South Africa
- Atlantique Assurance, Cote d'Ivoire
- Compagnie Algérienne des Assurances (CAAT), Algeria
- Compagnie Centrale de Réassurance (CCR), Algeria
- Compagnie d'Assurance Transport (CAT), Morocco
- Cornerstone Insurance, Nigeria
- Custodian Insurance, Nigeria
- EILGeo Re, Mauritius
- Ethiopian Reinsurance Company, Ethiopia
- Gallagher Re, South Africa
- Hollard Insurance, Ghana
- Leadway Assurance Company, Nigeria
- NamibRe, Namibia
- NEM Insurance, Nigeria
- PartnerRe, Switzerland
- Prima Re, Zambia
- Quantum Insurance, Mauritius
- Reinsurance Solutions, Mauritius
- SCOR, France
- Société Centrale de Réassurance (SCR), Morocco
- Société Commerciale Gabonaise de Réassurance (SCG-Ré), Gabon
- Swiss Re, South Africa



The insurance sector in Africa is, in a sense, the continent's risk manager. Insurance companies play an important role in understanding and addressing climate change in all its complexity. Through their underwriting, investment and advisory functions, insurers are directly exposed to the changing climate, which poses both threats but also great opportunities for the sector. The African insurance sector, together with key public partners, is uniquely positioned to help Africa better protect itself against climate risks and become more resilient.

Jean Baptiste Ntukamazina
Secretary General of the African Insurance Organisation

Executive summary

MARKET RESEARCH

African countries are disproportionately affected by climate change. Climate change is already causing more damage. Developing countries in the Southern Hemisphere will be disproportionately affected by climate change, given high levels of vulnerability, low adaptive capacity and widespread poverty. Extreme weather events such as droughts, floods, storms and cyclones are in strong evidence in Africa and are increasing in frequency and intensity across the continent. Droughts are the deadliest natural hazard, followed by floods.

Africa's macroeconomy will be significantly affected by extreme weather events. Across East and West Africa, climate change is forecast to affect GDP per capita by about 15 % by 2050 under severe warming scenarios. In Northern and Southern Africa, the decline in GDP is estimated at 10 % and in Central Africa, around 5 %. Service and industrial sectors are more vulnerable to extreme rainfall and flooding than agriculture. These negative impacts could affect Africa's ability to cope and adapt to evolving climate risks.

Low penetration offers a huge business opportunity for insurers. Total African non-life insurance premiums account for only 1.5 % of the total global market volume. Compared to the global average rate of 3.3 %, Africa's non-life insurance penetration in 2020 was only 1.8 %. Coming from this very low base, the theoretical potential for growth across the continent is immense. Another business opportunity emerges from the steep rise in renewable energy investment in Africa as the continent moves away from its dependence on fossil fuels and towards carbon neutrality.

SURVEY RESULTS

Flood and drought risks are dominant. According to the executives interviewed, flood and drought are the two most frequent climate risks for insurance markets. Increasing urbanisation in Africa means that the catastrophe risk profiles of African countries are shifting from predominantly rural areas, where drought and food security are the biggest challenges, to urban areas, where floods, cyclones and earthquakes are the main risks.

The frequency and severity of climate disasters are rising. Almost all survey participants noted a significant increase in the frequency of climate risks,

particularly tropical cyclones (especially in Mauritius, Madagascar and Mozambique), floods in West and East African countries, forest fires in North African countries and hailstorms in South Africa. At the same time, they have seen an increase in the severity of extreme weather events, especially tropical storms and floods. In addition, respondents reported a sharp rise in values in urban areas, which contributes to the increase in damage costs following disasters.

Improved awareness is not yet reflected in higher demand. Insurance market experts indicated that awareness of the risks associated with climate change is generally on an upward trend. Awareness is highest at government level, followed by businesses and consumers. However, higher levels of awareness have not yet translated into a significant increase in demand among Africa's price-sensitive consumers. Demand is higher for commercial insurance but low to very low for private insurance due to a combination of affordability, awareness and accessibility.

Higher prices, slightly higher capacities and stricter conditions. The majority of respondents have seen weather risk prices in African markets increase over the past three years and expect them to increase further over the next 12 months. Capacity has increased for primary insurers, while it has remained largely stable for reinsurers, and conditions have been tightened.

Climate change regulation and ESG gain momentum. The majority of interviewees agreed that climate change is gaining momentum and is now an important issue for their regional or local insurance regulators and supervisors. However, discussions on climate risk have not yet translated into new regulations supporting the insurance sector. Similarly, environmental, social and governance (ESG) is a much-discussed topic in Africa at the moment, but it has not yet been given the priority it deserves.

Climate change offers huge potential for the insurance sector in Africa. Interviewees agreed that climate change creates new opportunities for the insurance industry, especially with regard to generally low insurance penetration, but also thanks to the transition of African economies towards more renewable energies such as solar energy, wind power, geothermal energy and hydropower plants.

Market research

INTRODUCTION

Most African countries are disproportionately affected by extreme weather events

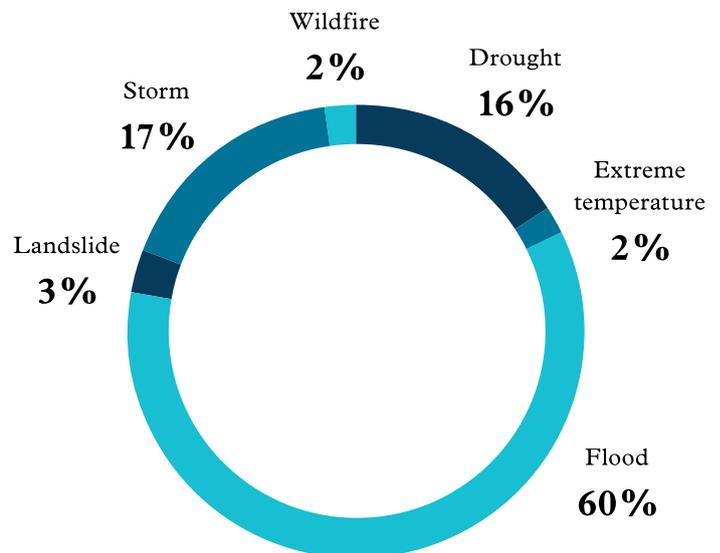
The unprecedented impact of climate change is already being felt across the world. Climate change has driven losses and is expected to cause even more damage in the future. Developing countries in the Southern Hemisphere will be disproportionately affected due to their high levels of vulnerability, low adaptive capacity and widespread poverty. Extreme weather events such as droughts, floods, storms and cyclones are very pronounced in Africa. Extreme weather events are increasing in frequency and intensity across the continent. According to the Centre for Research on the Epidemiology of Disasters, droughts are the deadliest natural hazard, followed by floods. From 2000 to 2019, 46,000 people were killed and 337 million were affected by 1,143 disasters on the continent.¹

Although the continent has contributed among the least to global greenhouse gas emissions, most African countries experience widespread losses attributable to man-made climate change, including the loss of lives, water shortages, increasing food insecurity and reduced economic growth.

As reported by the World Meteorological Organization, between 1970 and 2019, 1,695 natural disasters in Africa caused the loss of 731,747 lives and USD 38.5 billion in economic losses. During this period, the continent accounted for 15 % of weather, climate, and water-related disasters, 35 % of related deaths, and 1 % of global economic losses. Droughts accounted for 95 % of all fatalities in the region, while flood disasters were the most common type, accounting for 60 % of all events.²

Chart 1: Number of reported disasters 1970–2019, total = 1,695

Source: World Meteorological Organization



¹ www.preventionweb.net/news/digital-tools-help-africa-mitigate-climate-disasters#/

² World Meteorological Organization (2021): WMO Atlas of mortality and economic losses from weather, climate and water extremes (1970–2019)

According to the Intergovernmental Panel on Climate Change’s (IPCC) Sixth Assessment Report, agricultural productivity growth in Africa has reduced by 34% since 1961 due to climate change, more than any other global region.³ Rapid urbanisation, infrastructure deficiencies and a growing population in informal settlements further exacerbate the exposure of people, assets and infrastructure. Africa’s rapidly growing cities are expected to develop into hotspots of risks from climate change and climate-induced migration, which has the potential to further add to the stresses of poverty, informality and socio-economic exclusion. Furthermore, approximately 60% of the sub-Saharan workforce is employed in agriculture and 95% of all cropland is rainfed, both much higher than in most other developing regions of the world.

Chart 2: Top 10 weather disasters in Africa ranked according to economic losses (1970–2019), USD billion

Source: Faber Consulting AG, based on WMO Atlas of mortality and economic losses from weather, climate and water extremes (1970–2019)

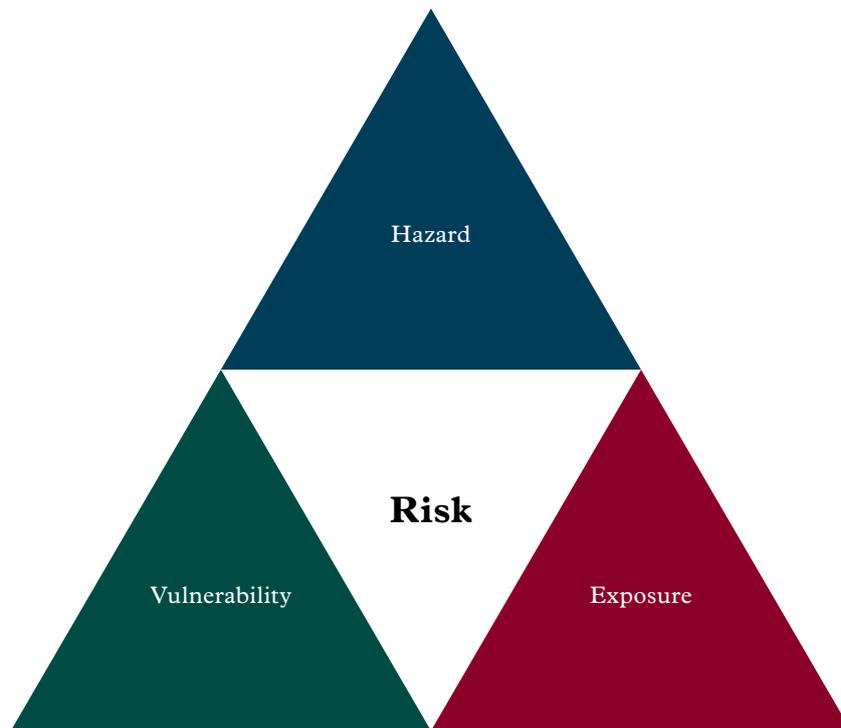


³ www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_FinalDraft_FullReport.pdf

NATURAL DISASTER RISK

Natural disaster risk is a function of hazard, exposure and vulnerability

According to the United Nations Office for Disaster Risk Reduction (UNDRR), natural disaster risk is defined as the potential loss of life, injury, or destroyed or damaged assets to a system, society or a community in a specific period of time, determined probabilistically as a function of hazard, exposure, vulnerability and capacity.



Source: Faber Consulting AG

An increase in risk must be attributed to changes in at least one of these three variables. While hazard describes a potentially destructive physical phenomenon, exposure is defined as the location, attributes and value of assets that are important to communities and that could be affected by floods. Vulnerability refers to a community's or an individual's susceptibility to hazards; its proneness to be adversely impacted, represented by the inability or incapacity of a community or a group to anticipate, cope with, resist and/or recover from its impacts. For material assets, vulnerability means the likelihood that these assets will be damaged, destroyed and/or affected when exposed to a hazard.

DROUGHT

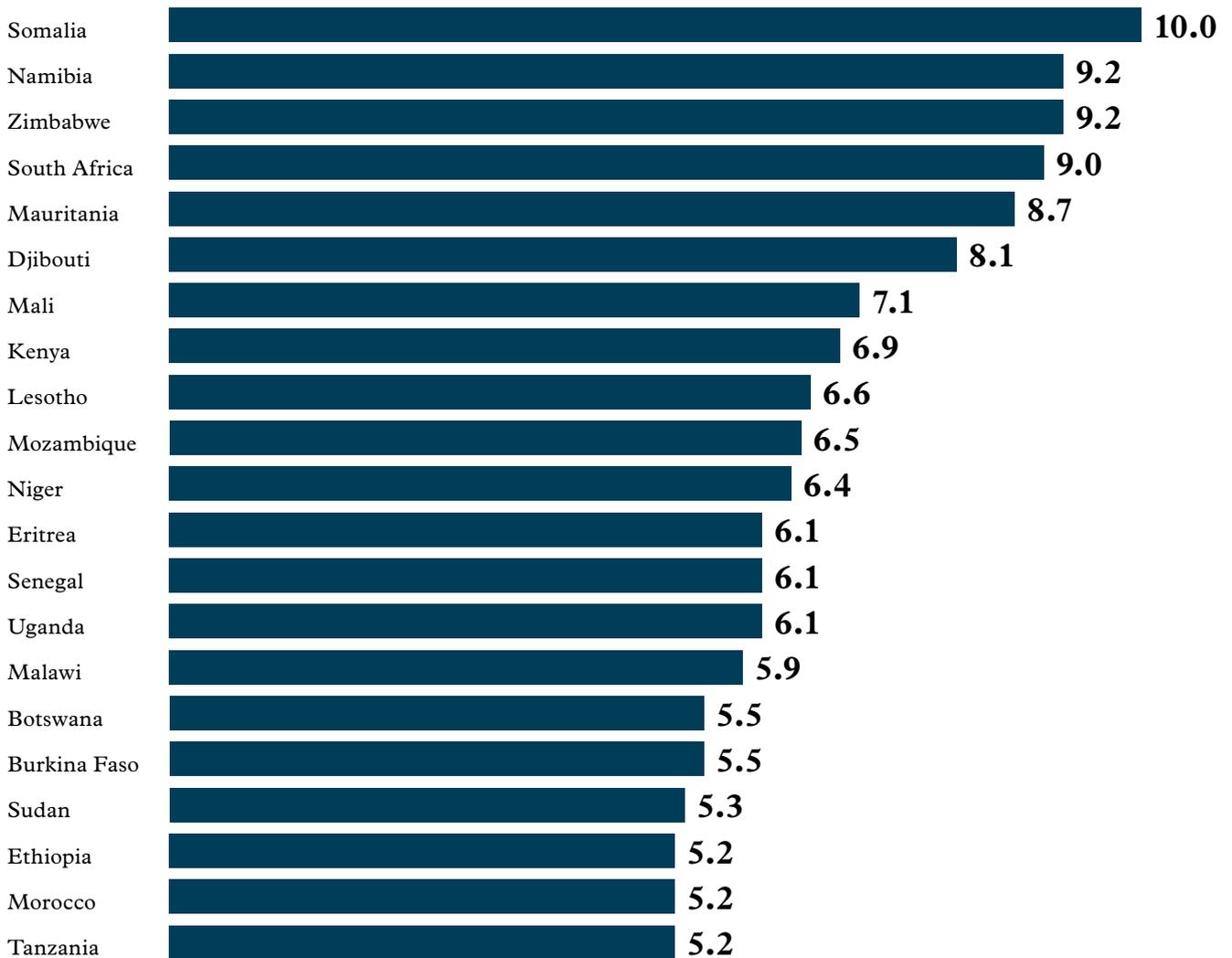
Droughts affect most African countries and all economic sectors

Droughts are among the most far-reaching natural hazards in the world. They negatively impact all sectors of the economy, including agricultural production, domestic water use, all industries that use water and the energy sector in large parts of the world. In addition to short-term responses to drought, such as food aid and increased groundwater pumping, changing climatic and socio-economic conditions require adaptive solutions and long-term decision making. Droughts are also one of the most common natural hazards in Africa. Although they have occurred on the continent for centuries and often manifest as endemic events, climate change, land-use changes, as well as socio-economic and institutional changes have further exacerbated the situation, causing a larger number of recurrent droughts.

Between July 2011 and mid-2012, the entire East African region was affected by one of the most severe droughts in the continent's history, resulting in the worst food security crisis in Africa since the Ethiopian famine in the 1980s. More than 11.5 million people were in need of food assistance in Djibouti, Ethiopia, Kenya and Somalia. In 2012, the Department for International Development (which was replaced by the Foreign, Commonwealth & Development Office in 2020) estimated that between 50,000 and 100,000 people – more than half of them children under five – died in the food crisis. But droughts on the continent are not limited to the sub-Saharan Africa region. In Morocco, a lack of rainfall in autumn and winter of 2021 caused the worst drought since 30 years. In February 2022, the government unveiled a USD 1 billion drought mitigation programme, including animal feed subsidies and financial help for affected farmers, to cope with the impact of the disaster.

Chart 3: Top 21 African countries with the highest drought probability and historical impact

Source: Faber Consulting AG, based on 2021 INFORM Risk Index data⁴



⁴ The INFORM Risk Index uses 80 different indicators. The index creates a risk profile for every country. Each has a rating between 0 – minimum rating – and 10 – maximum rating – for risk and all of its components to facilitate a comparison.

FLOOD

Many African cities are now regarded as flood disaster hotspots

The rise in sea level due to climate change, population growth and rapid urbanisation have caused more frequent and severe flood disasters in many countries around the globe. Those living near the seashore and rivers are the most affected by floods, which often force them to relocate. Flood risk due to heavy or prolonged rain, climate change, rising populations and poorly adapted land use is by far the most prolific natural disaster globally.

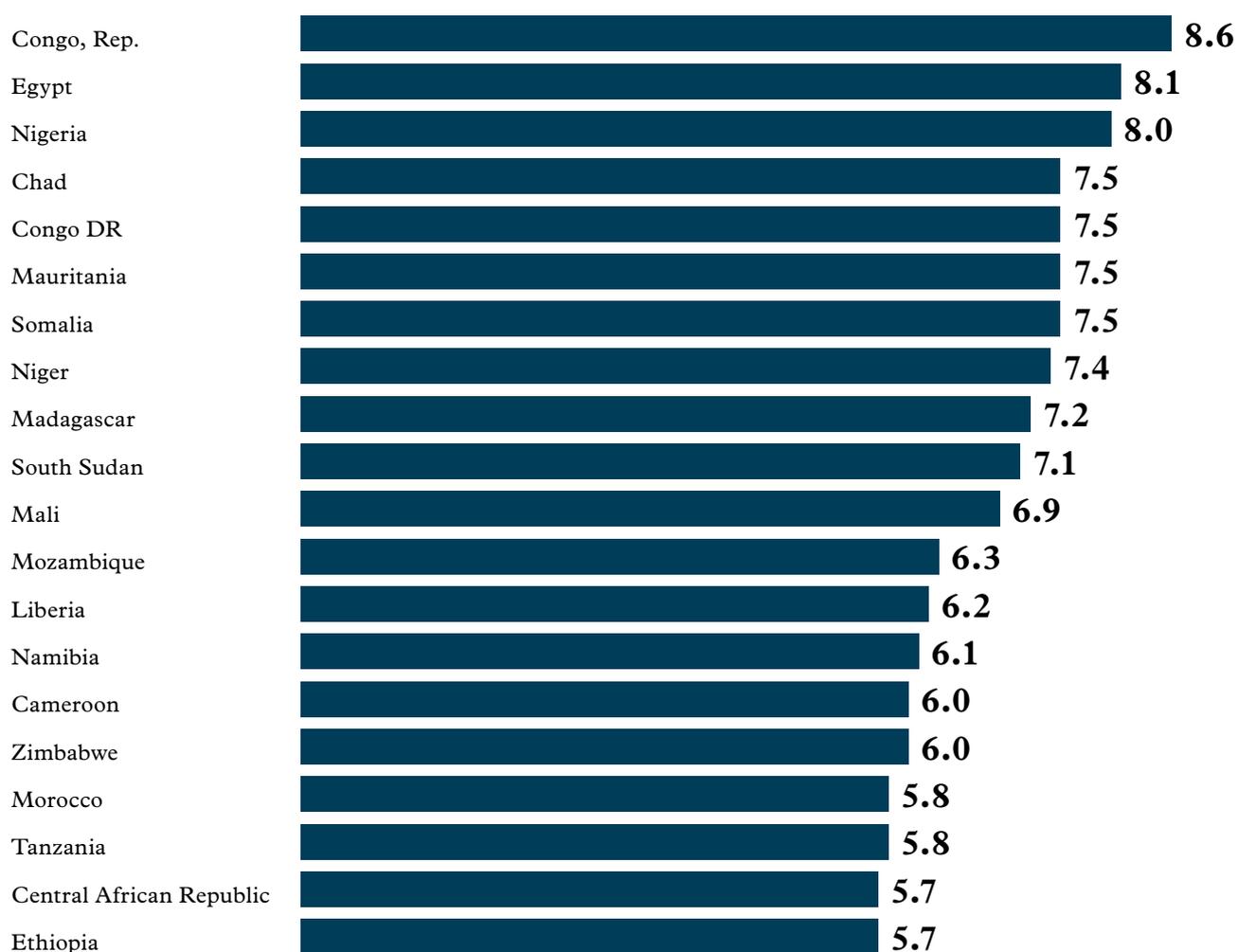
The seasonal movement of the Inter-Tropical Convergence Zone, the El Niño Southern Oscillation (ENSO) and monsoonal patterns influence and determine Africa's weather and precipitation patterns. Central and Eastern Africa have two major rainfall seasons, namely March to May and October to December. Some parts of Eastern and Central Africa also report rainfall from June to July. West Africa and the Sahel regions' main rainfall occurs between May and August. The Southern Africa region has two main seasons, namely the wet season (September to March) and the dry season (April to August). According to the International Federation of Red Cross and Red Crescent Societies (IFRC), more than 71 million people are estimated to live in both extreme poverty and significant flood risk in sub-Saharan Africa. Although there is a tendency to underreport natural disasters in Africa, it is estimated that on a cumulative basis, small and medium scale floods affected millions of people in 15 countries across the continent in September 2020, with an impact on the livelihoods of nearly seven million people and causing 1,273 deaths.⁵

Exacerbated by climate change, urban flooding has become a pressing issue in many African countries. Most cities and urban centres in Africa are now regarded as flood disaster risk hotspots, as the unplanned urbanisation in Africa and the consequential increase of people living in flood-exposed areas have led to an increase in the number of fatalities related to floods in African cities.

5 reliefweb.int/sites/reliefweb.int/files/resources/IB11052021.pdf

Chart 4: Top 20 African countries with the highest physical exposure to flood

Source: Faber Consulting AG, based on 2021 INFORM Risk Index data



The impact of climate change in sub-Saharan Africa is characterised by a significant increase in the number of floods and other severe weather events. While sub-Saharan Africa's current global share of flood events is about 20%, compared to 1970–79, the frequency of floods has increased more than ten-fold since the 1970s.

Over the same period, the number of people affected by floods in sub-Saharan Africa increased from 3.5 million to 28.1 million from 2010 to 2019.⁶

⁶ World Bank, October 2021: Africa's Pulse, Volume 24

TROPICAL CYCLONES

Globally, because of climate change, the number of cyclones is expected to decrease, but the intensity is likely to increase

Tropical cyclones are one of the biggest threats to life and property, even in the formative stages of their development. They generate a number of different hazards that can individually have significant impacts on life and property, such as storm surges, flooding, extreme winds, tornadoes and lightning. Combined, these hazards interact with one another and substantially increase the potential for loss of life and material damage. Interestingly, according to the IPCC's special report, if the increase of the global mean temperature can be limited to 1.5°C or even 2°C, the total number of tropical cyclones is expected to decrease, although this will differ regionally. However, the intensity of these storms is likely to increase, in particular for the highest category cyclones, as warmer oceans will provide more energy to feed the storms. This will most likely result in higher peak wind speeds and precipitation levels.

In Africa, the South-Western Indian Ocean region, encompassing the East Coast of the continent, Madagascar and other islands of the South-Western Indian Ocean, is the most exposed to tropical cyclones. On average, this region is affected by 13 cyclone events with wind speeds exceeding 63 km/h each year. The North Indian Ocean, and in particular the Greater Horn of Africa and Somalia, are occasionally affected as well. Cabo Verde is only rarely affected, and landfalls on mainland North Africa are exceptional. But cyclones developing offshore also have the potential to sometimes indirectly affect the continent.

Chart 5: Top three African countries with the highest physical exposure to tropical cyclones

Source: Faber Consulting AG, based on 2021 INFORM Risk Index data



**CYCLONES IDAI AND KENNETH, 2019: EXTREME EVENTS,
DEVASTATING IMPACT**

In March 2019, tropical cyclone Idai hit Malawi, Mozambique and Zimbabwe, causing overall economic losses of USD 2.2 billion. With wind speeds of up to 195 km/h, it was the deadliest and costliest tropical cyclone in the South-West Indian Ocean, affecting more than three million people and causing more than 1,000 fatalities. Only six weeks after Idai, a second cyclone made landfall in Northern Mozambique. Kenneth, a storm with peak wind speeds of 220 km/h and floods with a height of 2.5 metres, was the strongest cyclone ever recorded in Africa. Together, both storms caused overall damage of USD 3.2 billion in the country, mainly in the infrastructure, manufacturing and social sectors.

In Zimbabwe, Idai caused economic losses of around USD 620 million and damaged more than 580 km of roads. In Malawi, the cyclone directly affected 975,000 people and left more than 125,000 homeless. As the country's economy is highly dependent on agriculture, it is particularly vulnerable to severe weather events.

CLIMATE RISK EXPOSURE

Services and industry sectors more sensitive to extreme rainfall and floods than the agricultural sector

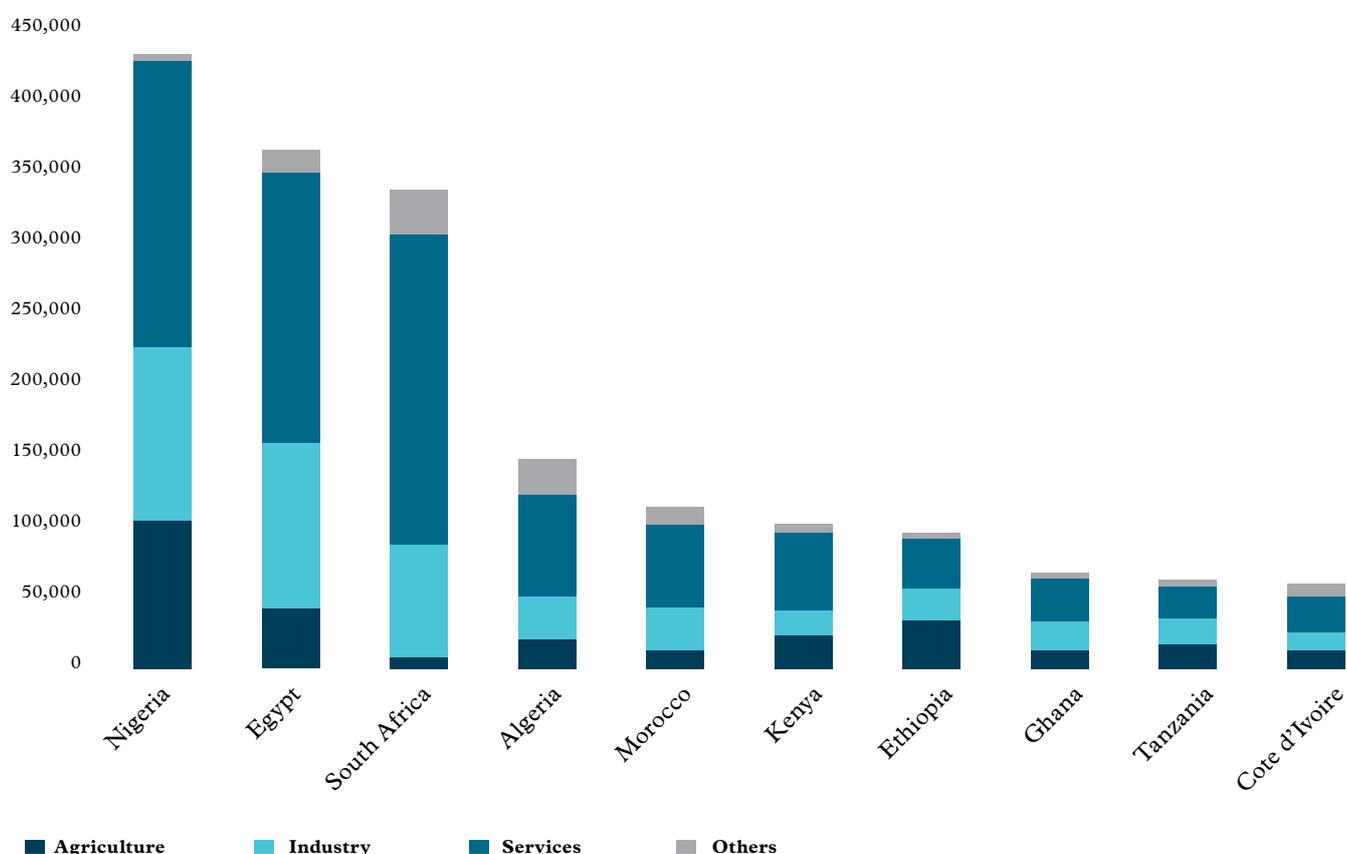
People living in poverty are particularly vulnerable to shocks, including those caused by natural disasters such as floods and droughts. An empirical study conducted by the World Bank⁷ found that in Southern African and Horn of Africa countries (except Ethiopia, Rwanda, Zimbabwe and Mozambique) and Egypt, poor people are at high risk of flooding, although not all countries show significant results. In West Africa, the results show a mixed pattern, although in countries with larger rivers and delta areas – particularly Benin, Nigeria and Cameroon – there appears to be a tendency for poor people to be disproportionately affected by flooding. In some countries, the number of people at risk of flooding is projected to increase rapidly under climate change scenarios, in particular in the Horn of Africa, parts of West Africa and Egypt. Countries with rapid urbanisation – like many in Africa – could see major changes in their flood hazard patterns in the coming decades, independent of climate change and other changes in hazards.

In many countries in Southern and Western Africa, the study found strong evidence that poor households are disproportionately affected by drought. Côte d'Ivoire, Ghana, Togo and Nigeria show that poor households are more affected by drought than average. In many parts of Africa, large parts of the population are subsistence farmers and highly dependent on reliable rainy seasons, which makes them more vulnerable to droughts. Climate change is likely to increase the number of people exposed to floods and droughts further, especially in West Africa.

⁷ World Bank (2015): Disaster Risk, Climate Change, and Poverty – Assessing the Global Exposure of Poor People to Floods and Droughts

Chart 6: Top 10 African economies, 2020 GDP composition by sector, USD million

Source: Faber Consulting AG, based on IMF, World Economic Outlook Database (GDP) and World Bank (value added by economic sector in % of GDP)



A research report⁸ published by the African Development Bank (AfDB), assessed economic growth and development risks and opportunities for African countries in two scenarios of future climate changes: (1) a low scenario that until mid-century is consistent with the Paris Agreement (well below 2°C, target 1.5°C) and (2) a high-warming scenario (2°C by 2050, exceeding 4°C by 2100). African countries are expected to experience significantly adverse macroeconomic consequences of climate change in the coming decades. Across East and West Africa, climate change will adversely affect GDP per capita by about 15% by 2050 under the severe warming scenario. Northern and Southern Africa would also be severely impacted, with GDP declining by about 10% by 2050, while Central Africa would be comparatively less affected, with a potential decline of 5% under the severe

8 African Development Bank Group (2019): Climate Change Impacts on Africa's Economic Growth

warming scenario. The analysis also shows that the services and industry sectors have a higher sensitivity to extreme rainfall and flood events than the agricultural sector – because of, for example, business interruption in the aftermath of floods. With the structural shift towards a service economy, macroeconomic sensitivity to extreme rain events could therefore increase slightly.

The increasing negative impacts of climate change on per capita GDP and development capacity of African countries could affect Africa's ability to cope with and adapt to the current and future impacts of climate change. Countries could be increasingly drawn into a downward spiral of risks and vulnerabilities.

VULNERABILITY

The WorldRiskIndex⁹ and is based on the understanding that disaster risk is not determined solely by the occurrence, intensity and duration of extreme natural events. It assumes that social factors, political conditions and economic structures are also responsible for whether or not a disaster occurs in the wake of extreme natural events. To show the interaction of natural events and social factors, the WorldRiskIndex multiplies the values of two dimensions: exposure to extreme natural events and vulnerability.

The calculation of the disaster risk for 181 states worldwide is based on the following components:

- Exposure to earthquakes, storms, floods, drought and sea-level rise.
- Vulnerability is composed of the components (1) susceptibility, (2) lack of coping capacity and (3) lack of adaptation capacity.
 - Susceptibility is dependent on infrastructure, food supply and economic framework conditions.
 - Coping capacities are dependent on governance, health care, social and material security.
 - Adaptive capacities are related to upcoming natural events, climate change and other challenges.

Susceptibility and the lack of coping and adaptive capacities – as opposed to exposure – are the key factors contributing to very high natural disaster risk in Africa

The African continent carries the second highest natural disaster risk of all continents, well above the world average and Asia, a continent often assumed to have a very high disaster risk. However, a closer look at the differences reveals that in Africa, vulnerability is much more important as a risk factor than exposure, with both vulnerability and the lack of adaptive capacity particularly low compared to other countries worldwide. The Sahel and tropical regions of the continent are the vulnerability hotspots, with 12 of the world's 15 most vulnerable countries in Africa. Narrowing down the vulnerability risk factors further, it is again African countries that dominate the group of most susceptible countries as well as the group of countries with the greatest lack of adaptive capacity. In other regions of the world, exposure – as opposed to vulnerability – accounts for a much larger share of overall disaster risk.

⁹ reliefweb.int/sites/reliefweb.int/files/resources/WorldRiskReport-2020.pdf
The WorldRiskIndex is a forward-looking assessment based on exposure and vulnerability

Table 1: WorldRiskIndex 2021: Top 25 African country overview

Source: WorldRiskIndex 2021

Global rank	Country	WorldRisk-Index	Exposure	Vulnerability	Susceptibility	Lack of coping capacities	Lack of adaptive capacities
11	Cape Verde	17.72	37.23	47.59	28.86	72.71	41.21
17	Djibouti	15.48	25.78	60.03	36.19	84.33	59.58
20	Comoros	14.91	23.62	63.13	45.93	85.39	58.06
23	Niger	13.90	19.27	72.15	61.72	87.91	66.83
25	Cameroon	13.07	20.35	64.21	47.58	88.58	56.66
26	Nigeria	12.66	19.64	64.46	49.70	88.58	55.10
28	Gambia	12.40	19.75	62.78	43.58	83.02	61.73
30	Chad	11.94	15.76	75.75	64.96	92.14	70.13
31	Benin	11.71	17.92	45.33	54.09	81.42	60.49
35	Burkina Faso	11.19	16.59	67.48	57.08	84.39	60.98
36	Togo	10.99	16.60	66.23	55.77	86.14	56.79
37	Mali	10.71	15.61	68.64	49.75	88.60	67.58
39	Madagascar	10.44	14.97	69.71	65.83	86.32	56.97
40	Burundi	10.42	14.88	70.02	62.29	90.43	57.34
41	Kenya	10.33	16.63	62.13	50.80	85.50	50.10
42	Angola	10.28	15.61	65.86	52.89	86.89	57.80
44	Cote d'Ivoire	9.98	15.57	64.10	47.26	85.61	59.43
45	Senegal	9.79	16.50	59.31	44.64	77.87	55.42
47	Sierra Leone	9.40	13.65	68.87	55.15	85.39	66.07
48	Ghana	9.32	16.38	56.88	41.60	78.75	50.29
49	Zimbabwe	9.30	14.51	64.11	55.02	88.44	48.88
50	Mozambique	9.11	13.26	44.73	62.60	88.45	55.13
51	Mauritius	9.04	23.85	37.92	17.39	58.21	38.17
52	Malawi	8.94	13.97	64.00	54.49	83.21	52.30
52	Tanzania	8.94	13.35	66.98	59.46	84.68	56.79
54	Liberia	8.92	13.48	66.17	55.63	87.16	55.73
56	DR Congo	8.78	11.86	74.04	67.76	92.80	61.55
	Africa	8.93	13.51	64.05	49.73	85.39	55.28
	Asia	5.80	12.15	44.47	23.05	75.65	35.91
	Oceania	15.60	28.52	49.52	29.73	79.82	44.92
	World	6.60	13.13	46.37	23.72	75.08	38.42

Max. value / category = 100, classification according to the quintile method

very low
 low
 medium
 high
 very high

The impact of losses associated with climate change can set back socio-economic development by potentially increasing not only the incidence but also the severity of poverty. There is a strong link between poverty and vulnerability: Because the poor have fewer resources, they have a lower adaptive capacity, which is further reduced by any extreme weather event. By providing compensation payments for damages caused by extreme weather events, climate risk insurance can help individuals and governments break this vicious cycle.

Since climate change is expected to lead to an increase in both the frequency and severity of extreme weather events, catastrophe losses are also likely to increase significantly in the future. Climate risk insurance has the potential to reduce the catastrophic impact of disasters on individuals and governments, enable rapid recovery and contribute to a sustainable, climate-resilient development.

CLIMATE CHANGE ADAPTATION AND MITIGATION

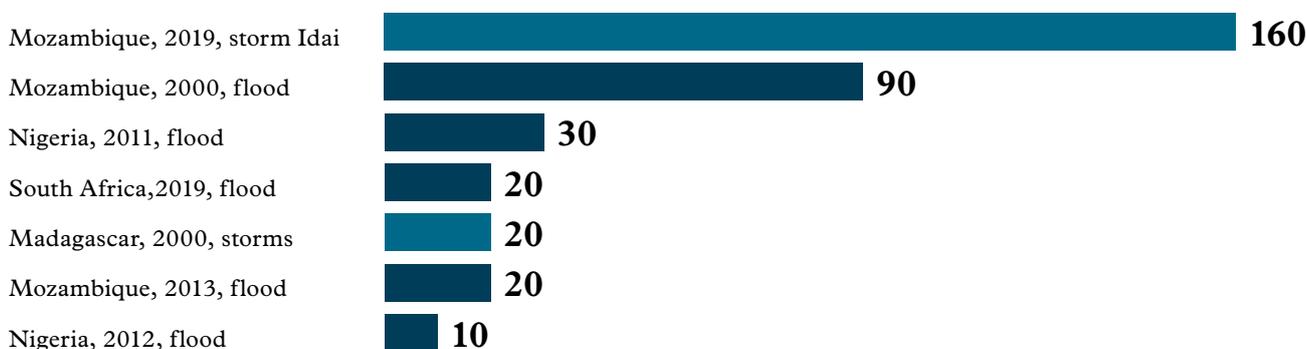
In 2010, the Cancun Agreements committed developed countries to provide USD 100 billion in international climate financing annually for developing countries from 2020 onwards to finance mitigation and adaptation measures. In 2018, a total of USD 78.9 billion was provided, still more than 20% short of the agreed amount. The share spent on adaptation was only about 21%, while more than 70% of climate finance was spent on mitigation efforts, although the target was initially for a 50/50 split. Even more worrying is the fact that only 8% of funds were provided to low-income countries, while the majority was allocated to middle-income countries.¹⁰ Most recent OECD figures indicate that climate finance provided and mobilised by developed countries reached USD 79.6 billion in 2019, up by only 2% from the previous year.

Insured losses account for only a fraction of economic losses, and drought losses hardly insured at all

Plans and systems that ensure financial resources are available after the occurrence of severe weather events are critical to rapid emergency response, financial stability and development progress in Africa. Disaster risk financing solutions, such as natural disaster insurance, can be an important cornerstone in holistic disaster risk management strategies by ensuring access to substantial and highly liquid funds on pre-agreed terms. Without these risk transfer instruments, governments must often reallocate funds within existing budgets, which can compromise other important long-term developments. Relying solely on humanitarian assistance, as many countries have done in the past, can be dangerous, as funding may be inadequate and slow to ramp up.

Chart 7: Selected weather disasters in Africa ranked according to insured losses, USD million

Source: Swiss Re sigma explorer

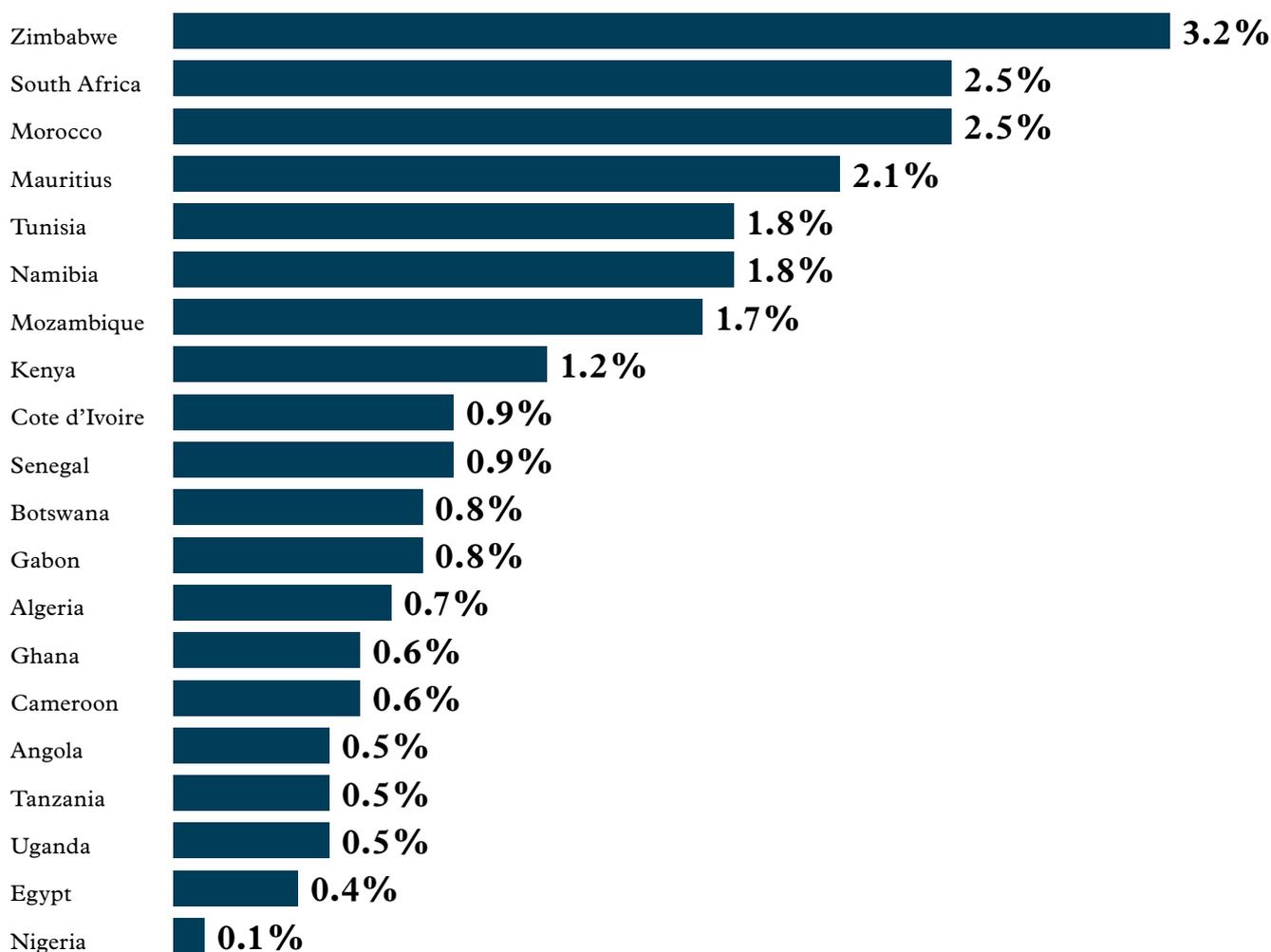


¹⁰ OECD (2020): Climate Finance Provided and Mobilised by Developed Countries in 2013-18

The natural disaster insurance protection gap for Africa is enormous. Swiss Re Institute reported that Cyclone Idai caused overall economic losses of about USD 2 billion in Mozambique, Malawi and Zimbabwe, of which only 7% was covered by insurance leaving 93% of economic losses uninsured.

Chart 8: 2020 non-life insurance penetration, top 20 African non-life insurance markets, in %

Source: Faber Consulting AG, based on Swiss Re Institute, Sigma No 4/2021, sigmaexplorer.com

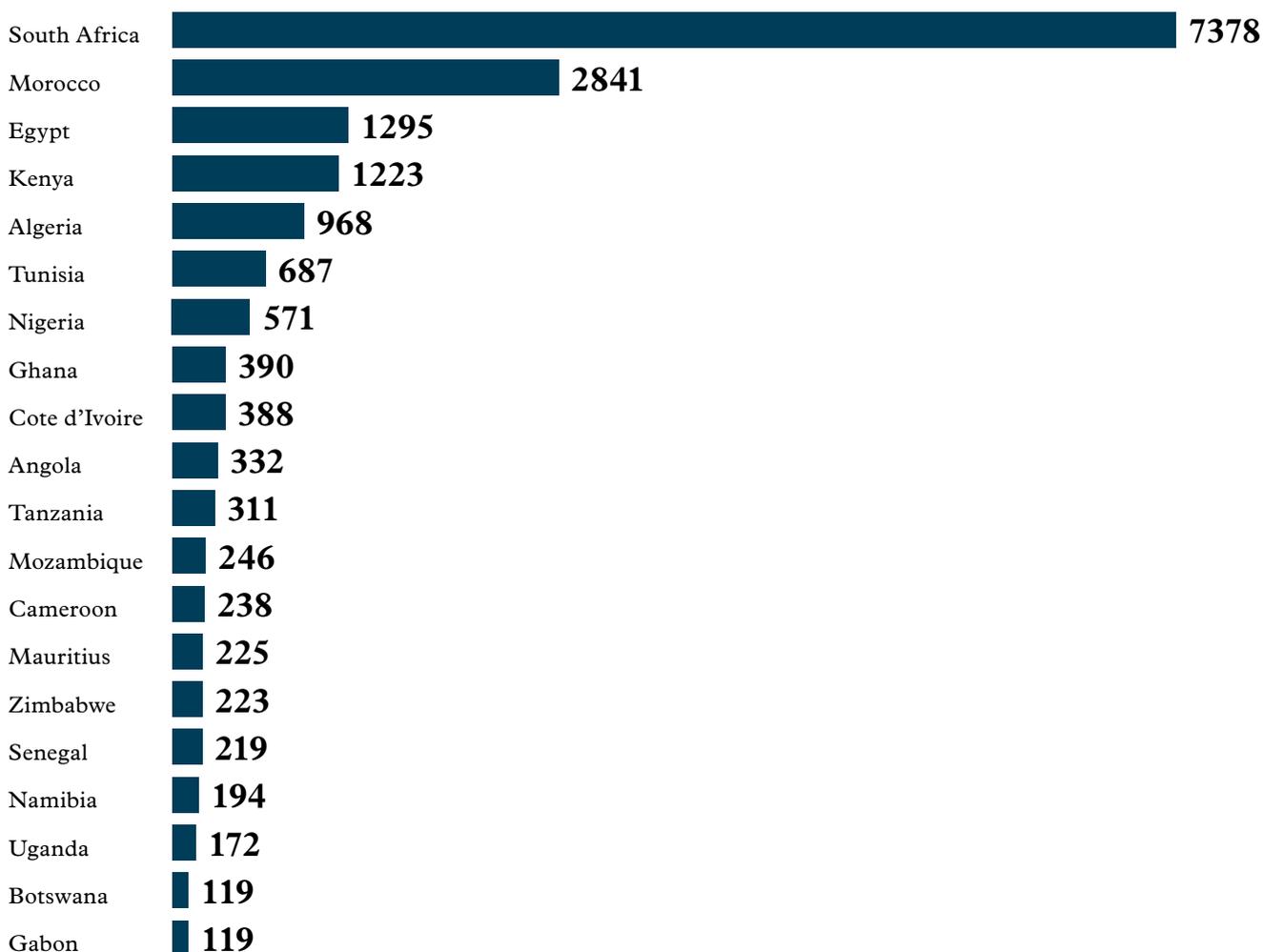


With the exception of South Africa, insurance coverage in Africa is still very low, particularly in retail markets. Commercial insurance is by far the most mature non-life insurance market, but total African non-life insurance premiums account for only 1.5% of the total global market volume. Compared to the global average rate of 3.3%, Africa's non-life insurance penetration

(premiums divided by GDP) in 2020 was only 1.8%. But even this low rate was largely driven by two of the continent's largest non-life insurance markets, South Africa and Morocco, where the respective local market rate of 2.5% was well above the African average. Coming from this very low base, the theoretical potential for growth across the continent is immense.

Chart 9: Top 20 African non-life insurance markets, 2020 direct non-life premiums written, USD million

Source: Faber Consulting AG, based on Swiss Re Institute, Sigma No 4/2021, sigma-explorer.com



Financial aspects are always crucial when dealing with disasters, especially for developing countries. In the aftermath of a natural disaster, governments have

two main tasks: restoring damaged infrastructure and helping those least able to do so. Insurance is one of the most popular approaches to disaster risk financing.

However, in most developing countries, purchasing disaster insurance is not mandatory and is also considered to be expensive. Public-private partnerships in disaster risk transfer can help address this problem and close the current natural disaster protection gap.

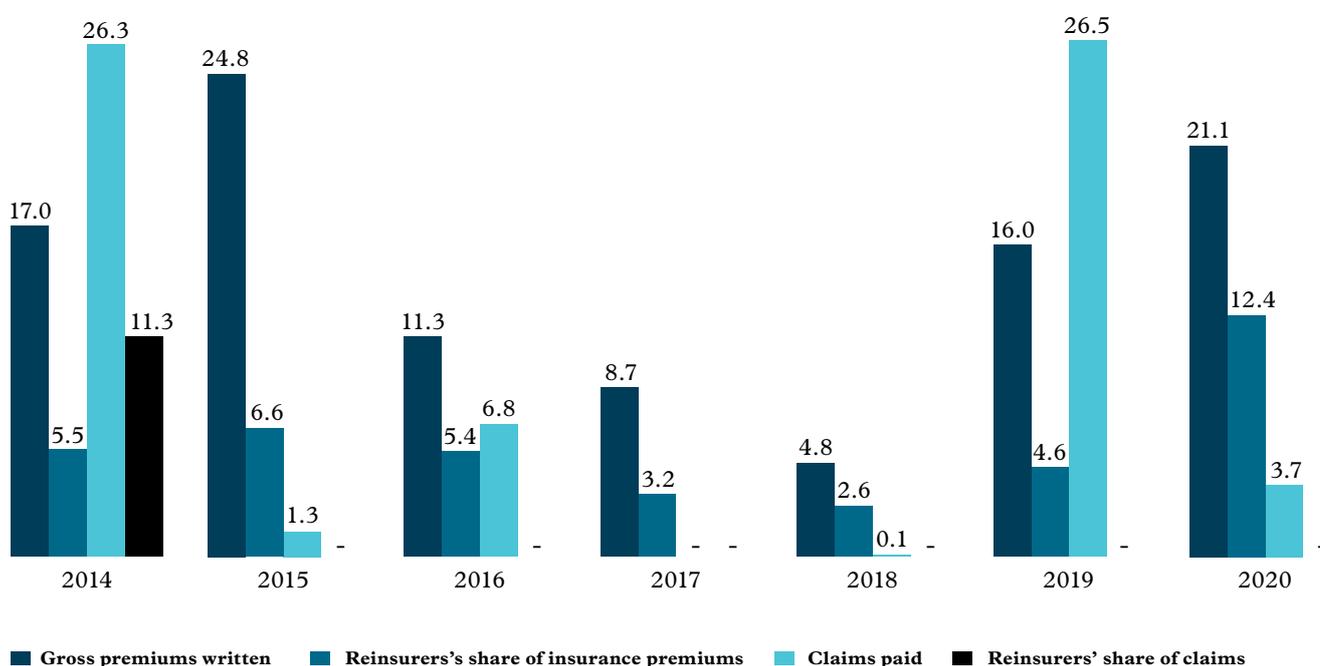
African countries have always been particularly vulnerable to extreme weather events. The insurance sector can help develop and implement relevant and innovative risk transfer solutions in response to these disaster risks, in particular in regions where insurance is still in its infancy. Building on the experience of mature markets with public and private-public pooling systems, some vulnerable countries, with support from development agencies and donors, have joined forces by pooling their scarce financial resources in regional risk-sharing institutions. African Risk Capacity Ltd, established in 2012, is one such sovereign risk pooling system designed to ease the burden on public budgets following natural disasters.

AFRICAN RISK CAPACITY: THE CONTINENT’S FIRST SOVEREIGN PARAMETRIC DEVELOPMENT INSURER

In 2012, African Risk Capacity (ARC) was established as a Specialized Agency of the African Union to help member states improve their capacity to prepare for and respond to extreme weather events and natural disasters, therefore protecting the food security of their vulnerable populations. ARC is the financial affiliate that carries out commercial insurance functions of risk pooling and risk transfer in accordance with national regulations for parametric weather insurance in Bermuda, where the entity is domiciled. There is a plan to relocate ARC to an African country as soon as an equally favourable legal and regulatory regime exists. For the 2020/21 season, Madagascar became the first country to take out ARC’s newly developed parametric insurance coverage, with premium support provided by German Development Bank KfW. On the 1st of March 2022, the government of Madagascar received an insurance payout of USD 10.7 million following the damage and destruction caused by Tropical Cyclone Batsirai.

Chart 10: Gross premiums written, reinsurers’ share of premiums, claims paid and reinsurers’ share of claims, 2014–2020, USD million

Source: African Risk Capacity Limited, Annual Reports 2014–2020



Between 2014 and 2020, ARC collected more than USD 100 million in gross written premiums and paid out more than USD 65 million in claims to drought-affected member countries. Insurance provided cover to over 72 million people and 3.8 million benefitted from insurance payouts. After two consecutive loss-making years with a devastating net loss ratio of 236% in 2019, ARC returned to profit in 2020. ARC's risk pool covering the 2021/2022 season includes 13 countries: Burkina Faso, Cote D'Ivoire, Gambia, Madagascar, Malawi, Mali, Mauritania, Niger, Senegal, Sudan, Togo, Zambia and Zimbabwe.

RENEWABLE ENERGY

A steep increase in renewables investments in Africa creates a significant business opportunity for re/insurers

Africa has significant energy resources. Fossil fuels account for about 40% of Africa's exports, and countries such as Algeria, Angola, Chad, Nigeria and Sudan are heavily dependent on them as a source of income. But Africa's high degree of dependence on raw materials is also the source of a high socio-economic vulnerability. In addition, Africa's high dependence on commodities also makes the continent particularly vulnerable to the negative effects of climate stress, including climate variability and extremes.

On the other hand, renewable energy offers African economies opportunities for economic growth, cost-effective technologies to expand access to energy and improve the quality of access, and industrial development along new value chains, with considerable potential for local job creation. Electricity penetration in sub-Saharan Africa has increased from 33% in 2010 to 46% in 2019, but 570 million people still lack access. The energy transition presents both challenges and opportunities for African commodity exporters. The continent has many minerals that are essential for renewable energy and low-carbon technologies, such as electric batteries and wind turbines, including manganese, copper, lithium, cobalt, chromium and platinum.

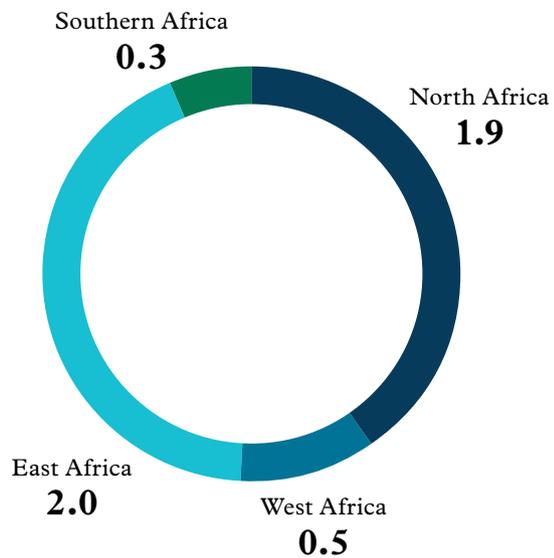
Even when excluding large hydropower plants, Africa attracted almost USD 60 billion in investment in renewables over the past 20 years. More than 90% was committed between 2010 and 2020, concentrated in a very small number of countries, such as Egypt, Kenya, Morocco and South Africa. Compared to 15% growth in Asia-Oceania (excluding China and India) and 7% globally, renewables investment in Africa grew much faster, at an extraordinary annual average growth rate of 96%.¹¹

Insurance plays an important role in de-risking investments in renewables and mobilising capital. Credit and political risks can be covered by joint initiatives such as the Regional Liquidity Support Facility (RLSF) launched in 2017 by the German Development Bank KfW and the African Trade Insurance Agency, a pan-African multilateral insurer. Technology risk, such as the risks associated with the use of nascent technology, can be mitigated through specialised insurance products, while natural disaster risk can be insured – often as an extension – through property and casualty insurance products. As such, the de-carbonisation of African economic development in line with a steep increase of investments in renewables presents an enormous business opportunity for local, regional and global re/insurance companies active on the continent.

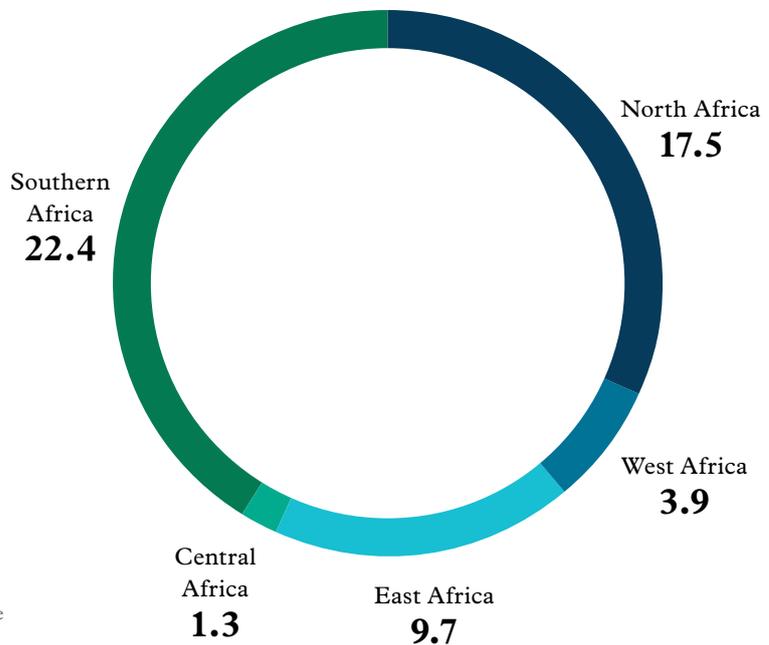
Chart 11: Renewable energy investments in Africa, 2000-2020, USD billion

Source: Faber Consulting AG, based on International Renewable Energy Agency (2022): Renewable Energy Market Analysis – Africa and its Regions

2000–2009, total: USD 4.8 billion



2010–2020 total: USD 55.0 billion



¹¹ International Renewable Energy Agency (2022): Renewable Energy Market Analysis – Africa and its Regions

Rising relevance of ESG to address climate risk

Interview with AM Best, Jessica Botelho-Young, Associate Director and Ben Diaz-Clegg, Senior Financial Analyst

Ms Botelho-Young and Mr Diaz-Clegg from AM Best joined the Africa Insurance Pulse for an interview on the impact of climate change on the African insurance markets and the relevance of ESG. The interview took place on the 19th of April 2022.

How do you see Africa's exposure to weather risks and weather-related risk patterns?

Exposure to natural catastrophe risks in Africa varies greatly between countries, given the sheer size of the continent, the large economic discrepancies and the differences in insurance penetration.

Take, for instance, South Africa, which has seen rising natural catastrophes over the past decade. For four years since 2016, the reinsurers operating in the country have seen combined ratios north of 100% as they bear some of the brunt of South Africa's spiralling rise in wildfires, floods, landslides or windstorms.

By comparison, Kenya has also seen an increase in natural catastrophes, principally drought. Economic losses predominantly affect the agricultural sector, which employs around two fifths of its workforce and accounts for 26% of the economy – measured by the country's GDP – but less than 1% of its insurance premiums. Thus, although drought presents a considerable problem to the country, the cost of insurance is often too high for farmers.

The situation is similar in Mozambique. In 2019 tropical cyclone Idai struck the coastal city of Beira (population 500,000) and caused economic losses of USD 2.3 billion, but hardly anything was insured.

In Egypt, changing weather trends are causing rising flood losses. However, natural catastrophe risks remain largely uninsured.

How do you perceive the insurability of weather-related risks in Africa?

With rising global temperatures, drought has become a key threat to African economies and societies. The agricultural sector provides both food security and employment on a far greater scale than in most other regions. Near the coastlines, flooding has become a major issue as precipitation increases in these regions and sea levels rise.

The impact from rising natural catastrophe losses and changing climate trends must be seen in relation to insurance penetration. While in markets with a higher insurance penetration, a larger share of the losses is carried by the insurance sector, in those with a low penetration, damages affect the population directly with no buffer to soften the impact.

The reasons are twofold. Firstly, financial inclusion is low, particularly in the retail sector, such as in the agricultural and SME arenas, and the concept of insurance is still insufficiently understood. Trust plays a key role too, as consumers often lack the confidence that the insurer will fulfil its promises towards the policyholder and payout should a loss occur. In addition, affordability and distribution also present an issue, especially if margins are tight.

The insurance industry is seeking new avenues to improve insurability. Public Private Partnerships (PPP) are a good example that could expand distribution and bring down costs per policy, where the actual values at risk are low and resources are limited. Microinsurance partnerships – for instance, with telecommunication companies – are frequently sought as they facilitate distribution as well as the payment of premiums and claims.

The African Risk Capacity Group (ARC), founded in 2014 by members of the African Union to build capacity for the coverage of extreme weather events, is a good example of a public-private initiative that has become a real success. It recently paid out after events in Mali and Madagascar and the group contributes to improving awareness and understanding of the benefits of insurance.

Compulsory insurance is also a measure to improve penetration and awareness. However, often there is not enough enforcement. We are all aware of insurance markets, where motor insurance is mandatory, however, many vehicles on the road are uninsured as the law is not appropriately enacted.

Which lines of business are most exposed to weather-related risks and climate change?

Property and motor insurance are obviously the two lines of business most affected in those markets where there is higher insurance penetration. Agricultural insurance is becoming more important as cash crops and food security are essential components to fight poverty and land flight. As InsurTech companies launch operations in Africa, satellite imagery to measure exposures and losses is being adopted, which is helping to cut the cost of providing insurance. In addition, the use of parametric covers, which have clearly defined triggers, should bring down costs, reduce ambiguity and strengthen the value proposition of insurance for policyholders as the product is quite easily understood.



Has the modelling of natural catastrophe risks improved in recent years?

Modelling of natural catastrophes across the continent has traditionally been constrained in part because of the low penetration and limited market size. With the increasing frequency and severity of weather-related events, that focus will be shifting, particularly regarding the long-term risks of changing climate trends. In addition, as climate risk disclosure legislation is enacted, modelling is important to measure the risks.

What is the role of ESG in Africa with regards to strengthening sustainability in an environmental and economic sense?

ESG plays an important role in improving and strengthening sustainability efforts in Africa. We observe several different dynamics. On the one hand, there is global pressure for governments to collaborate.

Many African countries have signed up to the Paris Accord and several local (re)insurers to the UNEP FI Principles for Sustainable Insurance. In addition, Egypt, which will be hosting the upcoming 27th session of the UN Climate Change Conference (COP) in Sharm El-Sheik in November 2022, has made the reporting on sustainability and financial inclusion mandatory.

Secondly, pressure is exerted by global reinsurance partners, which are at the forefront, providing their capacity for the coverage of large property risks. They take a lead role in enacting a tight ESG framework which may lead to them no longer covering projects deemed unsustainable – like, for instance, the East African Crude oil pipeline (EACOP) from Uganda to Tanzania at the coast of the Indian Ocean. While it is becoming more difficult to find capacity for environmentally questionable projects, there are also examples of reinsurers pressing to develop crop insurance, providing coverage to SMEs and retail clients to close the protection gaps as an initiative with positive ESG implications.

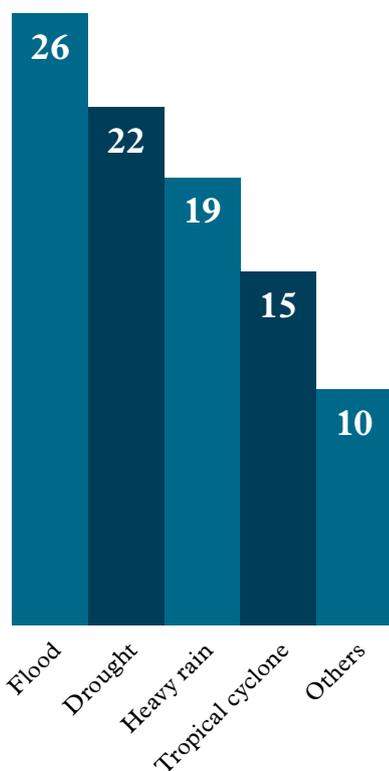
Finally, pressure also comes from international investors, which are shareholders in many African insurers and reinsurers too. In response to their own lenders and shareholders, investors demand that the company they are invested in complies with ESG standards to avoid a negative impact on their own brand and reputation.

In terms of governance, AM Best explicitly considers enterprise risk management in its rating assessment and sees this often being an area for further development for rated companies across the continent.

Finally, ESG can present opportunities for insurers. Micro-insurance initiatives support the «S» pillar of ESG as they strengthen financial inclusion, have a strong social aspect to it and generate additional premiums. Renewable energy is another class of risk that provides business opportunities to insurers while supporting the «E» pillar. Here the local insurance markets might still rely on reinsurers for support in terms of pricing and product development.

Survey results

Chart 12: What weather hazards is your market exposed to?
Number of mentions, multiple answers possible



THE IMPACT OF CLIMATE RISK ON AFRICA

Exposure to climate risk – rapid urbanisation is changing the risk profile of Africa

Africa is one of the regions most impacted by natural disasters and exposed to the effects of climate change, despite contributing the least to global warming. According to the Global Climate Risk Index 2021, five African countries are among the top 10 countries globally most affected by extreme weather events in 2019: Mozambique (1st), Zimbabwe (2nd), Malawi (5th), South Sudan (8th) and Niger (9th). Africa also faces major hurdles, such as fiscal constraints and the lack of an appropriate policy and institutional framework to prepare for, manage and respond to disaster risks that are increasing due to climate change.

Africa is the continent with the fastest rates of urbanisation (especially sub-Saharan Africa) and faces growing challenges as fast-growing populations move to cities. Increasing urbanisation means that the disaster risk profiles of African countries are shifting from predominantly rural areas, where drought and food security are the main challenges, to urban areas where floods, cyclones and earthquakes are prevalent.

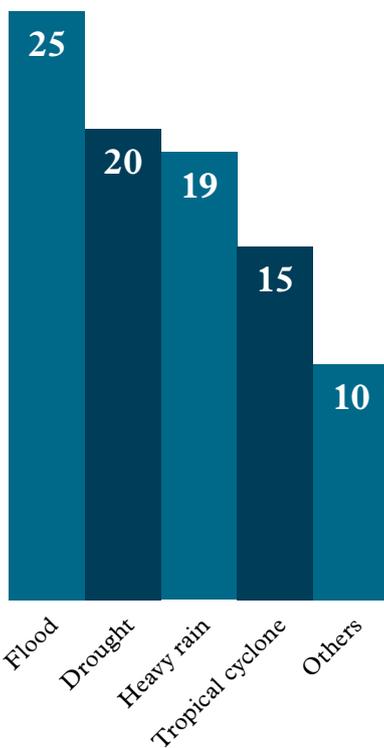
Our respondents identified this shift when they named flooding as the most important natural hazard, with 26 mentions caused by heavy rainfall (in 3rd place) or tropical cyclones (in 4th place). Drought was the second most frequent hazard. Other risks mentioned were hail, especially in northern and southern African countries, forest fires caused by heatwaves and landslides. Earthquakes, volcanic eruptions and tsunamis are excluded from this report as they are not weather risks caused by climate change.

Insert missing quote: Algeria, while not a major contributor to climate change, is expected to be at the forefront of climate change impacts. Today, most economic losses caused by natural disasters were uninsured, and the protection gap continues to grow due to global climate change. The biggest challenge for the insurance sector in Algeria is to turn this huge opportunity into a business opportunity, because for most people, survival is a higher priority than saving the world.

Hadj Mohamed Seba, CEO, Compagnie Centrale de Réassurance

Chart 13: What weather hazards are covered in your market?

Number of mentions, multiple answers possible



When we asked our interviewees which weather hazards were covered in African insurance markets, the answers were almost 100% consistent with the risk exposure, with the largest deviation for droughts, which affect most African countries and all sectors of the economy and pose a significant threat to GDP growth.

Some insurers we interviewed are tailoring new products and services to better address climate change risks on the African continent by offering more protection for the agricultural sector. Another successful initiative is the African Risk Capacity (ARC), established by the African Union to improve the management of climate risks in African countries, which offers drought insurance to governments for an annual premium. Zimbabwe recently took out a policy with ARC to protect more than 800,000 people in the country from drought risks in the 2021/2022 agricultural season.

We are convinced that sustainability will support Africa’s long-term growth and development. For this reason, Africa Re is currently undertaking a comprehensive ESG project to consolidate all existing achievements and potential sustainability commitments under a well-defined policy framework that is easily monitored, regularly refined and appropriately reported to our stakeholders.

Dr Corneille Karekezi, Group Managing Director and CEO, Africa Re

Today, investment and capital flows are often directed towards activities that are considered environmentally friendly. However, carbon intensive industries such as the energy and oil and gas sectors, with a Paris-centric transition plan, require significant investment in new technologies and solutions and time to transform. At Aon, we are very supportive of reducing carbon emissions, and this has been clearly articulated by our group leadership, however, we think that withdrawing investment and insurance solutions from these businesses in the short term will widen the protection gap, creating larger socio-economic challenges, especially in developing markets where there is reliance on these sectors for economic development.

Paul Griessel, CEO – Aon Reinsurance Solutions, South Africa

Cover by lines of business – physical assets are best protected yet at a low level

Property insurance, which protects real estate against weather risks such as flood, fire and drought, is mainly bought by companies in Africa rather than individuals. According to our interviewees, weather risk insurance cover is included in the basic policy in most cases. Some respondents said weather risks are included in multi-risk covers or as part of fire insurance. In Algeria, for example, compulsory insurance guarantees up to 80% of the value of property for individuals and 50% for businesses. 100% coverage can only be achieved by taking out additional voluntary insurance.

Most of Africa's agriculture is rain-fed and dominated by smallholder and subsistence farmers. They are at high risk of suffering from a decline in crop yields, which in turn will contribute to a further acceleration of rural exodus. Agricultural insurance mainly protects against fluctuating rainfall patterns, floods, frost and hail. However, the coverage offered for this line of business is very limited, as drought risk is too expensive to insure

against. Protection against floods, on the other hand, can be purchased as supplementary insurance. Some insurance companies have started to offer farmers new solutions against income loss, sometimes in the form of micro-insurance. However, public-private partnerships are more common in the agricultural insurance sector.

In some markets, basic motor insurance covers natural disasters, but in most cases, policyholders have to take out additional insurance or top-up to protect against weather-related hazards. Algeria has introduced compulsory insurance for vehicles, which can be supplemented by optional insurance. Comprehensive insurance is often subject to restrictions and limits depending on the location and timing of a natural disaster. In most countries, there are no exclusions, with the exception of countries such as Namibia, where floods, for example, are no longer included due to the increasing frequency of the risk.

In 2019, Atlantique Assurance, in partnership with the project GIIF (IFC World Bank Group), launched a microinsurance solution for agriculture in Côte d'Ivoire to better manage the negative impact of climate change. More specifically, this product offers cotton producers financial compensation in case of yield losses due to drought or floods, thus preserving their income. However, to achieve better protection of cotton producers, we need to raise awareness of this product.

Rosalie Logon, General Manager, Atlantique Assurances, Côte d'Ivoire

Changes in climate and weather patterns have the potential to influence extreme weather events. One of the main concerns of insurers is to understand these changes within a growing insurance market environment. Catastrophe modelling technology is being developed by insurers, reinsurers, governments, capital markets and other financial institutions on a global scale. In Nigeria, however, the necessary fundamental data for such models is not yet available, and the market is not yet mature enough to deliver any reliable impact on insurance contracts.

Kikelomo Fischer, Group Chief Risk Officer, Leadway Assurance Company Ltd

Outlook on the insurability of climate risks – extreme weather risks are likely to remain insurable in the foreseeable future, despite the increasing frequency and severity

Almost all survey participants noted a significant increase in the frequency of climate risks. Four risks led the mentions: tropical cyclones, especially in Mauritius, Madagascar and Mozambique, floods, especially in West and East African countries, forest fires in North African countries and hailstorms in South Africa.

At the same time, respondents also observed an increase in the severity of extreme weather events, especially for tropical storms and floods. In the case of flooding, increasing urbanisation reduces the ability of the soil to absorb rainfall as impermeable surfaces such as roads, buildings and pavements are created. In addition, large African cities are often built on riverbanks or near the coast, further exacerbating the problem. Several participants pointed out that the sharp rise in values, especially in urban areas, contributes to the increase in damage after disaster events.

When asked whether it could become difficult or even impossible to insure climate risks in Africa, most are optimistic. They do not expect any restriction in risk capacity, specifically for extreme weather risk in the foreseeable future, if the risks are structured in an insurable way. Exposures in Africa are still relatively small in absolute terms, and none of them correlate with peak global risk scenarios such as hurricanes in North America or earthquakes in California and Japan. A more critical group of leaders pointed out that the lack of data and sophisticated models is a major problem for the insurability of droughts and floods.

Chart 14: Does climate change contribute to an increasing or decreasing natural disaster risk in your market? In what way?

Number of mentions, multiple answers possible



McKinsey¹² warns insurers not to underestimate the true risk of climate change

According to scientific studies, climate change is expected to increase the frequency and severity of extreme weather events. At the same time, insured values are also projected to grow. Taken together, these factors will lead to more losses from climate-related catastrophes.

At first glance, the impact of climate change may not seem detrimental to property and casualty insurers. They can use the annual policy cycle and their understanding of evolving risks to reprice and adjust portfolios to avoid over-exposure to climate events. The increasing values at risk will drive up demand for insurance solutions and services. But the impact of climate change is systemic. Climate risk is likely to strain economies and possibly lead to market failures affecting both consumers and insurers. More frequent catastrophic events, combined with the need to meet evolving regulatory requirements, may threaten companies' business models and make insuring certain risks unaffordable for customers or not feasible for insurers.

The risk appetite and technical expertise to underwrite natural catastrophe risks such as drought and flood are insufficient in the Ethiopian market. Given the high importance of climate change to socio-economic development in Ethiopia and the recurrent nature of drought, the regulator, the government and other policymakers should do more to create an enabling environment for insuring disaster risks in the country.

Fikru Tsegaye, CEO, Ethiopian Re

Namibia is highly vulnerable to the impacts of climate change and climate variability. The combined impacts of environmental degradation, social vulnerability to poverty and climate change will affect agriculture and agricultural income generation throughout the country. In particular, households with limited or no access to social benefits and cash income will be more vulnerable due to their increased reliance on climate-dependent crop and livestock production.

Rudolph Humavindu, General Manager Reinsurance, Namib Re

¹² Source: McKinsey & Company: Climate change and P&C insurance: The threat and opportunity

DEMAND FOR CLIMATE RISK TRANSFER SOLUTIONS

Awareness, affordability and demand combine to dampen demand

The intangible nature of insurance sometimes conceals its essential role in development. Yet it contributes directly to Africa's economic development by driving growth, stabilising local economies and households in the event of disasters and serving as a vector for distribution and solidarity among people. Today, however, the vast majority of the African population is largely unaware of the benefits of insurance, has limited access to it and often cannot afford the premiums. Consequently, insurance companies have long believed that large parts of Africa's poor population are uninsurable.

According to our insurance market experts, awareness of the risks associated with climate change is generally on the rise. Awareness is highest at government level, as climate change has been on the global political agenda for many years. However, the level of awareness among governments varies greatly depending on the country's exposure to climate risk. Corporations follow second in their level of awareness. Again, differences within the category are significant due to the heterogeneity of the group, which ranges from large global companies to small local entrepreneurs. Consumers are the least aware of climate change and the resulting risks, but again this depends on the extent to which they are exposed to climate risks.

Furthermore, all respondents agree that climate change is already stimulating demand or will do so in the future.

In South Africa, weather risks associated with climate change have so far been a problem of frequency rather than severity. Fortunately, our market is reasonably sophisticated in its approach and it has a sufficient number of well-trained actuaries who can take the change in risk into account when pricing policies.

**Natalie van de Coolwijk, Regional Director,
Middle East & Africa, Gallagher Re**

Climate change has become a reality with devastating effects on people's earnings, assets, health and employment. Due to extreme temperatures, we first witness droughts, causing severe bushfires that even threaten urbanisations, and eventually, when the rain hits, the hardened soil is unable to absorb the water, and we are affected by flooding. As a result, we see rising losses in agriculture, motor, property and even some business interruption. Insurers have become more selective in their underwriting, applying stricter conditions in particular to loss-affected risks.

Wole Oshin, Managing Director, Custodian Investment Plc.

Chart 15: What is the demand for natural catastrophe insurance in your market?

Number of mentions, total mentions 25



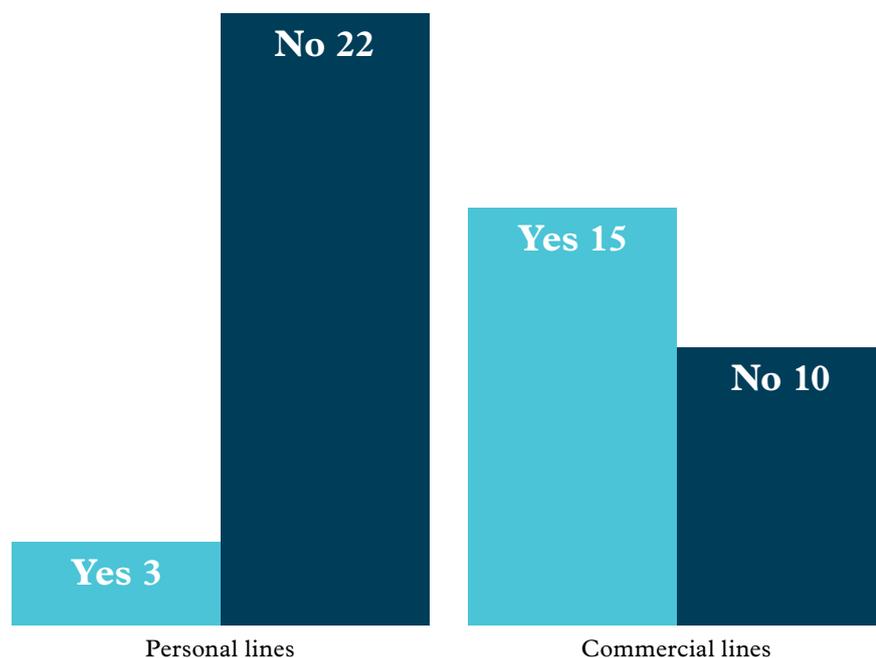
None of the respondents said that demand for climate change is «very high» in any African insurance market. Currently, demand for protection against extreme weather conditions is high (with 40% of mentions) for large commercial and industrial companies and in markets where climate risk insurance is mandatory. Demand is low (with 36% of responses) to very low (24%), mainly for personal lines and SMEs, due to a combination of affordability, awareness and accessibility. Affordability is the most commonly cited limiting factor, but it is not the only reason why demand is not increasing. Often people do not know what solutions are available, do not have access to them or are overwhelmed by the complexity of some products. The insurance industry also sometimes fails to develop attractive and relevant products. One participant also mentioned that in many societies, the community still steps in to help people in the event of a disaster.

In Algeria, insurance against natural disasters has been mandatory since 2003. Despite the compulsory nature of the insurance and the high risk of floods, storms and other natural disasters, only 12% of homeowners have taken out a policy. In other words, almost 90% of the population is unprotected against risks related to climate change. In order to better protect the Algerian population against natural disasters, the professionals in the insurance sector have decided to review the existing system by setting up a new institutional mechanism that encourages the generalisation of this type of insurance.

Youcef Benmicia, Chairman and CEO, CAAT

Chart 16: Are customers able and willing to pay for climate change-related risks?

Number of mentions, multiple answers possible



Africa's average consumers are very price sensitive and therefore show limited willingness to pay for protection against climate risks. On the other hand, the commercial side is more willing to pay for protection against these risks, with price sensitivity varying widely from large global companies to SMEs.

Although insurance coverage against natural hazards is readily available in Mauritius, the demand is relatively small. On the other hand, the demand for renewable energy insurance is increasing, but the range of available products is still too narrow.

Jean-Alain Francis, CEO, EIIGeo Re

Why is the take-up low in personal lines?

Behavioural research has shown that people deviate from rationally-expected behaviour. In the context of the threat of natural disasters and climate change, it would be rational to avoid economic losses by insuring one's assets. Affordability is a leading factor in low take-up rates by citizens; this factor, however, doesn't explain it all. We have already discussed the impact of awareness and accessibility. Additional factors are:

- Individuals' attitudes towards risk are also likely to play an essential role in insurance take-up. While the general population is considered to be slightly risk-averse, individuals who are risk-neutral or risk-averse are less likely to take out insurance.
- The motivation to purchase insurance is greatest when a disaster has just occurred, but this decreases over time.
- In addition, there is the geographical proximity to a potential disaster: the further away a person is from a disaster area, the safer they feel.
- Research also shows that general understanding of insurance products and disaster likelihood is limited.
- Finally, trust is vital. People will not pay for insurance if they do not believe they will receive support when needed. Therefore, the relationship between consumers and insurers is very important to drive demand.

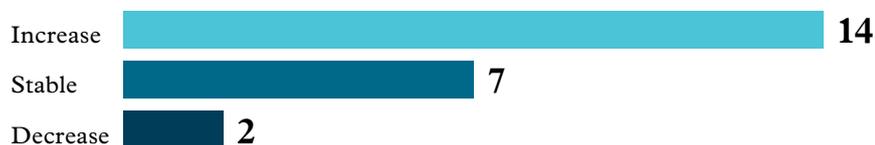
THE IMPACT OF CLIMATE CHANGE ON THE AFRICAN INSURANCE SECTOR

Weather risk insurance pricing – more extreme weather will push prices higher

Catastrophe programme prices are a «mixed bag», so it is difficult to judge parts related to climate risk. However, the majority of respondents have noticed an increase in weather risk prices over the last three years. The drivers for higher rates are varied, ranging from restructuring of compulsory insurance, higher reinsurance rates, regulators pushing for rate increases in competitive markets and increasing risks leading to higher demand in risk-exposed regions. In general, respondents reported increases in the single digits, but Kenya and South Africa saw increases of 20% or more. Over a third of respondents indicated that prices for weather protection insurance have remained stable since 2020, as demand is still very low or prices have been indexed.

Chart 17: Have weather risk insurance rates increased, decreased or remained stable in the past three years?

Number of mentions, total mentions 23



In Ghana, flood risk is included in the standard fire policy of property insurance as an «allied peril». We expect rates will continue to increase, in particular in Accra's flood-prone areas where exposures are expanding. Furthermore, the frequency and severity of flood events are steadily rising too. However, since flood risk is not quoted separately, affordability is not an issue for our corporate clients yet as the cost for the flood cover as part of the overall fire policy is not prohibitive.

Daniel Boi Addo, Managing Director, Hollard Insurance Ghana Limited

Chart 18: Will weather risk rates increase, decrease or remain stable in the next 12 months?

Number of mentions, total mentions 23



More than 60% of executives expect climate risk prices to rise. This is especially true for loss-affected natural catastrophe programmes but also for markets where prices have been stagnant for several years. Inflation was cited as another factor behind increases in premiums due to higher cost of replacement. Some participants also said prices might rise due to more accurate modelling capabilities that better capture risk value. Finally, some argued that simultaneously rising operating and claims costs will put insurers' income statements under severe pressure and require higher prices to compensate for these losses. For around 40% of respondents, prices are expected to remain stable, as the decisive factors are low risk and product awareness and thus low capacity allocated to weather risks.

The insurance sector, in its role as risk taker and investor, is uniquely positioned to address environmental, social and governance (ESG) challenges such as climate change and human rights and can help make the economy «greener» and fairer. Already today, international investors are asking for more transparency on ESG aspects when investing in Nigeria.

Tope Smart, CEO, NEM Insurance Plc and president of the AIO

Exposures or values at risk have risen dramatically in the recent past. Firstly, climate change is no longer a phenomenon in the distant future. We are already in its midst as the severity of cyclones and the frequency of flash floods increase. Secondly, these changes in weather patterns and secondary perils impact emerging economies, which simultaneously are more exposed due to rapid urbanisation as well as different patterns of land use. As a result, historical models of weather-related risks are ineffective and have to be remodelled as an adaptation tool with predictive analyses of future events and tipping points within the African climatic system.

Devesh B Biltoo, CEO, Quantum Insurance

Weather risk insurance capacity – primary insurers increased their capacity but also retained more

The overall insurance penetration remains very low across Africa, excluding South Africa. As a result, insurance capacity for weather risks is not an issue today. Demand is far from exhausting the available capacity. For this main reason, 60% of executives agree that insurance capacity for climate risk has remained stable, while 40% of interviewees reported an increase mostly due to mandatory coverage.

Chart 19: Have primary insurers increased, decreased, or kept capacity stable for weather risks in the past three years?

Number of mentions, total mentions 23



Global reinsurers would be willing to increase capacity in African markets, which would diversify their main natural catastrophe risks in the Americas, Europe and Asia. However, 52% of respondents said that reinsurance capacity for climate risks remained stable over the past three years as primary insurers have increased their retention rates given higher prices and stricter terms and conditions. One participant noted that regional reinsurers play a more important role in weather risks as they replace capacity no longer offered by leading global reinsurers. Some 48% of market experts report a slight increase in reinsurance capacity for weather risks due to a rise in demand in selected markets with higher climate risk losses.

Chart 20: Have reinsurers increased, decreased, or kept capacity stable for weather risks in the past three years?

Number of mentions, total mentions 23



In Gabon, climate-related disasters are likely to increase in both frequency and magnitude. There is a clear need for more risk data and expertise. This risk information can be used in multiple ways, for example, to implement risk mitigation measures (e.g. improving building codes, developing risk maps), but also to improve risk modelling and consequently risk pricing to increase resilience to climate change.

Isabelle Mélissa Kamdem, Deputy Head of Technical and Commercial Department, Société Commerciale Gabonaise de Réassurance

Weather risk insurance terms and conditions – a clear trend towards tightening

The majority of respondents have recently seen a tightening of insurance and reinsurance terms and conditions, primarily to provide greater contractual certainty and exposure transparency regarding the impact of climate risk. The tightening takes many forms: higher deductibles, narrower definitions of events, more loss limits, a shift from proportional to non-proportional coverage, and even exclusions, for example, for drought risks. Some 29% of respondents said that climate risk was not yet a determining factor in natural catastrophe cover and that terms and conditions would remain stable. One participant also noted that a better alignment of interests had been achieved on both the insurance and reinsurance sides, thanks to higher deductibles.

Chart 21: Have terms and conditions for weather risks been tightened, loosened or remained stable in the recent past?

Number of mentions, total mentions 24



Rapid urbanisation and the large infrastructure investment gap further exacerbate climate change risks in Africa. Because well-developed infrastructure systems can increase the resilience of cities to the impacts of natural disasters, climate change adaptation should form the basis of infrastructure investment strategies. This should be accompanied by a reduction of the natural catastrophe protection gap via the introduction of dedicated public-private schemes. As a global player highly invested in the protection of societies, we believe our industry has a key role to play in building those partnerships.

Hedi Hachicha, CUO, P&C Re, Middle East & Africa, SCOR

Weather risk insurance modelling and expertise – room for improvement

Around 70 % of the insurance market experts surveyed do not believe that climate change risk modelling has improved in recent years. The main reason for this is the lack of reliable historical data on natural disasters in many African markets and the limited economies of scale that make investment in model development less attractive. Without accurate historical data, risks cannot be modelled and, ultimately, insurers cannot price the risk accurately. It is, however, expected that modelling will improve over time as more historical data becomes available. In addition, sophisticated models are not available for most African markets with outdated models of 20 years and more still in use. The remaining 30 % see some improvements in important markets (e.g. South Africa, Maghreb countries) and for specific risks (e.g. earthquake models for East Africa, flood and earthquake models for Tunisia).

Chart 22: Has the modelling of weather risks improved in recent years?

Number of mentions, total mentions 22



The Moroccan government has undertaken a major initiative to develop a national integrated risk management strategy that could serve as a model for the rest of Africa. Since January 2020, mandatory insurance against property damage and bodily injury caused by certain catastrophic events such as floods, earthquakes, tsunamis and man-made events has been introduced. This protection is included in all insurance contracts on a mandatory basis, except for life and transport insurance. The part of the Moroccan population that is not insured for these perils will benefit from the solidarity fund for catastrophic events.

Bachir Baddou, Director General, the Fédération Marocaine des Sociétés d'Assurances et de Réassurance and CAT Assurance et Réassurance

Chart 23: Is there sufficient local expertise to underwrite climate risks in your market?

Number of mentions, total mentions 22



In the past, insurers operating in African markets have often cited the lack of qualified insurance professionals as the main barrier to growth and innovation, leading to insufficient product differentiation and thus increased competition on price.

This continues to be the case for extreme weather risk insurance. The majority of respondents said there is a shortage of qualified professionals. This problem is especially true for insurance companies that rely on a limited talent pool in one or a few markets. For a minority of respondents, mostly global and regional reinsurers and brokers, finding the right experts is not a problem as they have access to a larger pool of experts both regionally and internationally.

Climate change poses one of the greatest risks to our planet and our prosperity. Its impacts are already visible and shaking our risk landscape in Africa with warmer average temperatures, rising sea levels, longer and more frequent heatwaves, severe storms and rainfall, more floods, forest fires and weather extremes. The challenge for the insurance industry in Africa is to find ways to act as a catalyst to accelerate growth and reverse the trend of increasing protection gaps through innovative solutions such as microinsurance and parametric solutions, but also to create much-needed awareness for these risk solutions.

Sory Diomande, Head North, East & West Africa, Swiss Re

CLIMATE RISK REGULATION AND ESG INDICATORS

Climate risk regulation – regulators are not yet «walking the talk»

Over 70% of respondents agreed that climate change is gaining momentum and has become a relevant issue for their regional or local insurance regulators and supervisors. However, they also said that climate risk is much discussed but this has not yet translated into new regulations. The main challenges seem to be other more pressing priorities, the lack of data and capabilities to set regulations and guidelines and the lack of international standards or common methodologies (e.g. stress tests) to follow. All other respondents, around 30%, agreed that it is not yet a priority for their authorities.

Chart 24: Are regulators and policymakers already taking climate change into account in your markets?

Number of mentions, total mentions 25



Longer-term capital flows to Africa will be increasingly influenced by sustainability-oriented strategies that address risks such as climate change and the transition away from fossil fuel dependence. However, given that sub-Saharan Africa is not only the most commodity-dependent region in the world but also has a very high proportion of low-income people, it will be difficult to strike a balance between sustainable development and reducing exposure to ‘brown’ but high-income sectors.

Shashi Ramdany, CEO, Reinsurance Solutions

Southern Africa has been hit by a multitude of disasters in recent years, from cyclones and floods to major fires and droughts. These devastating events have shown that people are not yet sufficiently prepared for the dangers of climate change. Swiss Re, together with valuable partners, is establishing the Climate and Disaster Resilience Fund (CDRF) as an independent, whole-of-society response to the growing threat of climate disasters. The first organisation of its kind, the CDRF will bring together climate change and natural disaster thought leaders from governments, non-governmental organisations and the private sector to pool data and knowledge, share resources and implement initiatives that promote nature-based solutions, strengthen ecosystem and community resilience and help close the protection gap.

Beat Strebel, Market Executive Middle East & Africa, Swiss Re

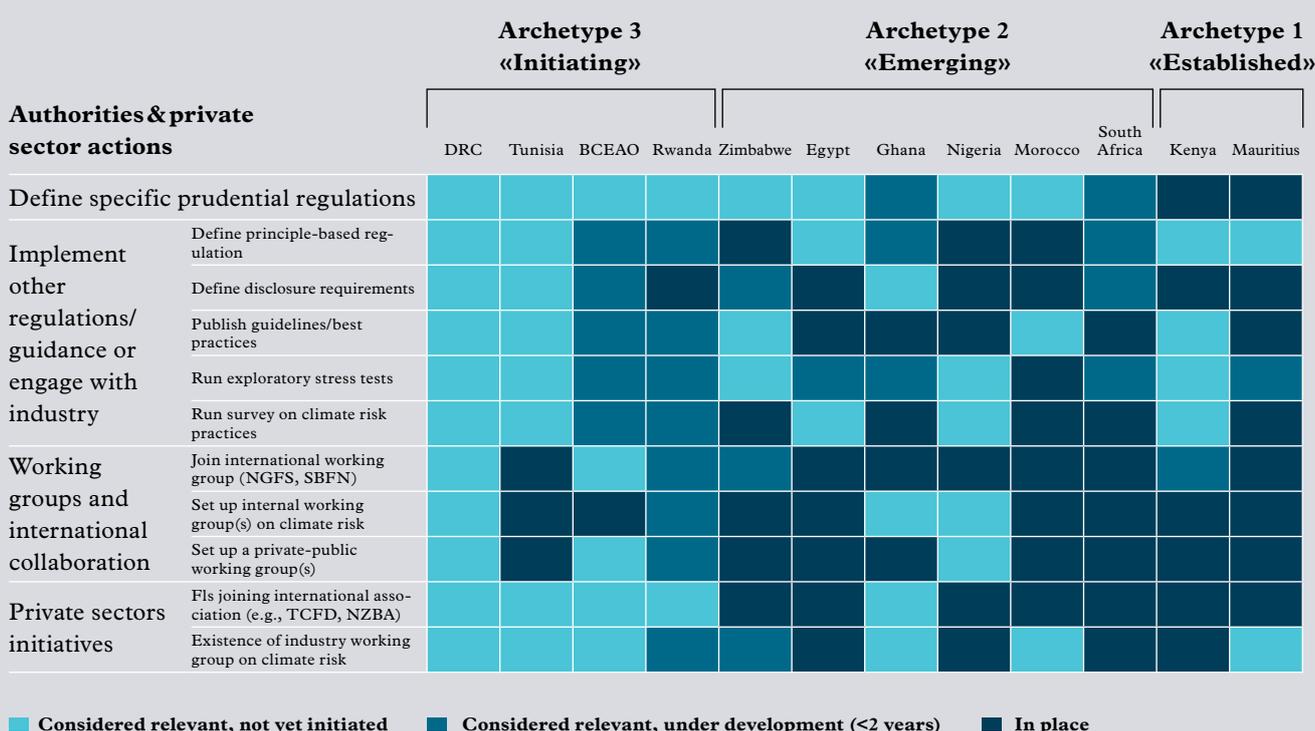
Climate risk regulation in Africa’s financial sector

According to a study conducted in 2021 by the African Development Bank together with the Global Center on Adaptation and the United Nations Environment Programme Finance Initiative, financial sector regulators and supervisors in Africa place climate risk as a «high» or «very high» priority on their agenda. However, few authorities have published regulations or supervisory expectations related to climate risk management in the financial sector, nor have they explicitly addressed climate-related or broader sustainability risks through binding regulations and supervisory guidelines.

Based on regulatory and supervisory progress, African countries and regions can be divided into three broad groups, as shown in the table below.

Chart 25: Overview of climate risk-related regulations and initiatives across selected African regions (based on interviews)

Source: Climate risk regulation in Africa’s financial sector and related private sector initiatives. Baseline study November 2021



ESG factors and trends – widely discussed but rarely implemented

Environmental, social and governance (ESG) criteria provide a comprehensive framework for evaluating companies. According to Milliman, insurers cannot ignore ESG considerations in today's environment, as sustainability awareness is increasingly influencing customer demand, investor preferences and regulatory attention. Insurers need to ensure that their positions on ESG are transparent and that they align their operations, products, asset management and governance accordingly. This is increasingly important to maintain their brand and reputation and to remain competitive as customer demand evolves.

Africa's insurance sector insures and invests in a wide range of assets and corporate clients with potentially negative impacts on the environment and carbon emissions. According to Financial Sector Deepening Africa, a specialised development agency focused on poverty alleviation through financial market empowerment, ESG risks in sub-Saharan Africa are not yet systematically incorporated into the underwriting, capital management and risk management decisions of the continent's insurers.

Cornerstone is proactively addressing the challenges and opportunities that climate change presents to our business. Over the last few years, we have continued to integrate ESG criteria into our underwriting and our own business activities. In this way, we promote inclusive and sustainable economic growth in Nigeria.

Ganiyu Musa, Group Managing Director and CEO, Cornerstone Insurance

As a provider of insurance for credit and political risks, ATI has increased its focus on the ESG impacts of projects. We have developed an internal ESG framework for assessing the risks we underwrite. Additionally, we continue to partner with our key partner institutions such as the European Investment Bank, the German Development Bank and the Norwegian Agency for Development Cooperation to design innovative products that mitigate the impacts of climate change.

Benjamin Mugisha, Chief Underwriting Officer, African Trade Insurance Agency

Chart 26: Are environmental, social and governance criteria already important in Africa?

Number of mentions, total mentions 25



Our survey participants concluded that ESG is a much-discussed topic in Africa, but it is not yet given the priority it deserves. Generally, the commitment of the African insurance sector to proactively address ESG issues and engage with experts, policymakers and companies within and outside the sector is currently increasing, albeit from a low level. ESG is most advanced in South Africa, Kenya and East African countries, according to the market experts. Global and large regional players are leading on ESG issues and have started to integrate this factor into their strategy and decision-making process.

Leadway has initiated the process of formalising the integration of ESG considerations into our business operations across the entire value chain. We have also embarked on a digital journey to actively manage our environmental impact throughout our branches and support moves to sustain group-wide national carbon neutrality. We continue to strive to improve our products and services while strengthening our corporate governance framework for greater economic and social development reporting.

Adetola Adegbayi, Executive Director, Leadway Assurance Company Ltd

OUTLOOK ON WEATHER RISK OPPORTUNITIES

Weather risk opportunities – the sky (and insurance capacity) is the limit

Our interview partners unanimously agreed that climate change is creating new opportunities for the insurance industry. In particular, renewable energies such as solar energy, wind energy, geothermal energy and hydropower plants are high on the list of opportunities from climate change. Investment in renewable energy in Africa has risen steeply over the last two decades, from around USD 5 billion to USD 55 billion, with many projects insured by the African insurance sector. And this observed investment trend is set to continue as the African continent shifts to a carbon-free energy supply to achieve sustainable development. In April 2022, the African Development Bank Group (AfDB) committed to double climate finance in Africa to USD 25 billion over the next five years. The bank said it would invest the funds to help African countries adapt and mitigate climate change.

The large and growing insurance gap resulting from climate change and natural hazards was the second most frequently mentioned opportunity. One of the survey participants aptly summarised the problem: «Our challenge now is to turn this huge protection gap into concrete business opportunities.» Possible solutions, according to our respondents, can be summarised as follows: Offer insurance coverage that is better adapted to risk (e.g. agricultural insurance, renewable energy insurance) and the economic affordability of consumers (e.g. parametric insurance, microinsurance); continue to create more awareness of insurance solutions through targeted marketing; and finally, improve the distribution of insurance solutions.

Chart 27: Do you see new weather risk-related business opportunities for insurers in your markets?

Number of mentions, total mentions 25



Awareness of climate change and natural disaster risk, which are key elements of disaster risk management strategies, is still relatively low in Africa. Contributing to this is the limited availability and robustness of data, which is also reflected in the scarcity of reliable natural catastrophe models.

Salvatore Orlando, Head of Region WSE/CETRA, Partner Re

