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Harnessing Africa's blue economy

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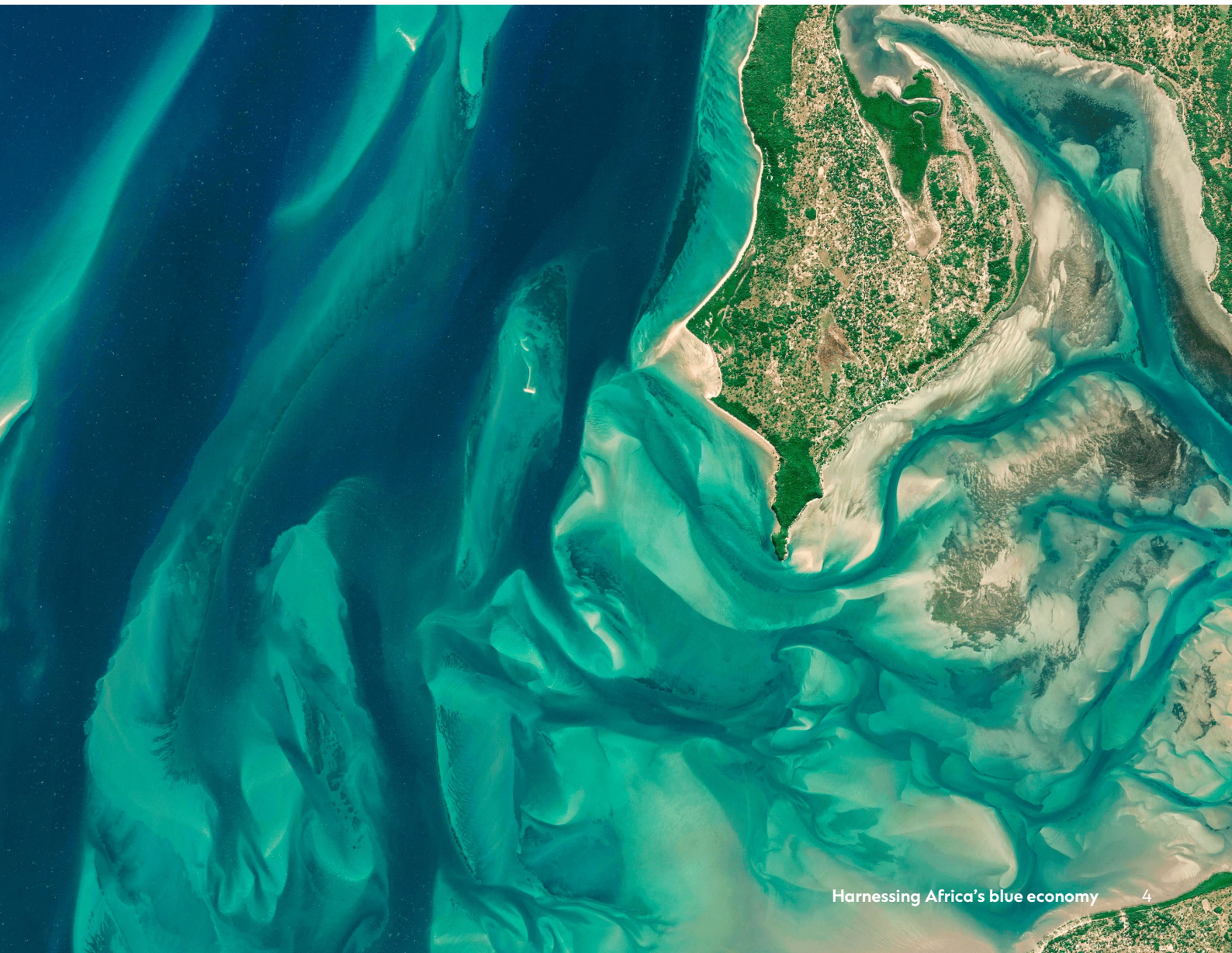
Supporting and harnessing Africa’s sustainable blue economy is not just about unlocking the potential of our ocean—it's about securing the livelihoods of millions, driving sustainable growth, and building long-term resilience. In support of our markets across the continent, we're working to highlight new and emerging opportunities to protect and conserve the ocean and scale Africa's sustainable blue economy in support of inclusive growth and development for generations to come.

Kariuki Ngari

Managing Director & Chief Executive Officer,
Standard Chartered Kenya & Africa

01

Executive summary



Standard Chartered's previous report, Towards a sustainable ocean: where there's a will, there's a wave provided a global overview of the opportunities and developments associated with making the use of our ocean more sustainable. It offered guidance on the growing range of financing mechanisms that can be deployed to scale these solutions. In support, this report looks at how the development of a sustainable blue economy could help countries across Africa to meet their climate and broader sustainability ambitions.

Africa stands to benefit from the development of a sustainable blue economy

Developing a more sustainable blue economy could be highly beneficial to Africa's macroeconomic and sustainable development considering that the region has more than 30,000km of coastline. Of the almost 20 different industries that make up Africa's blue economy, this report highlights a few with significant potential to deliver sustainable, inclusive growth.

Offshore wind: Estimates from the World Bank (1) suggest that Africa could increase electricity generation by c.45x if it captured its offshore renewable power generation potential.

Aquaculture: Our calculations suggest Africa's aquaculture-based fish production could grow 8-fold and reach 19mn tonnes per year.

Seaweed: Africa has the opportunity to be a powerhouse for seaweed production which could support a range of sustainable products and services and function as a catalyst for social change.

Marine conservation and restoration: Establishing Marine Protected Areas (MPAs) could provide Africa with the potential to expand conservation and restoration activity, which in turn could provide significant ecological, societal and economic benefits.

Sustainable finance flows towards Africa are increasing

Africa has seen an increase in finance flows from USD30bn in 2019-2020 to USD52bn in 2022 according to data from Climate Policy Initiative (CPI) (2), however, there is strong potential for further growth because research shows that across the continent, countries do not yet fully benefit from the expanding sustainable debt market. Additional funding to support the development of a sustainable blue economy could be unlocked through engagement with the private sector, which in 2022 contributed only 18 per cent of Africa's climate funding compared to 58 per cent for the rest of the world, according to CPI data.

Three developments have the potential to facilitate financial flows towards Africa's blue economy continuing to grow.

1) An increasing appetite from governments to issue blue debt and engage in debt-for-nature conversions.
2) An expanding range of local organisations and networks focused on early stage or growth investing.
3) A growing local investor base with total assets under management from local banks, insurance companies and pension funds estimated to expand by 171 per cent to reach USD6.5tn by 2040 according to data from CPI.

2025 could be a pivotal year for Africa's sustainable blue economy

As this report will outline, 2025 could be a pivotal year for the development of a sustainable blue economy in Africa, as countries increasingly consider integrating the blue economy into policies and sustainability strategies. Alongside this, countries are now considering blue bonds and other financial instruments, such as debt-for-nature conversions, as vehicles to secure funding to support enduring growth and socioeconomic development.

The global agenda in 2025 will also turn attention to the blue economy, with global events including the Blue Economy & Finance Forum in Monaco, and the United Nations Ocean Conference in France, gathering stakeholders to discuss this theme. Elsewhere, South Africa's G20 Presidency also presents an opportunity for heightened focus on Africa, and the blue economy in this context.

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Africa stands to benefit from the development of a sustainable blue economy

Greater awareness of the impacts the deterioration of our ocean ecosystem could have on climate, nature, people and global GDP has resulted in a growing focus on solutions that can help make the use of our ocean more sustainable. In our previous report, Towards a sustainable ocean: where there's a will, there's a wave, we highlighted a range of opportunities that can support the transition of the real ocean economy towards more sustainable practices and showed how these solutions could deliver significant benefits for the global economy. Countries across Africa may benefit from widescale adoption of some of these solutions. In this chapter we highlight solutions that could promote a sustainable blue economy and tackle broader challenges faced across the region.

The blue economy covers many interrelated sectors

The ocean is relevant to a wide range of economic activities, and these are made up of a very significant number of sub-sectors. Each of these can help address climate change and nature loss, whilst enabling sustainable and inclusive economic development through the adoption of sustainable practices. Figure 1 groups the key industries by ocean service and type of activity. These industries can only contribute to a more sustainable blue economy if their services are provided sustainably.

Type of activity	Ocean service	Industry	Key growth drivers
Harvest of living resources	Seafood	Fisheries	Food security
		Aquaculture	Demand for protein
	Marine biotechnology	Pharmaceuticals, chemicals	Research and Development (R&D) for healthcare and industry
Extraction of non-living resources, generation of new resources	Energy	Ocean-based renewables	Demand for alternative energy sources
	Fresh water	Desalination	Demand for fresh water
Commerce and trade	Transport and trade	Sustainable shipping	Growth in global trade
		Ports	
	Tourism and recreation	Ocean tourism	Growth in tourism demand
		Coastal development	Urbanisation, regulation
Response to ocean health challenges	Ocean monitoring	Technology and R&D	R&D in ocean technologies
	Carbon sequestration	Blue carbon	The need to store carbon dioxide and develop carbon markets
	Coastal protection	Habitat protection and restoration	Long term environmental targets
	Waste disposal	Assimilation of nutrients and waste	Protection of marine ecosystem sustainability

Source: Standard Chartered

Figure 1: Ocean based services and activities

There has been progress on specific SDGs in Africa, but more is needed

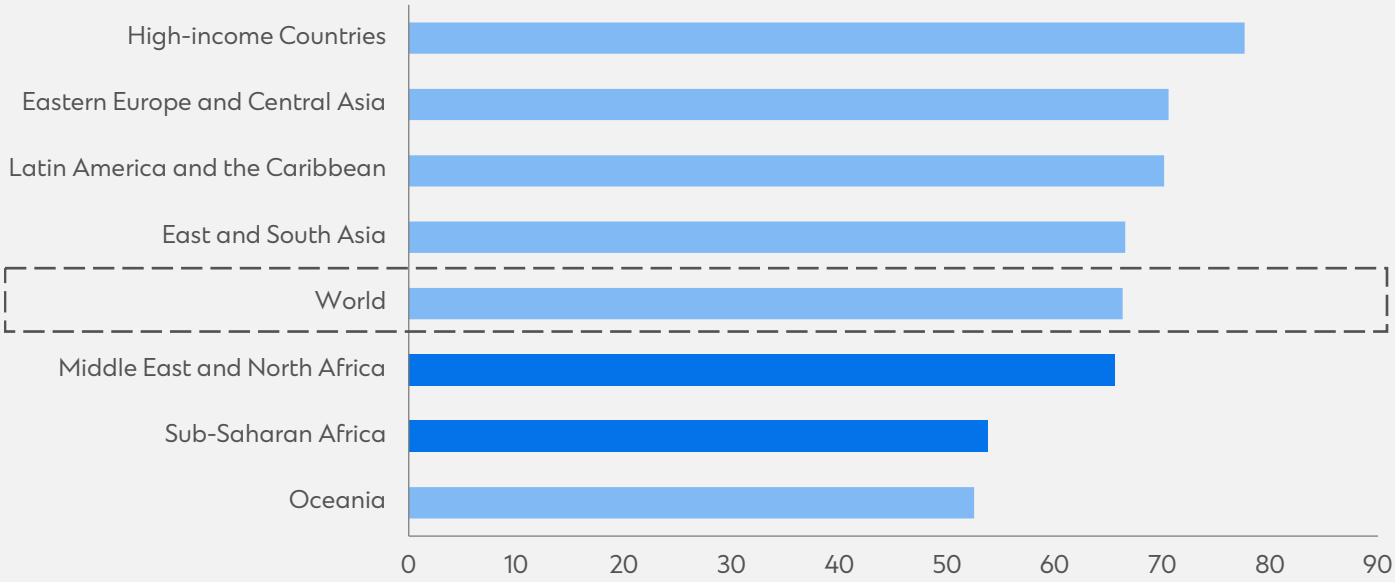
While there has been some progress on specific sustainable development goals (SDGs) in Africa, overall progress towards achieving the 2030 Agenda remains uneven and slow.

The SDGs are a useful tool to outline the challenge that countries across Africa face in relation to sustainability.

Data captured in 2023 from the United Nations' Sustainable Development Report showed that Sub-Saharan African countries had achieved an average SDG index score of 53.7 which is below the world average of 66.3.

North African countries perform somewhat better than the average, although the region's score of 65.6 is also below the world average (Figure 2). When measuring the improvement in SDG performance since 2000, Sub-Saharan African countries show some of the strongest improvements (Figure 3).

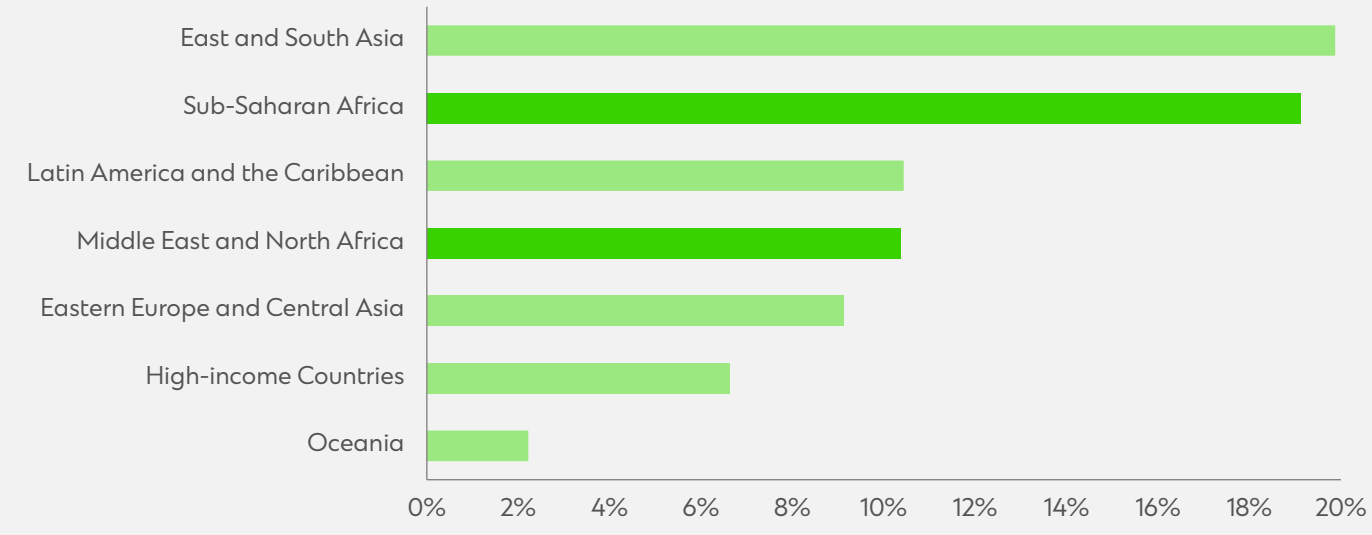
2023 SDG index score by region
A score of 100 denotes that the SDG targets have been met



Source: United Nations, Standard Chartered

Figure 2

Change in SDG index score by region
2023 vs 2000



Source: United Nations, Standard Chartered

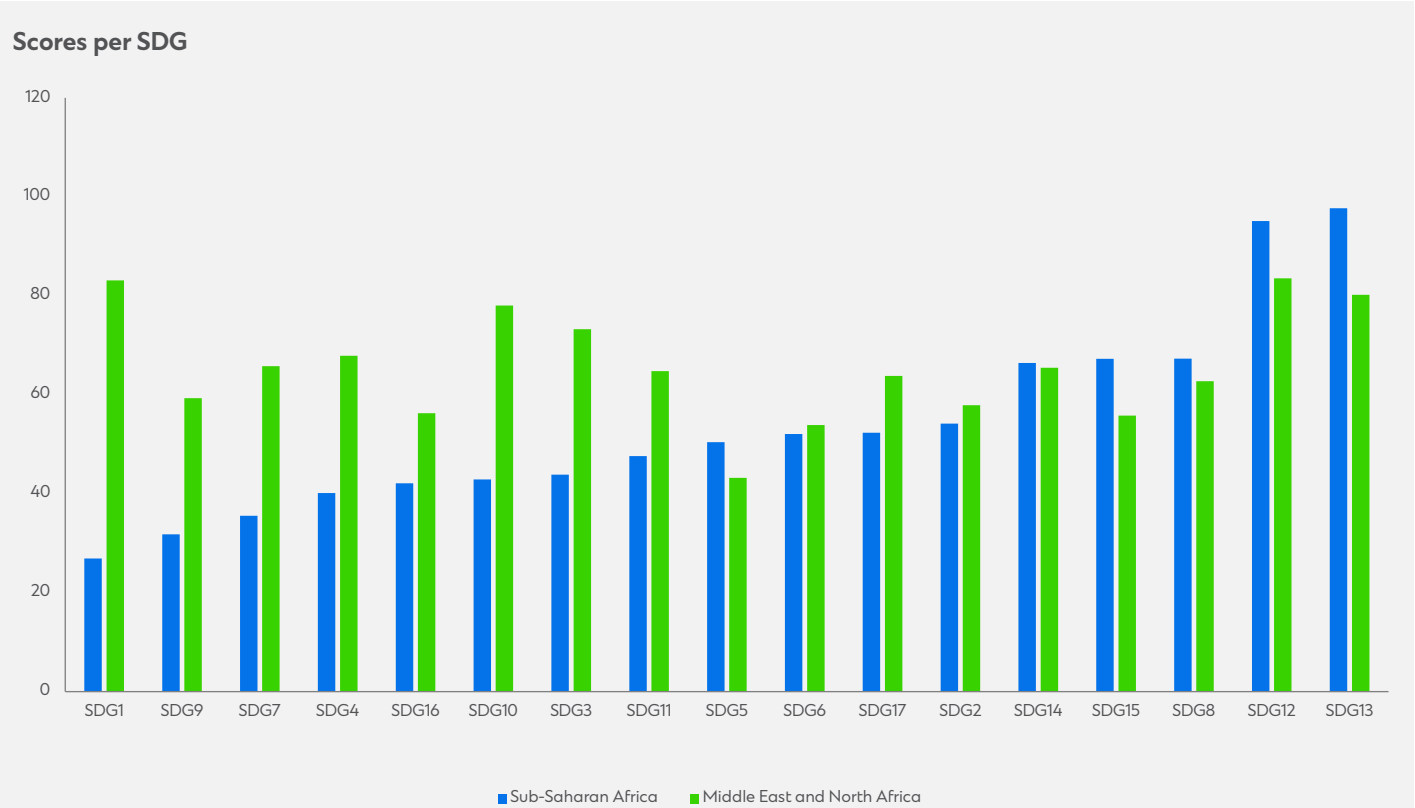
Figure 3

Although Africa's performance against the SDGs is improving, a more granular review of the individual SDGs shows that further improvements are needed (Figure 4), notably the SDGs that need most attention for countries in Sub-Saharan Africa include SDG1 (No Poverty), SDG9 (Industry, Innovation and Infrastructure), SDG7 (Affordable and Clean Energy), SDG4 (Quality Education), SDG13 (Climate Action) and SDG14 (Life Below Water).

When reviewing progress towards the targets associated with SDG14, we find that African countries perform below average in terms of the health of their oceans and designating MPAs. On the other hand, Africa's fishing industry performs better than other regions as the share of fish caught from overexploited stocks and the share of fish caught using trawling is lower than elsewhere.

The integration of sustainable blue economy solutions into economic and sustainable policy agendas could help African nations improve their performance across the SDGs.

Areas where the development of a sustainable blue economy can make a difference are noted on the following pages.



Source: United Nations, Standard Chartered

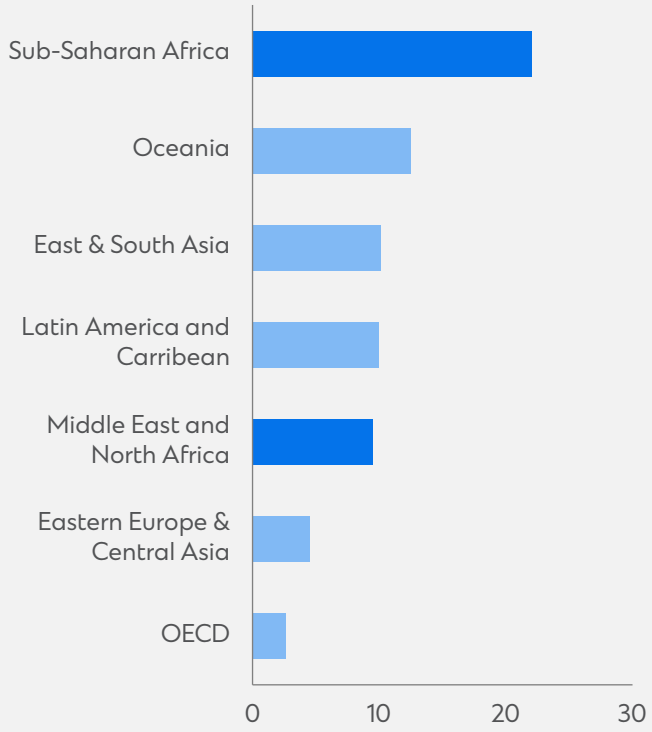
Figure 4

A sustainable blue economy could help Africa meet growing food demand

A sustainable blue economy incorporates a range of food supply sources and technologies which could help Africa address challenges related to food security. This holds great potential, because more than 20 per cent of people living in Sub-Saharan Africa are currently undernourished (Figure 5). Country-based data from the UN suggests that more than a quarter of the African countries assessed have a rate of undernourishment that is 30 per cent or higher (Figure 6).

The challenge for Africa, in this regard, is to not only eliminate existing rates of undernourishment, but to also increase food supply to meet the demand for food that will emerge as the region's population continues.

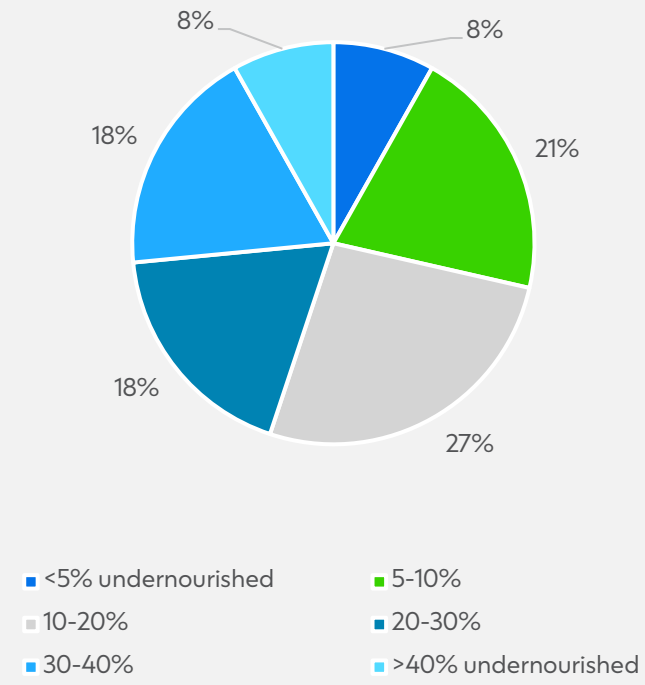
Rate of undernourishment
% of population, 2021



Source: United Nations, Standard Chartered

Figure 5

% of African countries with a level of undernourishment
2021



Source: United Nations, Standard Chartered

Figure 6

Food demand scenarios: The impact of population growth

To estimate the potential future demand for food across Africa, population data from the World Bank, and food consumption data from the UN's Food and Agricultural Organisation (FAO) has been analysed. Estimates from the World Bank for the 50 African countries assessed suggest that their overall population is set to increase by 70 per cent from 1.45 billion in 2023, to 2.47 billion by 2050. This implies that just keeping food supply per capita at current levels would require a 70 per cent increase in production. However, such a scenario would be insufficient as it would imply that current levels of undernourishment remain.

Food demand scenarios

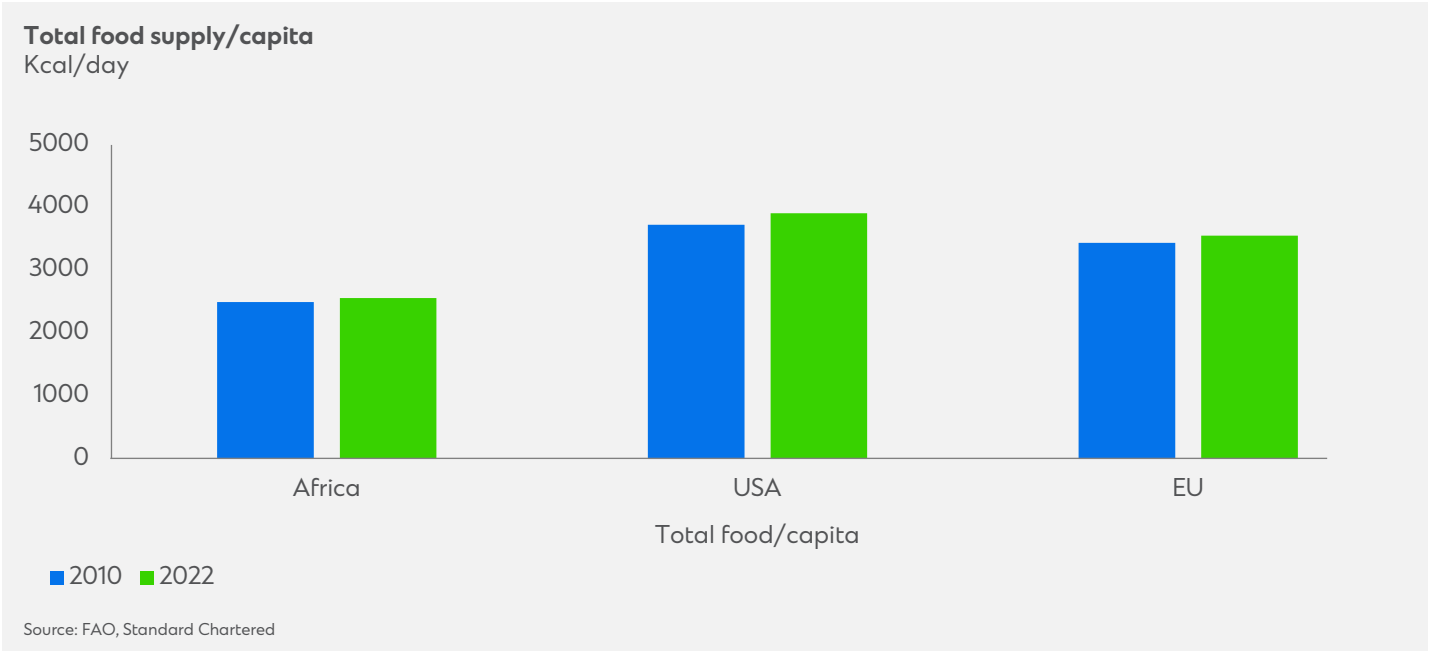
Research conducted to inform this report modelled total food supply in Africa, if food consumption per capita were to match that of developed market levels. This exercise used total food supply per capita and protein consumption per capita as indicators.

Using Food and Agriculture Organization of the United Nations (FAO) data, average food supply per capita across markets in Africa was surveyed, and reached 2,561 kcal per day in 2022.

This is 28-35 per cent below EU and US levels respectively (Figure 7). Reviewing the nutritional make up of Africa's food, on average the protein supply in Africa in 2022 was 40-45 per cent below EU and US levels respectively. Relative animal protein supply levels were even lower. The FAO's data suggests that across the 50 surveyed economies, meat supply was more than 70 per cent lower than levels

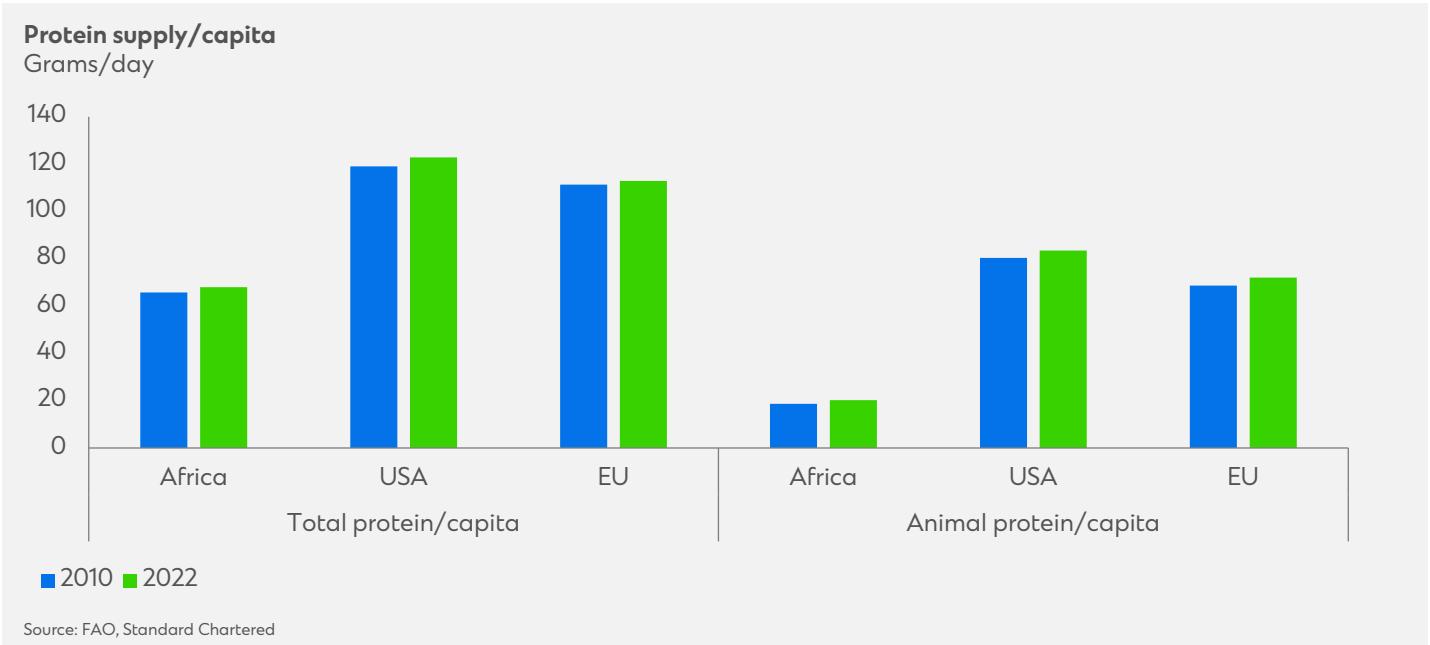
seen in Europe and the US in 2022 (Figure 8). We note that the FAO's data uses gross levels, suggesting that these do not incorporate issues such as food loss or waste.

The FAO estimates that 37 per cent of food in Sub-Saharan Africa is lost or wasted, implying that actual calorie availability per person per day is likely to be just 1,600, rather than the gross level of 2,561.



Source: FAO, Standard Chartered

Figure 7



Source: FAO, Standard Chartered

Figure 8

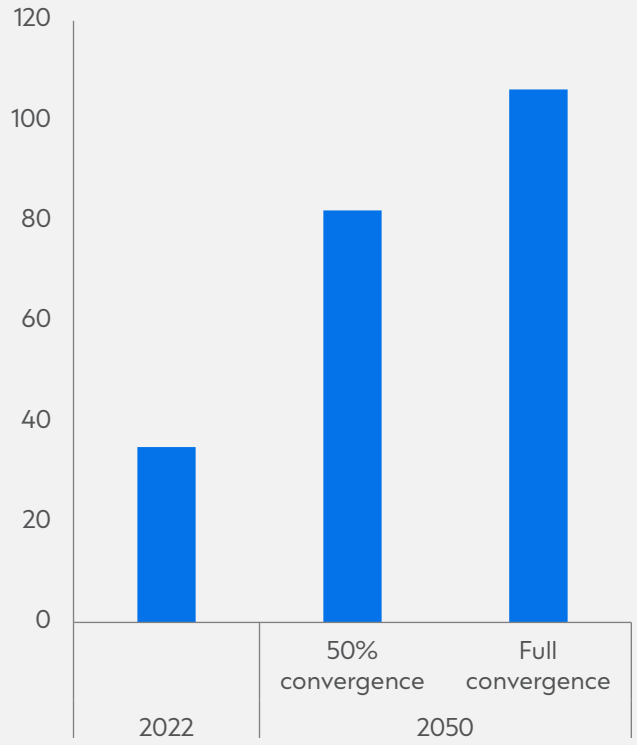
A calorie-based approach: Country-based FAO data suggests that spending power per capita is positively correlated with calorie intake per capita. In 2022, average calorie intake per capita for the EU and US reached 3,555 and 3,912 respectively.

Our calculations suggest that total food supply across the 50 assessed African countries would have to increase 136 per cent, if Africa's total calorie intake were to match current EU levels. Even assuming that only half the current calorie deficit to the EU would be closed would require a 102 per cent increase in total food supply across Africa.

A protein-based approach: However, a total calorie intake assessment does not necessarily suggest that consumers enjoy a good quality diet. As such, total protein intake per person per day was also a focus in the research. Across the African countries assessed, this reached 68 grams in 2022, which compares to 113 grams and 123 grams for the average EU and US consumer respectively. In a scenario where the average protein consumption per capita in Africa were to reach US and EU levels, a more than a 200 per cent increase in total protein supply would be required (Figure 9). Assuming that African protein consumption per capita would reach just half the levels seen in the EU and US would require total protein production in Africa to increase by 135 per cent.

Countries that face the strongest challenge to increase protein supply to levels currently seen in the EU and US are Nigeria, the Democratic Republic of the Congo (DRC), Ethiopia, Tanzania and Egypt (Figure 10).

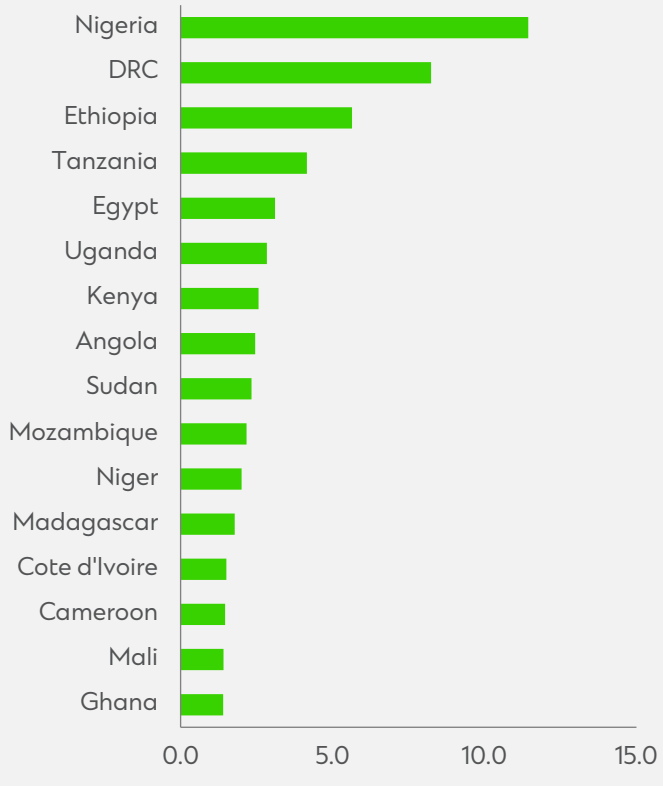
Total Africa protein supply
Million kg



Source: FAO, World Bank, Standard Chartered

Figure 9

Required increase in protein supply per country
Million kg

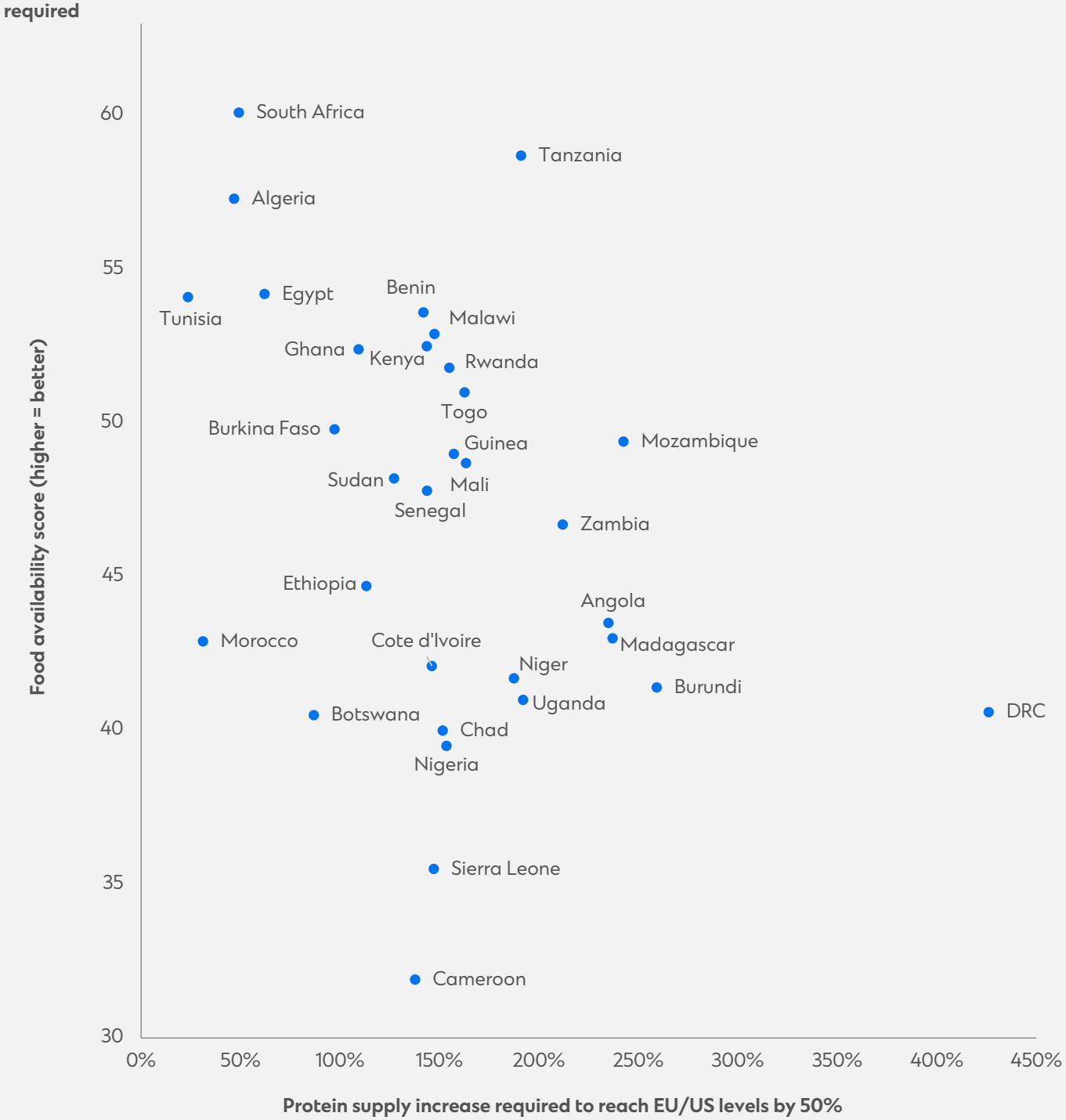


Source: FAO, World Bank, Standard Chartered

Figure 10

Increasing protein supplies as modelled in the scenarios could be challenging for most African countries considering that food availability is below average across most geographies. In fact, our analysis suggests that countries with potentially the largest absolute protein deficit are those that have the lowest current food availability (Figure 11). What this analysis of Africa's potential food challenges implies is that to increase food supply sufficiently, markets across the continent will need to increase production of current food supply sources, and broaden the range of food and protein sources available. This is exactly what the blue economy can deliver via aquaculture and sustainable fishing for animal-based protein, seaweed for plant-based protein and cultivated meat for protein-alternative products.

Correlation between food availability and supply required



Source: FAO, World Bank, Economist, Standard Chartered

Figure 11

Blue Economy Solution: Spotlight on sustainable seafood and aquaculture

To meet food demand across Africa over the next few decades requires an increase in protein supply. Carried out sustainably, scaling marine fishing and aquaculture production could be a potential solution to meet this challenge. In 2022, the African Natural Resources Center (ANRC) **estimated that to feed the growing population in Africa** would require total marine fish production- encompassing both wild catches and fish farming (aquaculture) - in the region to increase by c.30 per cent from current levels, to reach 13 million tonnes by 2030, and by c.90 per cent to reach 19 million tonnes in 2050 (4).

Estimates from the FAO included in their most recent 'The State of World Fisheries and Aquaculture' update suggest that current policies and strategies will likely lead to an increase in total fish production of just 7 per cent between 2022 and 2032.

Improving fishing practices is critical to increasing production

Improving the sustainability of fishing practices will have significant benefits, as highlighted by the ANRC. The ANRC lists several areas that provide markets across Africa with the opportunity to increase marine fishing activity, where relevant, in a sustainable manner.

Improving the health of ecosystems: Improved management and restoration of marine ecosystems across Africa may allow for an increase in fish production by 50-60 per cent. This can be done by incorporating MPAs into fishing management, addressing pollution and improved marine spatial planning (MSP).

Sustainable operations: Reducing the environmental impact of fishery fleets and processing industries, better management of fishing practices, and investments in solutions that reduce bycatch would help increase production by 30-40 per cent.

Adoption of new technologies: Greater use of monitoring, control and surveillance technologies would also improve the efficiency of fishing activities. According to the FAO, less than 30 per cent of its fishing vessels are motorised compared to 70 per cent for the rest of the world, reflecting the potential for fisheries in Africa to improve their efficiency through new technologies.

Reduction of waste: Adopting better standards for fish use post-catch would help reduce waste production, both during and after the harvest period. Examples include fish smoking and drying technologies to extend shelf life. Waste could also be reduced by increasing intra-regional trade, rather than exporting fish to regions outside of Africa. This is an area with potential as FAO data suggests that Africa's intra-regional fish trade is just 26 per cent compared to 50 per cent for Latin America, 47 per cent for Asia and 65 per cent for Europe.

Improving fishing practices could also help address the issue of illegal fishing. This is an issue that undermines the livelihoods of local fishers and limits broader economic upside potential. The elimination of illegal fishing through improved governance and regulation of fishing activity could help identify the macroeconomic value generated by fishing. This, in turn, could support policymakers' efforts to generate funding for blue economy-related programmes.

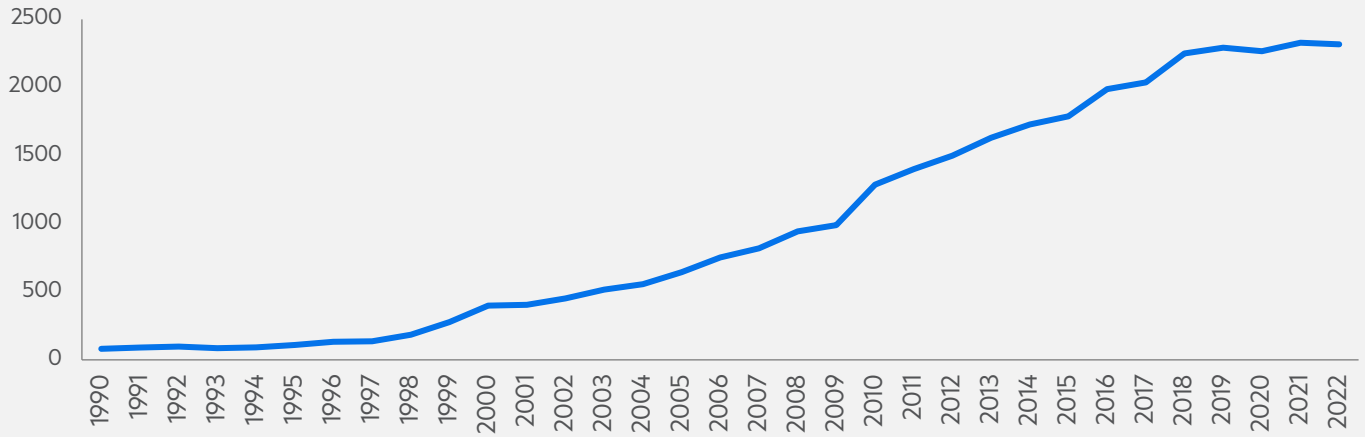
An opportunity to scale aquaculture production to meet food demand

Growth in global aquaculture production has been strong since the early 1990s. Data from the FAO suggests that total aquaculture production reached 94.4 million tonnes in 2022, which for the first time was greater than fishery production of 91.0 million tonnes (5).

Aquaculture production in Africa has grown more than 28x since 1990 to more than 2.3 million tonnes and the data shows that growth potential remains strong. (Figure 12).

In 2022, aquaculture production levels represented just 22 per cent of marine fishery production in Africa. This compares to 34 per cent for Latin America and the Caribbean and a very high 177 per cent for Asia. Aquaculture production in Africa is dominated by Egypt which accounted for 67 per cent of the region's total aquaculture production in 2022, according to FAO data (Figure 13). To reflect the growth potential for aquaculture and capture fisheries in the region, this report highlights work from Chan et al (6). Their analysis in a high growth scenario suggests that, in 2050, up to 58mn people could be employed in aquaculture and capture fishery production in Africa, while aquaculture revenues could reach USD20bn in 2050, according to their estimates. As feed accounts for a significant share of aquaculture production costs, their estimates also imply a positive outlook for the aquaculture feed sector.

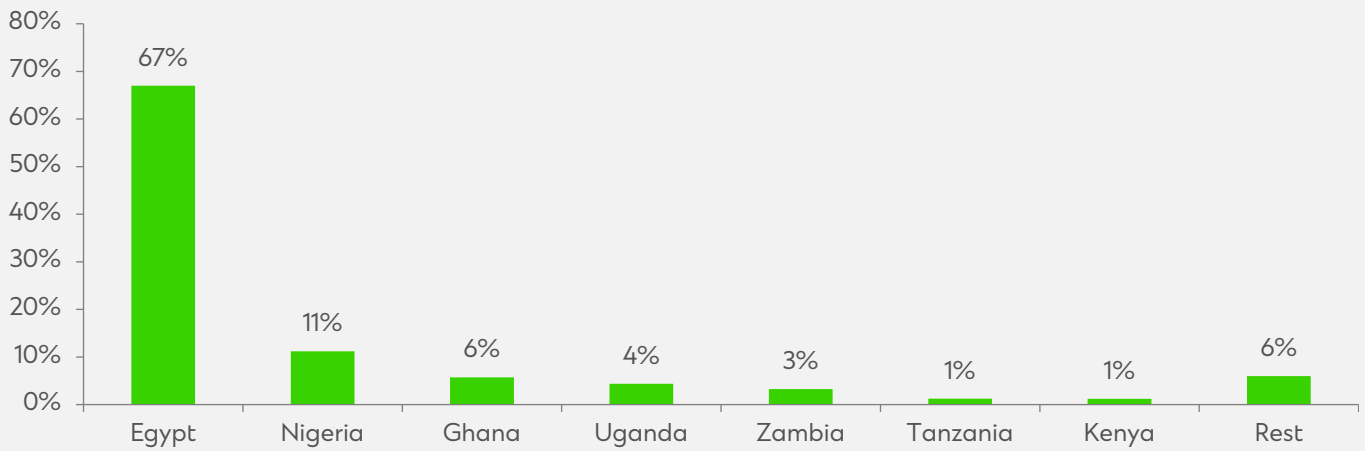
Total fish aquaculture production in Africa
Per thousand tonnes



Source: FAO, Standard Chartered

Figure 12

Aquaculture market share by country
2022, for African countries



Source: FAO, Standard Chartered

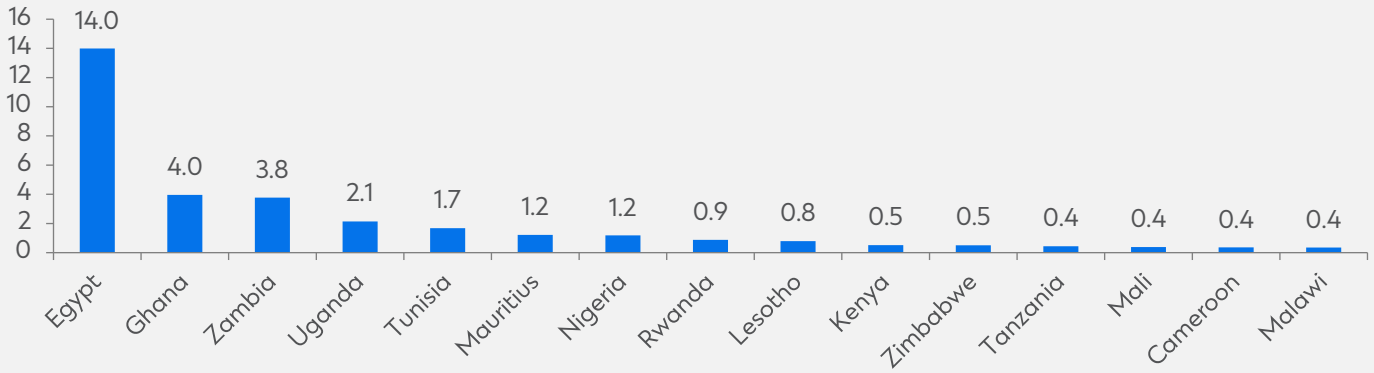
Figure 13

Based on FAO's data for aquaculture production of fish in Africa, we developed two simple scenarios to underline the growth potential for aquaculture in Africa. At present, aquaculture production per capita is highest in Egypt at almost 14kg per capita, while production in Ghana and Zambia are close to 4kg per capita (Figure 14). Aquaculture production across all other African countries is substantially lower.

Assuming that all African countries were able to achieve aquaculture production levels achieved by Ghana and Zambia would lift the region's total aquaculture production by 185 per cent to 6.6mn kg. Raising productivity to levels achieved in Egypt would result in more than 19mn kg of aquaculture production for Africa (Figure 15). Such productivity would match the level of fish production that is needed to feed Africa's population by 2050, according to the ANRC.

While aquaculture growth potential is significant, this needs to be pursued and operationalised sustainably. One of the key challenges to achieving this will be to use sustainably-grown feed and transition away from using wild fish as feed for aquaculture, replacing this with, for example, insect-based feed.

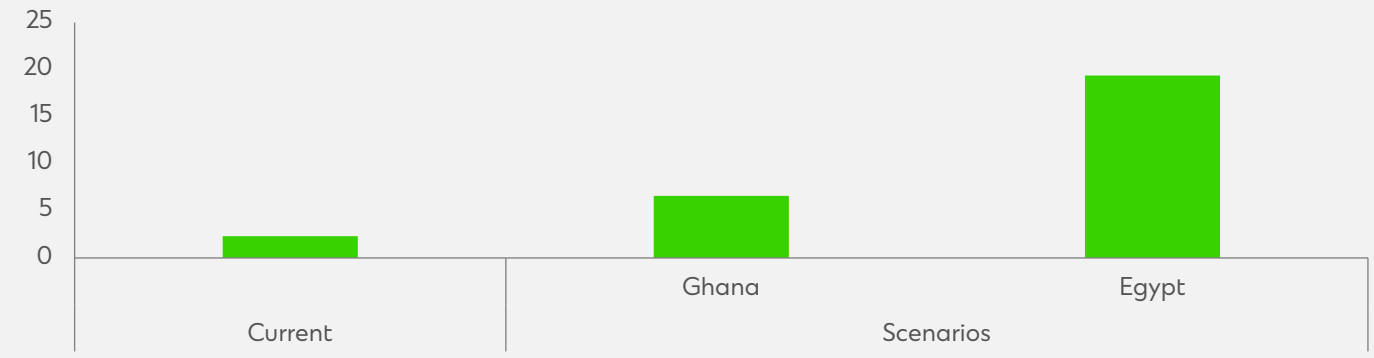
Aquaculture production per capita
2022, kg



Source: FAO, World Bank, Standard Chartered

Figure 14

Aquaculture production potential for Africa
Million kg, current refers to 2022



Source: FAO, World bank, Standard Chartered

Figure 15

A sustainable blue economy could help Africa to meet growing energy demand

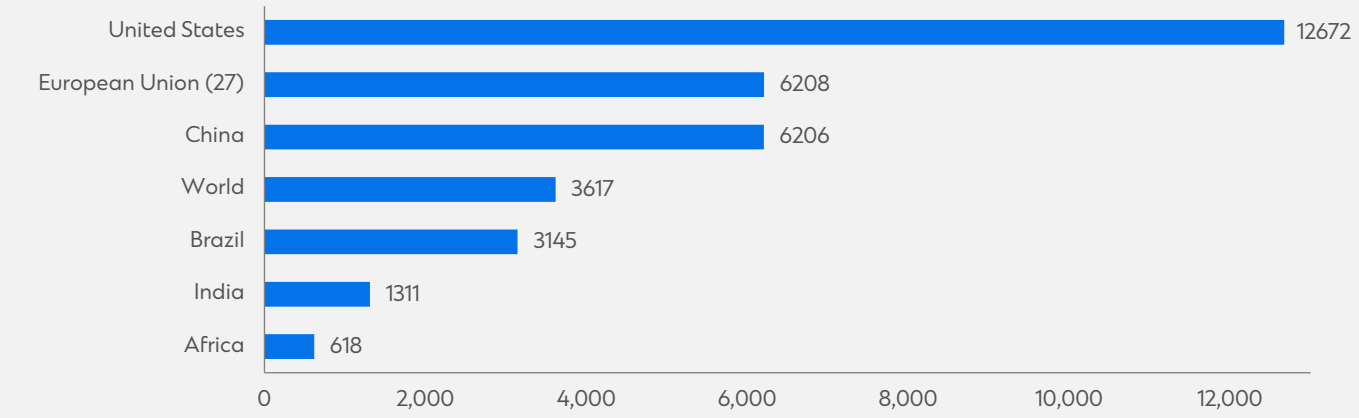
Developing a sustainable blue economy is one of the key strategies that African countries can adopt to help meet growing energy demand, whilst mitigating climate change. In Towards a sustainable ocean: where there's a will, there's a wave, we showed that a full adoption of sustainable blue economy solutions globally has the potential to mitigate up to 40 per cent of current greenhouse gas emissions (GHG) by 2050.

Blue Economy Solution: Spotlight on ocean-based renewable energy

Africa's energy infrastructure is underdeveloped and requires substantial investment for SDG targets to be met. Average electricity generation per capita across the region reached 618kWh in 2022. This is 80 per cent below the world average, less than half electricity generation in India and 90 per cent below China's levels (Figure 16). The only countries in Africa where the level of electricity generation per capita is above the world average are The Seychelles, Libya and South Africa. Of the 52 African countries assessed 37 have electricity generating capacity that is below Africa's own average.

Renewable energy provides Africa with a real possibility to meet this demand, whilst mitigating climate change. This is especially true given that the cost of generating solar and wind power has fallen significantly over the past ten years and is now often cheaper than traditional energy sources (Figure 17).

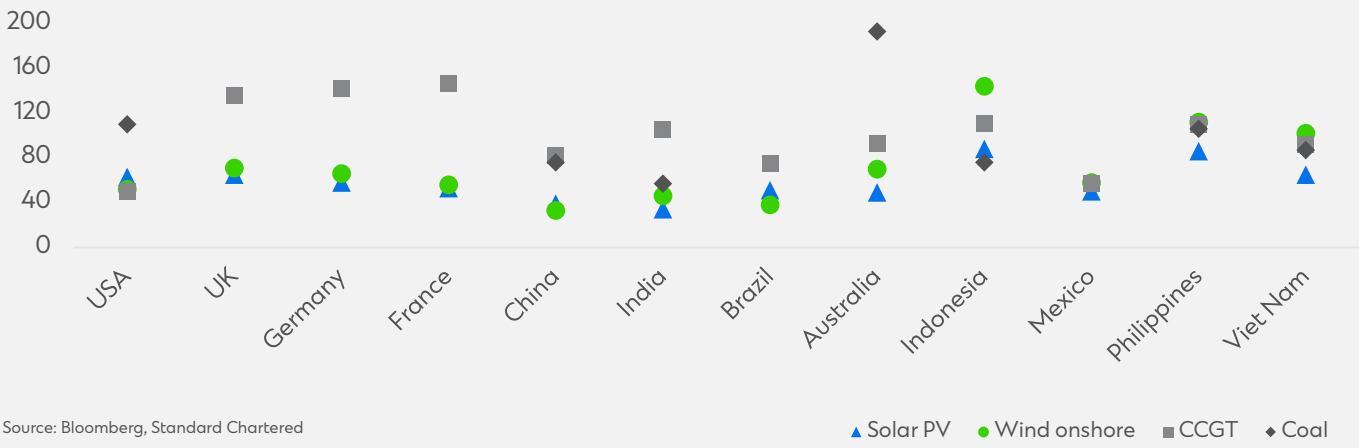
Electricity generation capacity
kWh/capita



Source: Ember, Standard Chartered

Figure 16

Solar and wind cost compared to traditional energy sources
USD/MWh

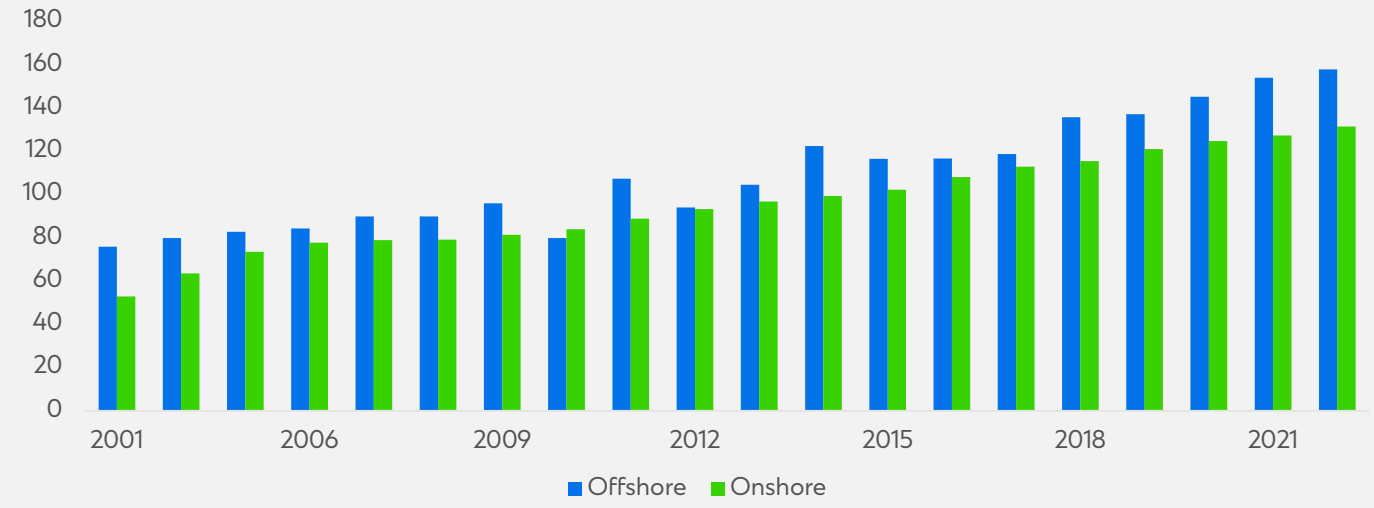


Source: Bloomberg, Standard Chartered

Figure 17

Offshore renewable energy is one of the sectors included in the sustainable blue economy which has the potential to play an important role in helping to create energy security for countries across Africa. The offshore wind market is rapidly evolving, not least as wind turbines are growing in power and size (Figure 18). The increasing size of turbine rotor blades not only increases power output but also reduces the cost of generating electricity (Figure 19).

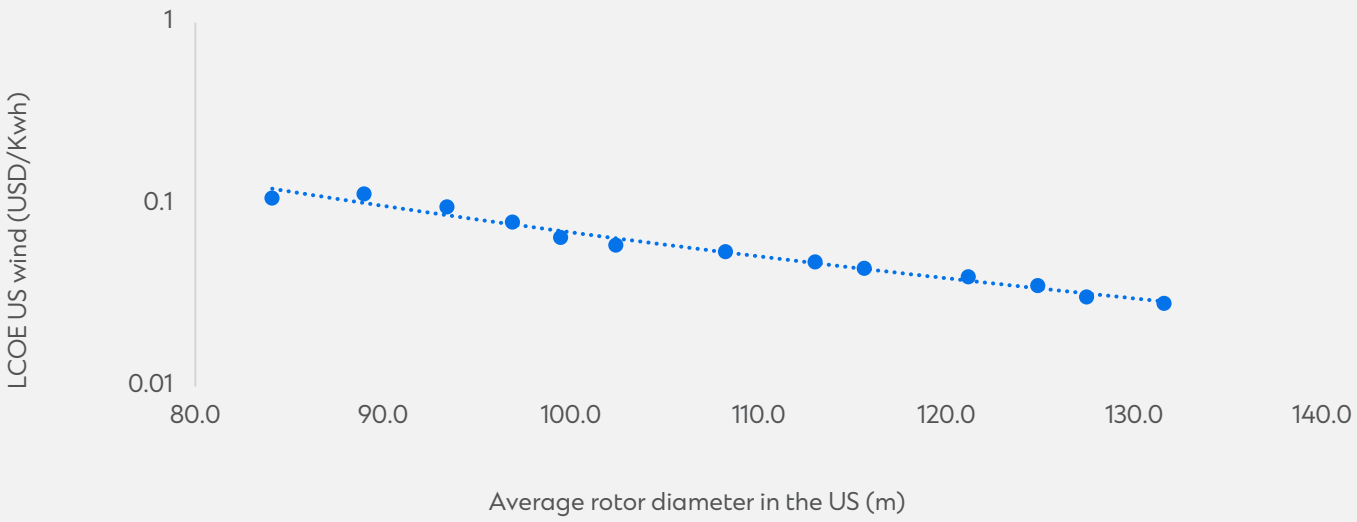
Rotor blades size increase over time
Metres



Source: Department of Energy, Bloomberg, Standard Chartered

Figure 18

Costs decline as rotor sizes increase
Levelised cost of electricity (LCOE) versus size of rotor



Source: Department of Energy, Standard Chartered

Figure 19

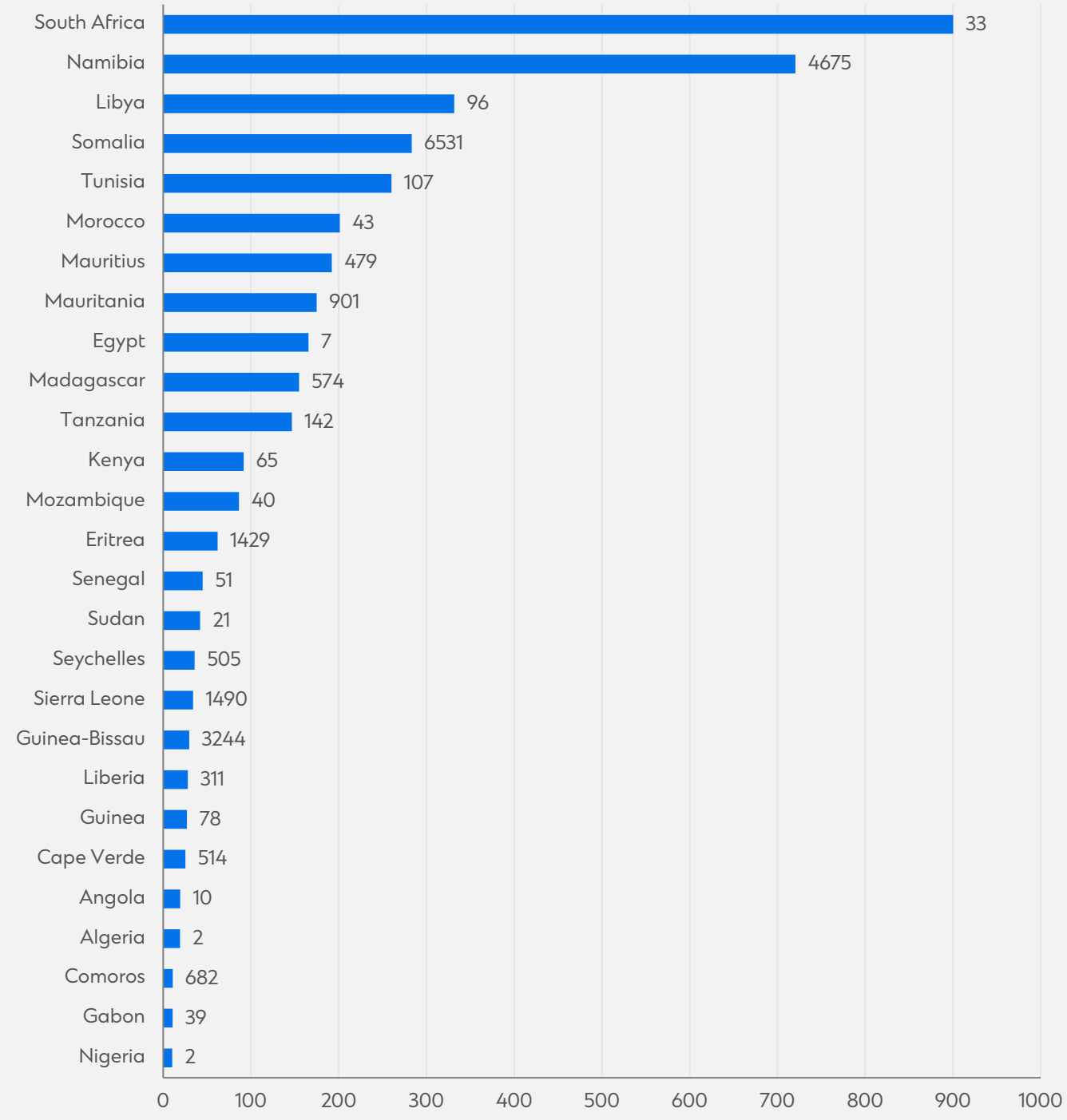
Analysis from the World Bank shows that a range of African countries have very significant offshore wind potential. For example, their calculations imply that South Africa has the potential to establish 900GW of offshore wind capacity (Figure 20). To put this into perspective, this offshore capacity would be more than 33x the country's total electricity production in 2022. Importantly, offshore wind potential is particularly significant in African countries that have some of the most underdeveloped electricity infrastructures. For example, with an opportunity to make full use of their offshore wind potential, Somalia and Namibia could increase their annual electricity production by 6531 and 4675 times respectively.

For the region as a whole, the World Bank's data suggests that Africa could increase total electricity production by 45x if the continent was able to capture the full scope of its offshore wind potential.

There are a range of reasons why fully meeting these offshore wind capacities might be a significant challenge. Financing needs, permitting procedures, supply chain challenges are but a few of these. However, reducing these barriers to capture part of the region's offshore wind potential may already have significant benefits for Africa.

Based on the World Bank data we calculate that to double total annual renewable electricity production across the African countries which have offshore wind capabilities would require them to capture just 2.2 per cent of their maximum potential on average.

Offshore wind potential for African countries
Gigawatt, labels indicate ratio of offshore wind potential to total electricity production in 2022



Source: World Bank, Ember, Standard Chartered

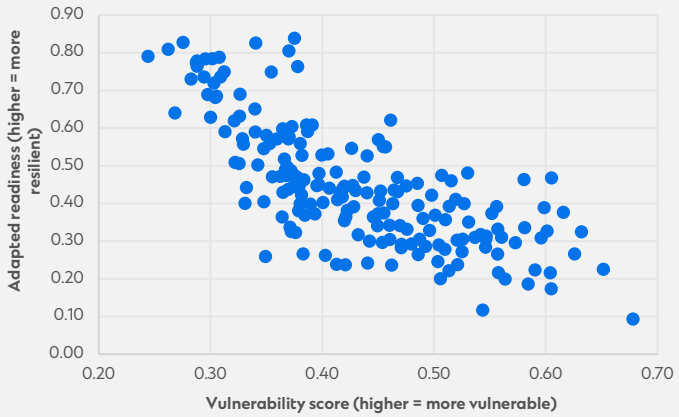
Figure 20

Marine conservation and restoration could support adaptation and resilience

Standard Chartered released the Guide for Adaption and Resilience Finance which provides a roadmap for investment in adaptation and resilience, with over 100 investable activities, including blue economy-related solutions. As the Guide showcases, developing sustainably managed nature-based solutions is one effective way to help Africa build resilience against the impacts generated from extreme weather impacts, including drought and floods.

Addressing the impacts of climate change through the adoption of sustainable blue economy solutions is especially relevant for Africa, considering that of almost all the 200 countries assessed by the International Monetary Fund (IMF) for climate risk, those with the highest perceived risk tended to be in Africa (Figure 21). Analysis also shows that countries with increased vulnerability to climate disruptions tend to be less prepared to leverage private and public sector investment for adaptive actions (Figure 22).

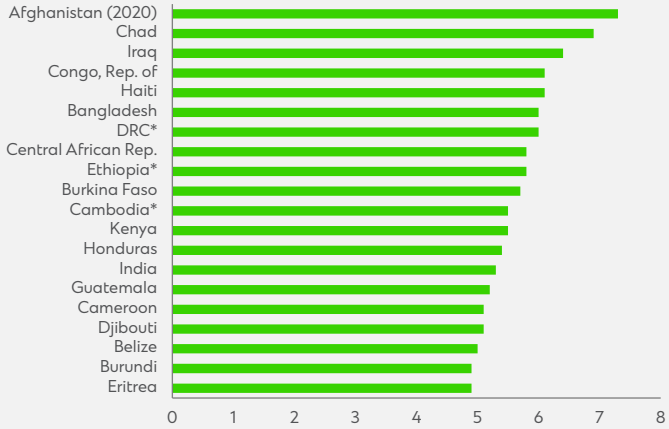
Climate vulnerability and adaptation readiness
2021



Source: IMF, Standard Chartered

Figure 21

Countries with the highest climate-driven risk
2022 (INFORM Risk Indicator, higher score denotes higher risk)



Source: IMF, Standard Chartered

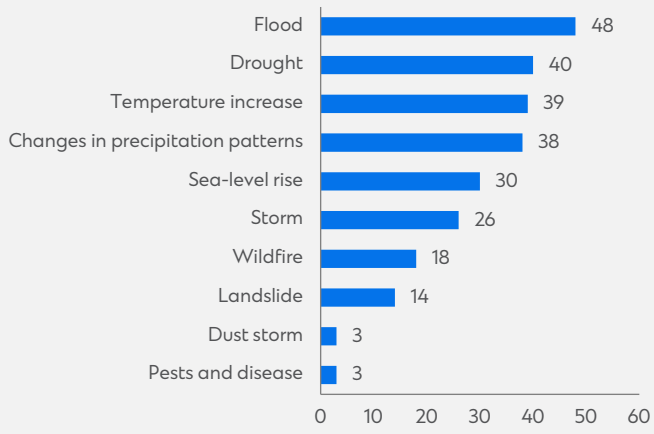
Figure 22

The degree to which African countries themselves perceive climate change to be a risk factor was highlighted in recent work from the World Meteorological Organisation (WMO).

Their 2023 'The State of the Climate in Africa' report showed that of the 53 assessed African countries, 48 highlighted flood risk as a key hazard, while 40 saw droughts as a key risk (Figure 23).

Data for sea level rise since 1993 suggests that flooding is indeed a rising risk for Africa given that most of the region's coastline has been rising more quickly than global sea levels since 1993 (Figure 24).

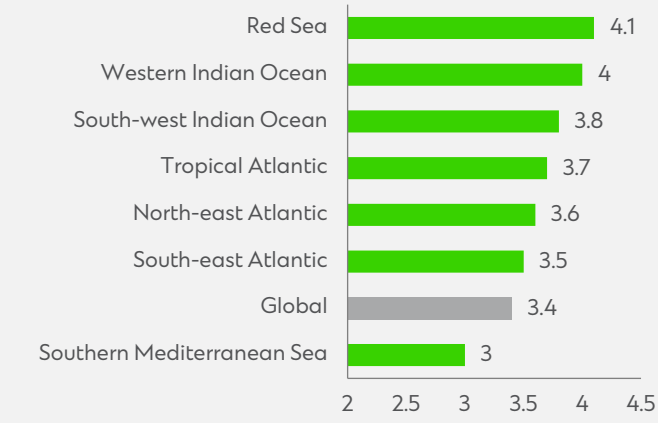
Hazards of greatest concern for Africa
Number of countries out of 53 reviewed NDCs 2022



Source: IMF, Standard Chartered

Figure 23

Rate of sea level rise
Mm/year from January 1993 to June 2024



Source: World Meteorological Organisation, Standard Chartered

Figure 24

Examples of nature-based solutions and how they can help address various hazards are highlighted in Figure 25. Adopting marine restoration and conservation solutions as highlighted have significant benefits that go beyond addressing the impact of climate change.

They can also help to increase food production, improve biodiversity, drive tourism and recreation revenues, and importantly, provide social benefits as livelihoods could be improved.

Examples of how nature-based solutions regulate hazards

Nature based solution	Flooding	Erosion	Drought	Heat	Landslides
Rivers and floodplain restoration	Storing water, slowing water flow, infiltration	Rebalancing sediment supply and processes	Enhancing infiltration storing water, shading	Shading, absorbing heat	Stabilising riverbanks
Ponds, lakes and small water bodies	Storing water	Regulating sediment flow	Storing water	Absorbing heat, reducing evaporation	n.a.
Inland wetlands	Storing water, slowing water flow, reducing wave height	Regulating sediment flows	Recharging ground water	Affecting evapotranspiration	n.a.
Mangrove forests	Reflecting energy, slowing water flow, reducing wave height	Regulating water and sediment flows	n.a.	n.a.	n.a.
Other coastal wetlands	Storing water, slowing water flow, reducing wave height	Stabilising soil and sediment	n.a.	n.a.	n.a.
Reef ecosystems	Reflecting energy, slowing water flow, reducing wave height	Affecting surf zone dynamics and sediment transport	n.a.	n.a.	n.a.
Submerged aquatic vegetation	Slowing water flow, reducing wave height	Regulating water and sediment flows	n.a.	n.a.	n.a.

Source: World Bank, Standard Chartered

Figure 25

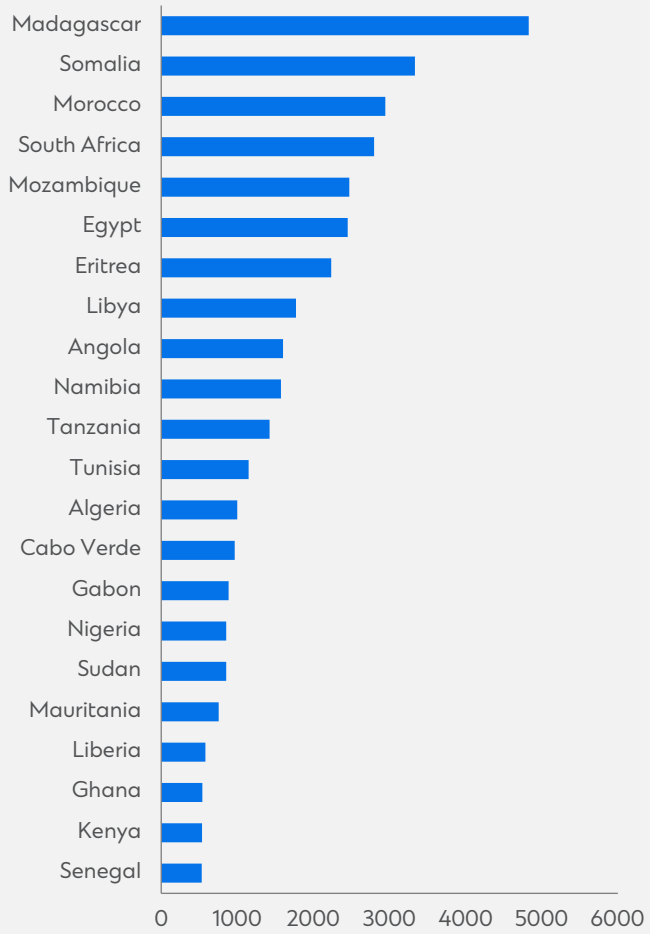
With a total coastline of over 30,000km, developing nature-based solutions as part of a wider blue economy strategy could hold significant potential for a range of markets across the continent.

Countries with the largest coastlines across the region, that could realise the greatest benefits from marine restoration and conservation, include Madagascar, Somalia, Morocco, South Africa, Mozambique, and Egypt (Figure 26).

One of the catalysts for integrating marine-based solutions is the Kunming-Montreal Global Biodiversity Framework that was agreed in late 2022 by 190 countries. This agreement includes a target to protect at least 30 per cent of the sea by 2030. To date, The Seychelles and Gabon are the only African nations that have already designated 30 per cent of their ocean area as protected (Figure 27).

As the benefits and value of sustainably managed coastal systems become clearer, it is expected that other countries will likely accelerate their '30x30' plans. This could help drive investments in and development of marine ocean ecosystem services.

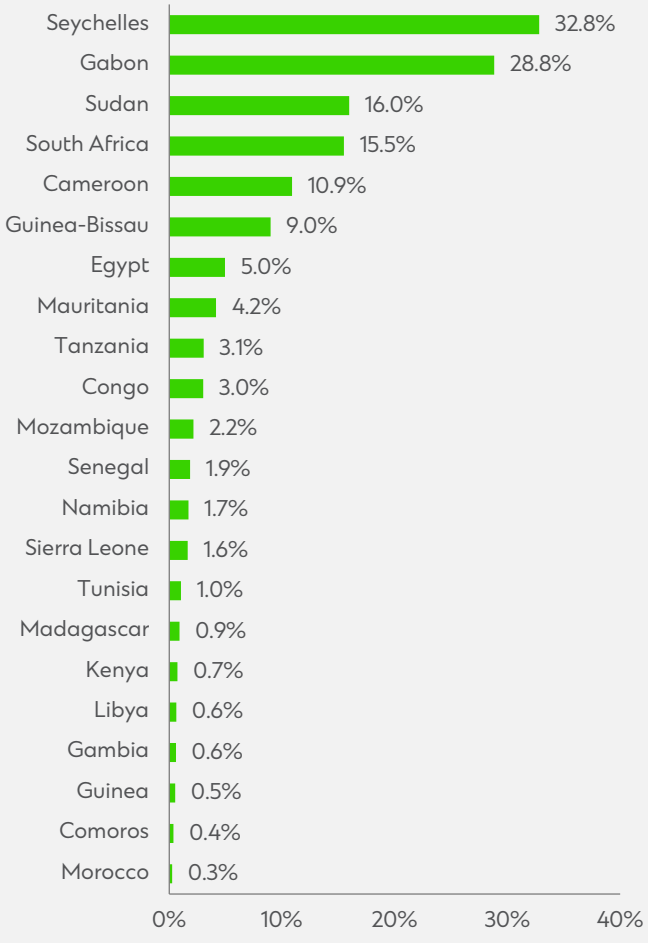
African countries with the largest coastline
Km



Source: World Population Review, Standard Chartered

Figure 26

Status of 30x30 targets for African countries
% of ocean areas designated as MPAs



Source: IBAT, Standard Chartered

Figure 27

Blue Economy Solution: Spotlight on ocean conservation in The Seychelles

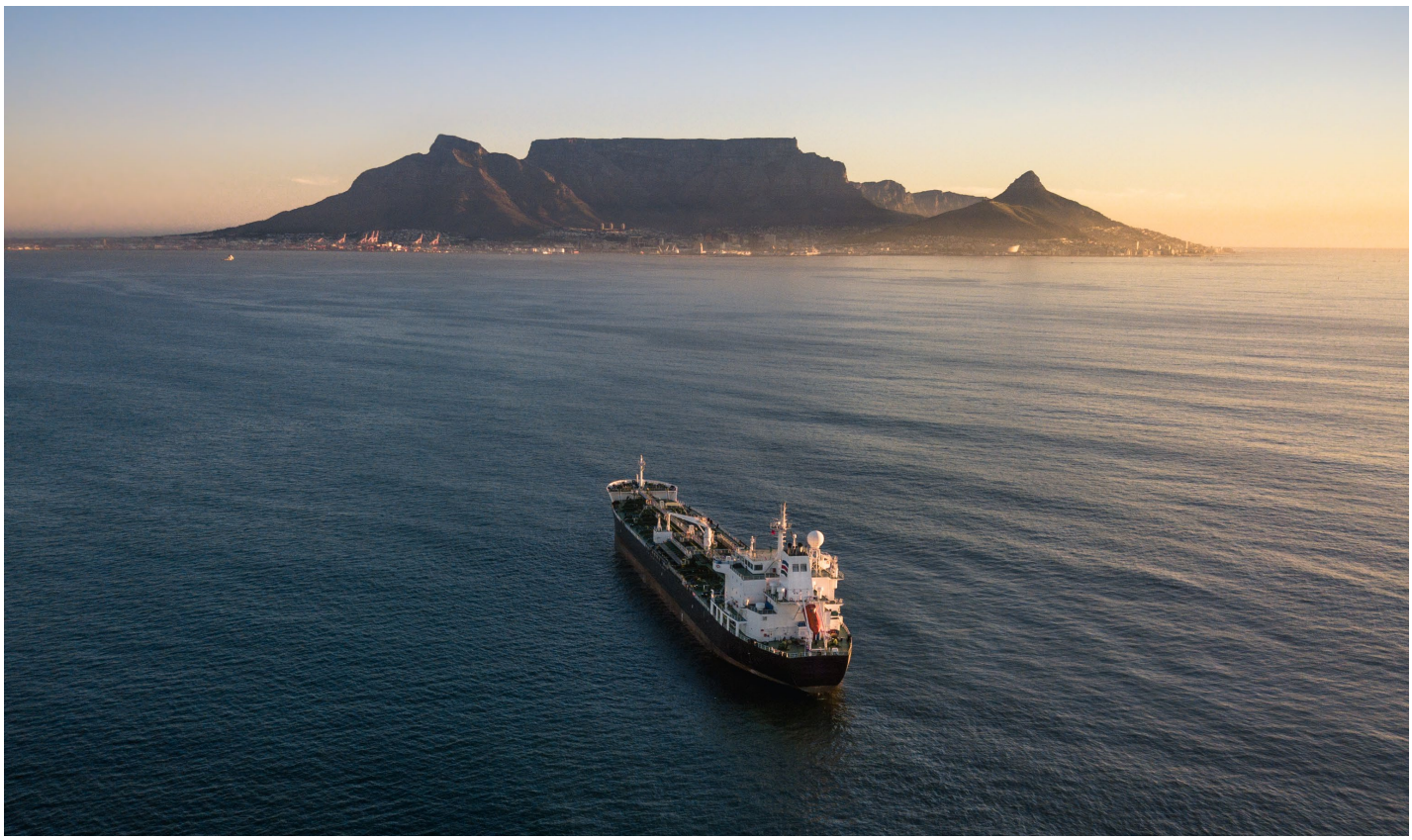
The Seychelles reflect how marine and ocean conservation can help support a country's economic and ecological development. As highlighted in Figure 27, The Seychelles is the only country in the world that has achieved the target to protect 30 per cent of its Exclusive Economic Zone (EEZ). The country accomplished this through a Marine Spatial Planning (MSP) initiative, which balances marine protection with the Blue Economy and climate change adaptation. with the Blue Economy and climate change adaptation The country's EEZ of 1.37 million km² is approximately 3000x its land area, indicating that its prosperity is heavily reliant on healthy marine and coastal assets.

The objective: strengthen the blue economy

As part of its efforts to strengthen its economy and secure the state of its marine and coastal assets, The Seychelles developed a range of strategies, including the MSP initiative and a Blue Economy Strategic Policy Framework and Roadmap. The roadmap included four strategic priorities:

1. Creating sustainable wealth 2. Sharing prosperity 3. Securing healthy and productive oceans and 4. strengthening the enabling environment.

Through the establishment of MPAs, The Seychelles aimed to support the sustainable development of its marine and ocean ecosystems. It sought to diversify its blue economy exposure from fishing, tourism and ports to include marine-based aquaculture, renewable energy and marine biotechnology. All of this aimed to make The Seychelles' economy and marine ecosystems more resilient and sustainable.



Financing the blue economy

To achieve The Seychelles' objectives associated with its blue economy required innovative financing structures. Two of these structures are noteworthy in this respect.

Blue bond: The Seychelles were the first country to issue a sovereign blue bond. Proceeds of the bond issued in 2018 were used to enhance governance of fisheries, expand marine protected areas and develop the country's blue economy.

Debt-for-nature swap (DFNS) : To enhance its ability to finance the management of its MPAs and key marine ecosystems, The Seychelles undertook the world's first blue economy DFNS in 2016. Key objectives of the DFNS included aiding the management of coral reefs, mangroves and coasts, promoting the implementation of an MSP that covers the country's entire EEZ and manage 400,000 km² of this for conservation as MPAs within five years.

Enabling the solution

To achieve the conservation of The Seychelles' blue economy, The Seychelles' Conservation and Climate Adaptation Trust (SeyCCAT) was established in 2015. SeyCCAT's main roles included supporting the management and expansion of the country's MPAs, sustainable fisheries and other blue economy-related activities and manage the proceeds of the country's blue bond through the SeyCCAT Blue Grants Fund. To date, SeyCCAT has successfully completed five projects, while more than 20 partnerships and projects are ongoing.

The Seychelles' coordinated approach towards designating MPAs, making use of MSP, and developing innovative finance mechanisms to enable the sustainable management and development of these MPAs has been successful.

Other African countries could follow The Seychelles' example and establish an integrated MPA approach for their EEZs and make use of sustainable debt market capacity to develop the necessary funds to manage and grow their blue economy sectors sustainably.

Seaweed as a catalyst for a sustainable blue economy

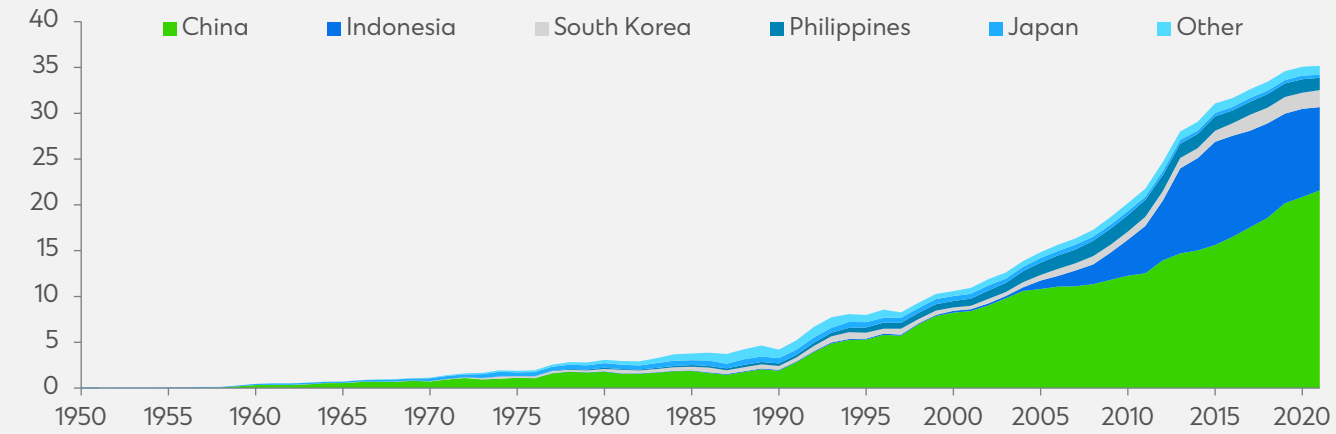
One of the solutions that has strong potential to address a range of sustainability-related challenges is seaweed.

Global seaweed production has grown exponentially since 1950

Since 2000, seaweed production globally has increased by 232 per cent, to more than 35mn tonnes of wet weight. Countries dominating the global seaweed markets are China, Indonesia, South Korea and the Philippines (Figure 28).

Although seaweed production in Africa has more than doubled since 2000, as a share of the global seaweed market, the region makes up just 0.3 per cent. Tanzania, Madagascar and South Africa make up 99 per cent up Africa's seaweed production (Figure 29).

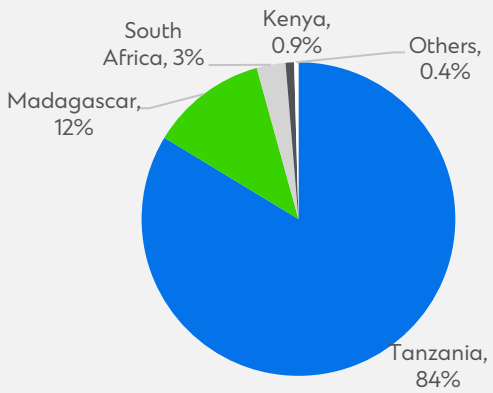
Seaweed production globally since 1950
Million tonnes of wet weight



Source: FAO, Standard Chartered

Figure 28

Seaweed production across Africa
% of total wet weight production across African countries



Source: FAO, Standard Chartered

Figure 29

A range of end uses

Standard Chartered's previous report, Seaweed: Kelp is on the way, outlined that seaweed can be used across a wide range of end markets (Figure 30). It was calculated that the seaweed market globally may be worth over USD300bn and create 200mn jobs by 2040 if sufficient capital were to be deployed.

Seaweed products and their benefits

Segment	Examples	Primary functions	Key benefits
Additives	Gelatine substitutes, processed meat and dairy	Thickening, emulsifying and stabilising	Natural and vegan-friendly, lower environmental footprint than animal-based alternatives.
Animal feed	Livestock feed supplements, aquafeed supplements, pet food additives	Positive immune response and gut health. Better digestive process	Improvement in animal health and reduction in methane emissions from livestock.
Biofuels	Biodiesel for cars	Source of energy	Replacement for fossil fuels or land-intensive biofuels.
Bio-packaging	Packaging, coatings and plastic film for food containers	Marine-safe and compostable plastic molecules	Replaces fossil fuel substances that have a greater environmental footprint.
Biostimulants	Seed treatments	Stimulation of plant growth, protection against abiotic stress	Lower environmental footprint than nitrogen fertiliser alternatives; promotes plant health, productivity and soil regeneration.
Construction materials	Used for insulation and building bricks	Sustainable housing	Smaller emissions footprint than traditional building materials; improves energy efficiency of buildings.
Cosmetics	Anti-ageing moisturisers, toothpaste	Nutrient-rich ingredients and thickening, stabilising and emulsifying properties	Natural and vegan-friendly, supports skin health.
Food	Raw salads, crisps, spaghetti, burgers	Source of energy, proteins and vitamins	Supports healthier diets; lower environmental footprint than animal or land-based alternatives.
Pharmaceuticals	Gastrointestinal protectors, wound care products, nutrient health supplements	Bioactive and nutrient-rich ingredients	Disease prevention and natural health enhancement.
Textiles	Seaweed fibres used in wide range of products including underwear, T-shirts, diapers	Source of clothing	Skin-friendly and environmentally friendly textiles.

Source: Seaweed for Europe, Standard Chartered

Figure 30

An opportunity for Africa to capitalise on seaweed

Seaweed farming in Africa has strong growth potential. This supports the growth of a wide range of seaweed applications if sufficient capital, training, and policy frameworks are put in place.

More than 30 years of seaweed farming experience exists across the region, both in terms of harvesting from the wild, as well as cultivated seaweed. Some countries have experience in growing seaweed for inclusion in animal feed (South Africa and Namibia), biostimulants (South Africa, Namibia) or as sources of marine products in biotechnology products (Ghana and Morocco). In some regions, there are also developments of using seaweed for biofuel production (SeaH4). Increasing attention has been paid to some seaweed species that may reduce methane emissions when fed to ruminant livestock. These species grow in both Southern and Northern Africa.

Overall, Africa has the potential to grow a wide range of seaweed species that can be used to develop new end markets. Although seaweed can be used as food alternative, it seems that expanding its market will have a larger economic impact on Africa (Webb et al, 2023) ecosystems and capture carbon dioxide. Various African countries have recognised the potential that seaweed offers and are trying to increase production volumes (Msuya et al, 2022). Seaweed diseases and pest outbreaks have been a headwind for some of these countries; however, careful management and utilisation of resources should help to reduce the introduction or spread of diseases. Introducing monitoring technologies, restricted importation and adopting protocols for seed usage will help too.

Spotlight on seaweed as a catalyst for SDG14 and SDG5

Expanding seaweed production not only supports a range of blue economy-related activities, but it can also support broader targets. This is reflected by the Africa Fair Seaweed Finance Facility (AFSFF) - a blended finance facility established by the Aqua-Farms Organisation with support from the UK's Blue Planet Fund and a grant from the Convergence global network of blended finance in 2024.

The AFSFF's objective is to scale deep-seaweed production by providing farmers, notably women, with access to new technologies, training, and connection to domestic and international seaweed buyers. The AFSFF will focus first on coastal communities in Kenya and Tanzania before expanding into Mozambique and possibly other regions.

The AFSFF has a goal to help support 25,000 farmers, with at least 60 per cent of them being women, in the first five years. This is relevant in Tanzania where 80 per cent of seaweed farmers are women. As a result, the AFSFF is designed to support not just SDG14, but also SDG5 (Gender Equality). The facility aims to mobilise USD50mn from private capital from foundations, impact investors, and development finance organisations in five years.

We believe that blended finance solutions, such as the AFSFF, could be effective tools in growing seaweed farming production across Africa, especially as most of these farmers are often small in scale with limited access to capital.

03

Developing a sustainable blue economy in Africa

The benefits of implementing solutions to support the development of a sustainable blue economy may be clear, however, analysis suggests that while countries across Africa have not yet captured the full potential of these benefits, momentum towards integrating strategies that support the development of a sustainable blue economy are improving.

The status of the blue economy across Africa

In October 2019, the African Union published their Africa Blue Economy Strategy report which outlined the potential that the blue economy offers to African countries, and the challenges faced by its member states in realising the blue economy's full potential.

The objective of this was to accelerate the development of a blue economy across the region with a focus on fisheries, aquaculture, shipping and transportation, coastal and marine tourism, sustainable energy and governance. According to the African Union, the value of the blue economy to Africa could reach USD405bn in 2030, to as much as USD576bn by 2063. Employment levels could increase from 49mn in 2019, to 78mn by 2063.

The African Union highlighted a number of key challenges that would need to be overcome for the blue economy to reach full potential in Africa. These challenges include the need for countries to develop effective blue economy policies that integrate environmental protection and restoration alongside sustainable economic development. One of the more technical challenges relates to a general lack of knowledge regarding the potential of the blue economy and the accounting of blue economy activities.

Limited analysis has been published regarding the status of the blue economy in Africa to date, or the degree to which individual African countries have implemented blue economy-focused strategies. Popoola et al (2023) published a review of the blue economy in the Gulf of Guinea. Another insightful paper comes from March et al (2024), which reviews blue economy approaches for African countries and classifies the status of them from "none" (implying that no published mention of developing a blue economy is recorded) to "policy" (implying that a country has an integrated blue economy strategy passed into law and has regulatory tools in place).

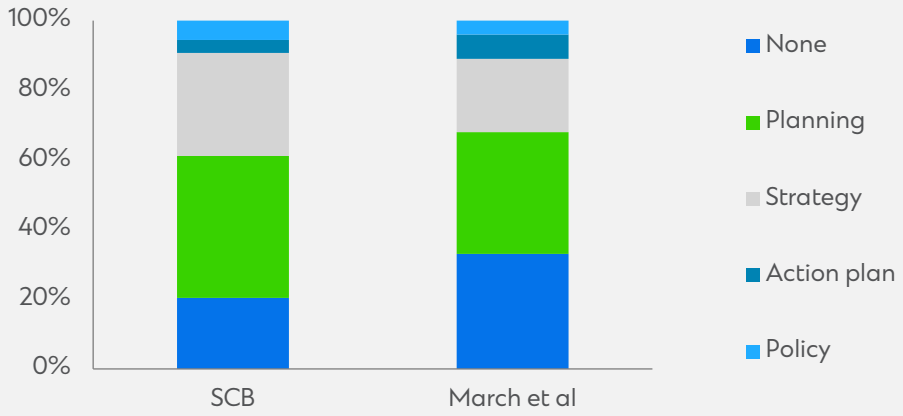
March et al. (2024) used data up to June 2023. Given that interest in the blue economy is rapidly growing, this report uses their approach and updated this with announcements from African countries since June 2023. To identify the extent to which a country is engaged with the blue economy, the following has been considered:

- **Designated blue economy coordination unit:** a country that has a body designated to implement and oversee the blue economy is likely to be more engaged.
- **Blue economy tracking tools:** key for a successful implementation of a blue economy strategy is the ability to monitor and track its performance to value its contribution. These tools include the United Nation's Blue Economy Valuation Toolkit or the development of National State of Environment reports.
- **Coastal planning strategies:** countries need to develop an integrated marine management system given the integrated nature of the blue economy sectors, as highlighted in our previous report. The use of MSP and the development of MPAs via the 30x30 targets provide an indication of how countries are focused on this at present.
- **Breadth of sustainable finance options used:** the investment requirements associated with the creation of a sustainable blue economy are substantial. Countries could benefit from exploring the full range of blue finance options, including blue bond and blue financing strategies.

Africa is becoming more engaged with the blue economy

Our analysis indicates that the blue economy is becoming an increasingly important topic for policy makers in Africa. 20 per cent of countries analysed by March et al. (2024) have not made progress on the blue economy, which is down from 33 per cent (Figure 31). Our analysis suggests that 30 per cent of African countries are developing a strategy for the blue economy, up from 21 per cent highlighted by March et al. (2024). For a more detailed overview of the country-by-country data please refer to the Appendix of this report.

Extent of blue economy development by African countries
% out of 54 countries



Source: March et al (2024), Standard Chartered

Figure 31

For this report, 34 non-landlocked African countries were identified that have some degree of blue economy strategy development. For these countries, their approach taken for key blue economy-relevant instruments is shown in Figure 32.

Our review of these countries suggests that 19 of them are in the process of adopting MSP strategies or have already implemented these. While positive, it can be noted that just 5 countries have achieved a third or more of their 30x30 target at this point.

Two of the countries in Figure 32 have issued blue bonds: Cabo Verde and The Seychelles - of which Standard Chartered was involved in the latter.

However, a range of other countries have started to discuss the issuance of blue bonds. DFNS is also a topic that is receiving greater attention across Africa. Several countries listed in Figure 32 have already executed debt swaps, but more are engaged with the topic too. Among these are countries that support The Great Blue Wall (GBW) initiative, endorsed by the World Conservation Congress in 2021. This is a major Africa-led effort toward a nature-positive world, creating interconnected protected and conserved marine areas.

Blue economy development by non-landlocked African countries

Stub Header	BE unit	Use of MSP	Valuation/ reporting	Blue bond	DFNS	30x30 progress
Algeria	✓					✓
Angola		✓ ✓			✓	✓
Benin		✓ ✓	✓	✓		
Cabo Verde	✓	✓ ✓		✓ ✓	✓ ✓	
Cameroon						✓ ✓
Comoros		✓ ✓			✓*	✓
Congo						✓
Democratic Republic of Congo						✓
Cote d'Ivoire		✓ ✓	✓		✓	✓
Djibouti			✓			✓
Egypt				✓		✓
Eritrea						
Gabon		✓ ✓		✓	✓ ✓	✓ ✓ ✓
Ghana		✓				✓
Guinea		✓ ✓				✓
Guinea-Bissau	✓					✓
Kenya		✓ ✓		✓	✓	✓
Liberia						✓
Libya						✓
Madagascar	✓	✓ ✓		✓	✓*	✓
Mauritania		✓				✓
Mauritius	✓	✓ ✓		✓	✓*	
Morocco		✓ ✓				✓
Mozambique		✓ ✓			✓ ✓	✓
Namibia		✓ ✓		✓		✓
Nigeria	✓					✓
Sao Tome and Principe	✓					✓
Seychelles	✓	✓ ✓	✓	✓ ✓	✓ ✓	✓ ✓ ✓
Sierra Leone						✓
Somalia					✓*	
South Africa		✓ ✓		✓	✓*	✓ ✓
Sudan	✓					✓ ✓
Tanzania	✓	✓ ✓			✓*	✓
Togo	✓	✓				✓
Tunisia					✓	✓

Source: March et al. (2024), World Database on Protected Areas, Standard Chartered MSP: one tick for development, two for fully used. Valuation/reporting: one tick for valuation and one for state of environment reporting. Blue bond: one tick for discussed, two for issued. DFNS: one tick for discussed, two for executed. 30x30: one tick for less than 10% achieved, two for 10-20% achieved and three for more than 20% of ocean allocated. * refers to DFNS suggestions made within the context of a joint-DFNS made by countries backing the Great Blue Wall initiative

Figure 32

The Great Blue Wall initiative as a template

Making our use of the ocean more sustainable requires an integrated approach along two dimensions. First, policy makers need to appreciate that the sectors making up the blue economy are interconnected, and therefore any strategy to improve the sustainability of our use of the ocean needs to include targets and plans covering all relevant sectors. In addition, and especially for African countries, we note that improving the sustainable use of the ocean requires countries to develop coordinated approaches between them. An integrated cross-country strategy for the ocean has much greater chance of success than if individual blue economy targets and policies are developed in isolation.

As such, we see The GBW initiative as one that could serve as a template for other countries.

The GBW is a Western Indian Ocean-born (WIO), Africa-driven roadmap established in 2021 with the aim to achieve a nature-positive world for the region by 2030. This is to be achieved through accelerating and upscaling ocean conservation, enhancing social-ecological resilience and by developing a sustainable blue economy. African countries leading the initiative include the Comoros, Kenya, Madagascar, Mauritius, Mozambique, The Seychelles, Somalia, South Africa and Tanzania.

Key objectives for the GBW are to protect and conserve at least 2 million km^2, or 30 per cent, of the WIO by 2030; conserve and restore at least 2 million hectares of critical ecosystems in the WIO and sequester more than 100 million tonnes of carbon dioxide; to create regenerative livelihood opportunities for 70 million people in the WIO area; and create at least 2 million jobs in the blue economy. In June 2023, the countries involved in the GBW signed the Moroni declaration for ocean and climate action in Africa, which recognised the need for regional policies, strategies and frameworks. Greater coordination may very well act as a catalyst for improved policies regarding the blue economy and help channel investments towards it.

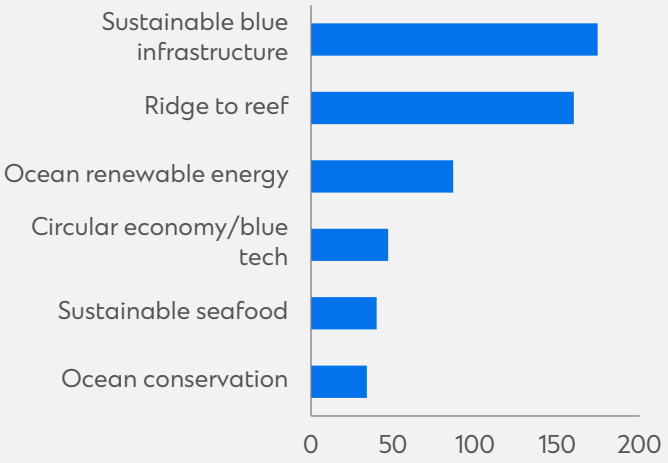
While we are positive on the development and potential of the GBW, it must be noted that it is made up of just a sub-set of African countries. There could be potential for the GBW initiative to be replicated for other parts of Africa given the similarity of challenges and because coordinated ocean strategies have a better chance of succeeding, in our view.

04

The benefits of sustainable finance in Africa

Our previous report outlined that the investment requirements associated with creating a sustainable blue economy globally may be as high as USD2.5tn between now and 2030. Our estimates may appear high, however, they are in line with those made by a feasibility study from the Minderoo Foundation, Callund Consulting and the Ocean Risk and Resilience Action Alliance (ORRAA). They estimated that USD550bn per year is needed across six blue economy investment themes (Figure 33). They also estimate that Africa and the Middle East alone face annual blue economy-related investment needs of almost USD70bn per year until 2030 (Figure 34).

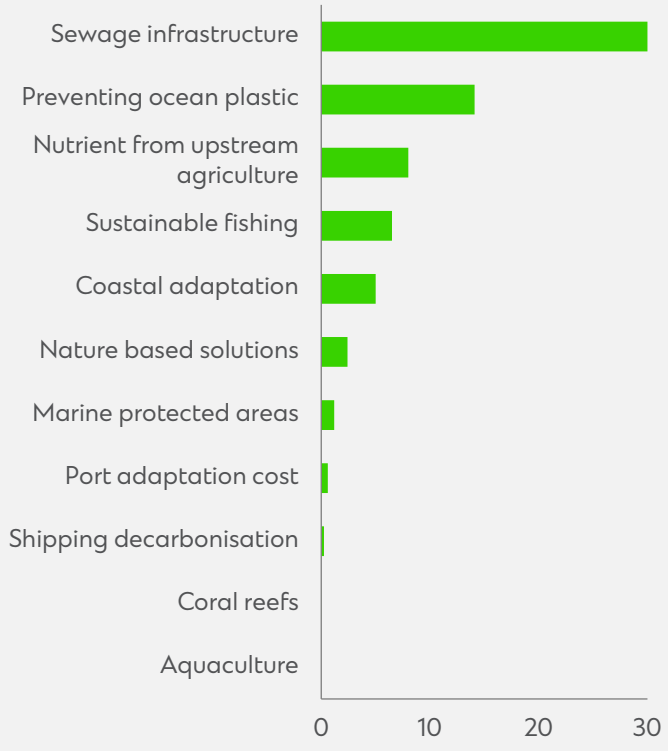
Blue economy investment requirements
Global USDbn/year until 2030



Source: World Population Review, Standard Chartered

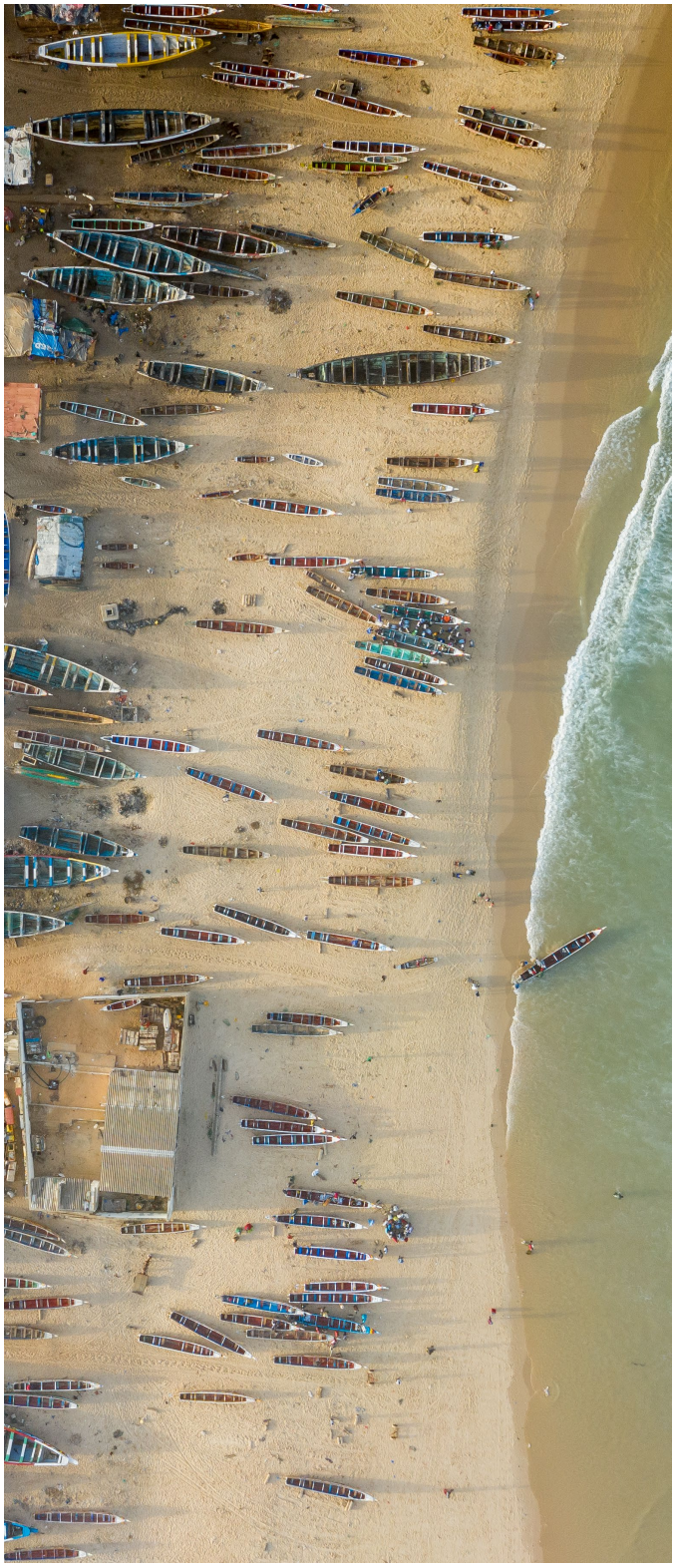
Figure 33

Africa's blue economy investment requirements
USDbn/year until 2030



Source: Minderoo Foundation, Callund Consulting, ORRAA, Standard Chartered

Figure 34



Africa's climate finance flows have increased 73 per cent

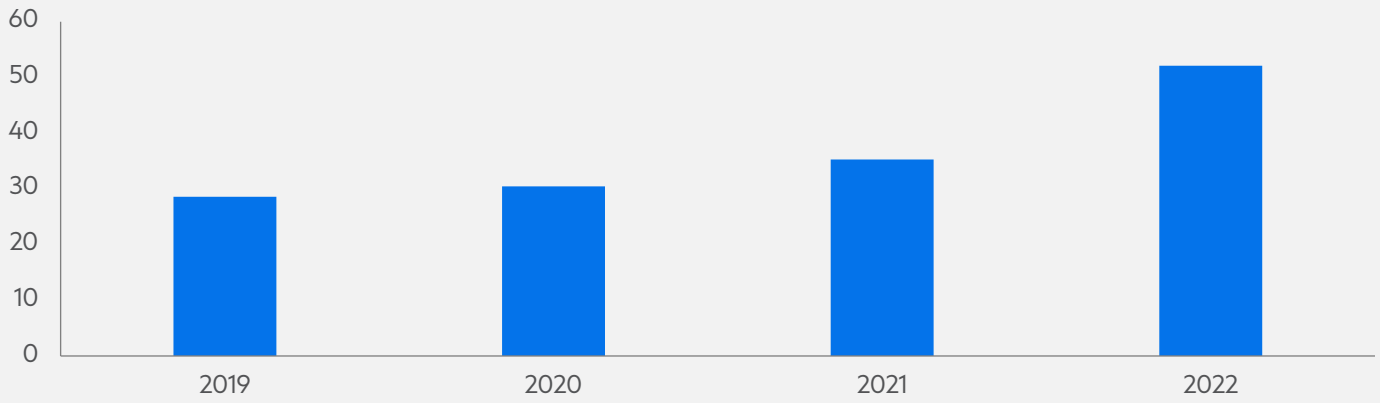
Data from the recently published Landscape of Climate Finance in Africa 2024 report by the Climate Policy Initiative (CPI) shows that climate finance flows into Africa are accelerating.

Less than USD30bn was directed towards climate solutions across Africa in 2019 and 2020. This increased by 73 per cent to USD52bn in 2022 (Figure 35).

While the increase in climate finance in Africa is a clear positive for the region, the CPI also calculates that climate finance flows need to rise c.4x more to meet investment needs associated with the Nationally Determined Contributions (NDCs). The required growth in climate finance is greatest for Southern Africa, (Figure 36).

Increasing climate finance flows - including through adaptation finance - towards Africa is possible, not least because the value proposition is clear. In 2019, The World Bank estimated that every USD1 invested in climate-resilient infrastructure would generate USD4 in avoided damages. This parallels research conducted by Standard Chartered, in 2021, which found that for every USD 1 spent on adaptation this decade, an economic benefit of USD 12 could be generated.

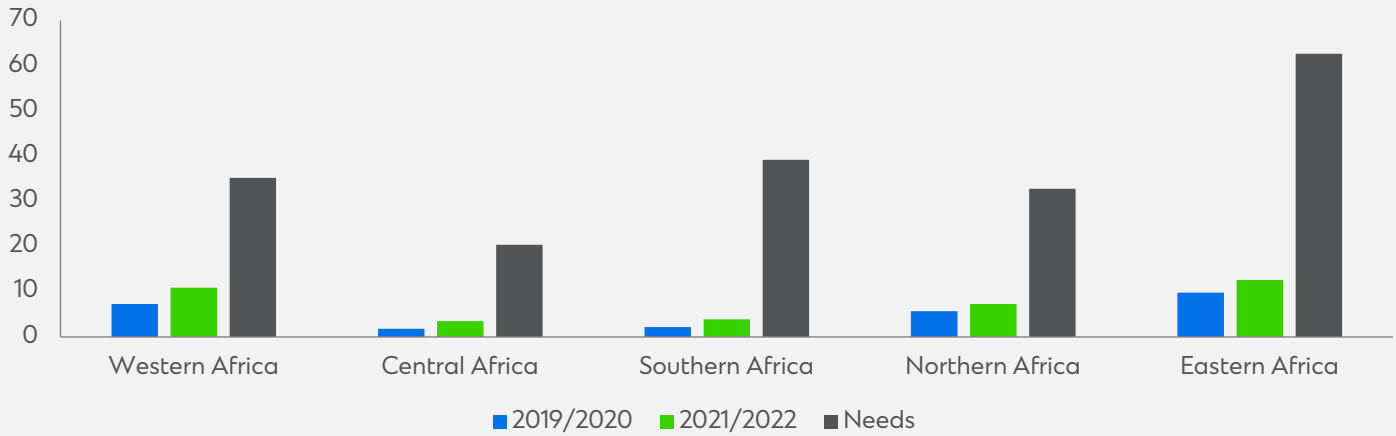
Climate finance flows towards Africa
USDbn



Source: CPI, Standard Chartered

Figure 35

Climate flows versus requirements
USDbn



Source: CPI, Standard Chartered

Figure 36

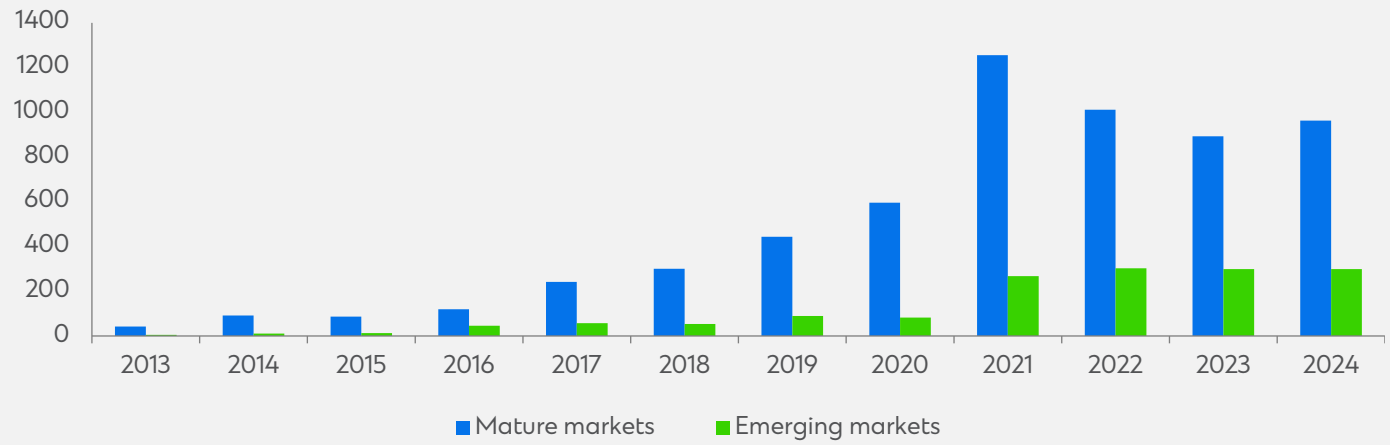
Sustainable debt market is a largely untapped opportunity for African sovereigns and corporates

The growing sustainable debt market provides a way for African markets to help fund the investment requirements associated with creating a sustainable blue economy.

The volume of sustainable debt outstanding globally reached USD7.3tn in 2024, according to data from the Institute of International Finance (IIF). Although emerging market (EM) issuers represented just USD1.1tn - or 16 per cent - of this, there are three supportive facts for EM sustainability debt:

- Annual issuance of EM sustainable debt has increased from less than USD50bn before 2017, to USD300bn in 2024.
- EM issuance levels of sustainable debt are now 31 per cent of mature market issuance levels, which is more than double the share seen a decade ago (Figure 37).
- EM sustainable debt issuance is more resilient than that of mature markets. During the 2020-2022 period, when interest rates and bond yields globally were rising sharply, issuance levels of sustainable debt across mature markets fell by 30 per cent, whereas issuance levels of sustainable debt across EM increased by 10 per cent.

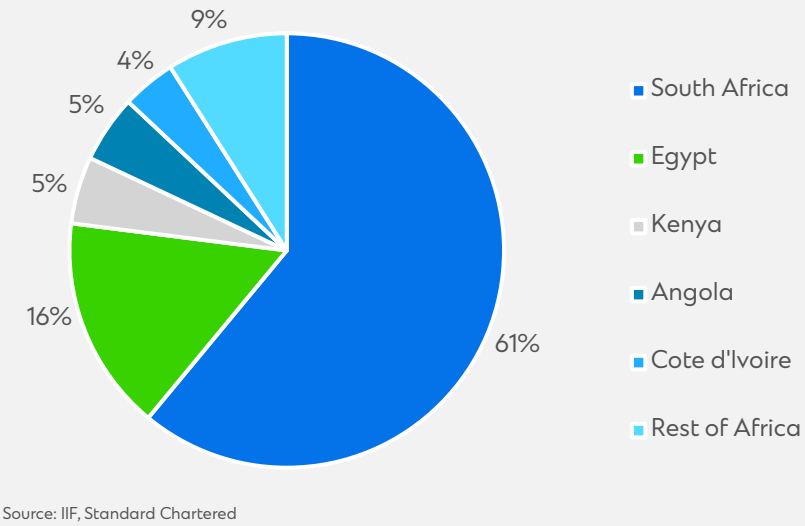
Sustainable debt issuance
Annual: mature vs emerging markets (USDbn)



Source: IIF, Standard Chartered

Figure 37

Africa's sustainable debt market by country
2025

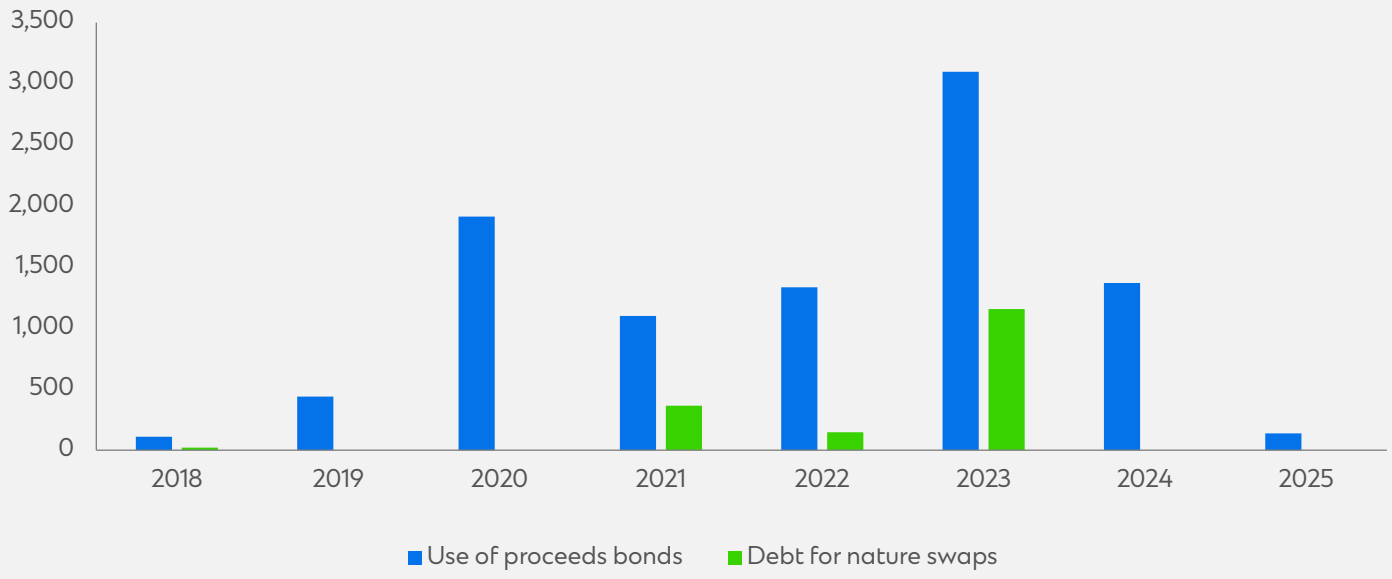


Source: IIF, Standard Chartered

Figure 38

The IIF's database suggests that African issuers have yet to capitalise on the opportunity of accessing the sustainable debt market. Firstly, their combined outstanding sustainable debt balance was just USD31bn at the end of 2024, or less than 3 per cent of total emerging market sustainable debt. Additionally, Africa's sustainable debt balance is dominated by South Africa, Egypt and Kenya as these countries make up 83 per cent of all of Africa's outstanding sustainable debt (Figure 38). Several debt financing strategies have been developed to specifically help fund investment requirements associated with creating a sustainable blue economy. Examples of these 'blue finance instruments' include blue bonds and loans, sustainability-linked bonds and loans and social bonds. DFNS may be attractive options for some sovereign issuers depending on their financial characteristics. Blue finance issuance levels have been growing over recent years, although they remain very low compared to broader sustainability-related debt issuance. Between 2020 and 2024, annual average issuance of blue bonds reached just USD1.7bn (Figure 39).

Annual capital raising across debt for nature swaps and use of proceeds bonds
USDbn



Source: Standard Chartered

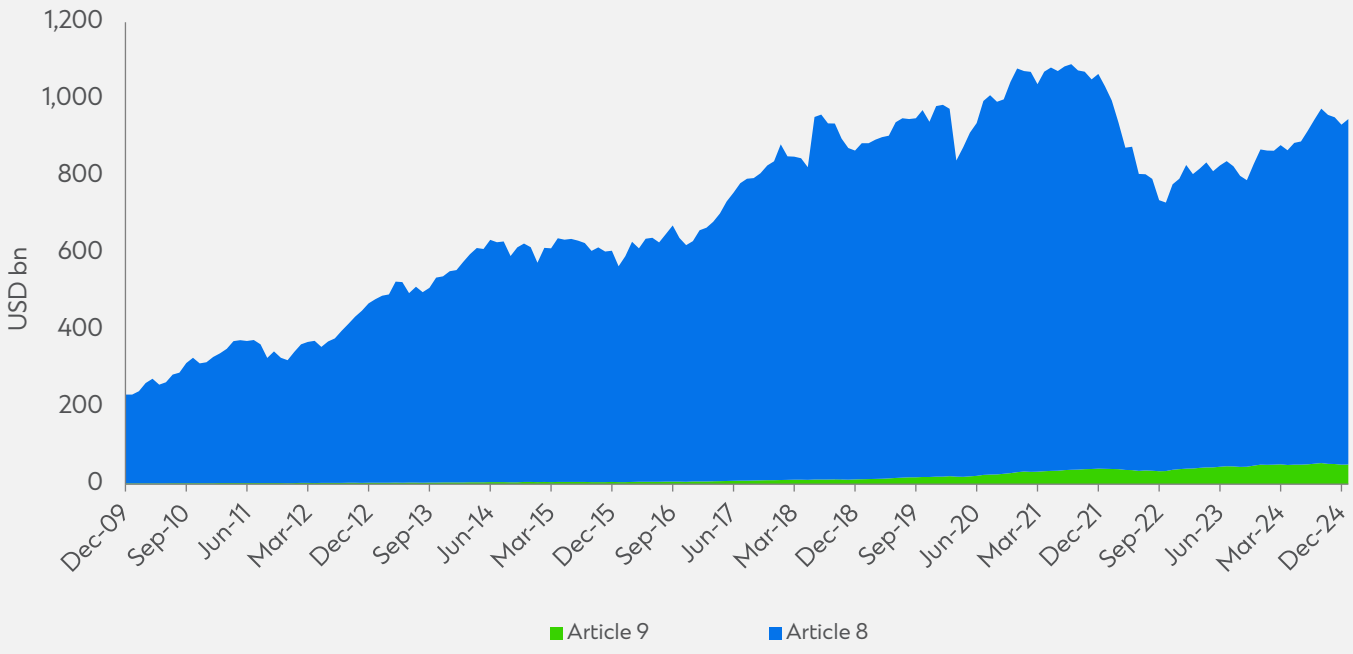
Figure 39

African sovereign sustainable debt issuance may help expand the corporate sustainability bond market in Africa

Our analysis suggests that only a few of Africa's sovereigns have engaged with the blue finance market so far. Examples are the DFNS and blue bonds executed and issued by the governments of The Seychelles and Gabon. Further engagment from African issuers with the sustainable finance market, including blue finance instruments, would facilitate a route to funding blue economy-related investment requirements and enables them to access more capital by widening the potential investor base. Recent work from Cheng et al. (2024) suggests that raising sustainable debt by African sovereigns would not only help meet their own sustainability-related investment requirements, but importantly, could also help accelerate the development of the local corporate sustainability debt market. Their analysis of the global green bond market suggests that:

- The number and size of corporate sustainable debt issues increases following the debut of a sovereign sustainable debt issuance. These effects have shown to be greater for EM than for advanced economies.
- A larger share of corporate green bonds issued after the sovereign green bond debut have used green bond verification tools. In other words, the quality of corporate green bond reporting and verification improves with the launch of sovereign debt issuances.

Total assets under management of fixed income funds
USDbn, funds classified as Article 8 or 9 bond funds



Source: Bloomberg, Standard Chartered

Figure 40

The investor base willing to engage with sustainable debt has rapidly increased during the past 15 years and includes general investors as well as those with a specific sustainability-related mandate. Total assets under management for fixed income funds with an Article 8 or 9 classification for example have increased from USD233bn at the end of 2009 to almost USD1000bn at the end of 2024 (Figure 40). The sustainable debt market provides African issuers with a way to help fund their blue economy-related investment requirements. Whether this is done through issuing green bonds and loans or through the more recently established blue bond and loan market is up for debate. The blue finance market has been established to drive investments into the blue economy. However, comments made by some issuers and investors suggest that it adds an unnecessary framework with reporting regulation requirements, especially as the green bond market is seen to function just as well.

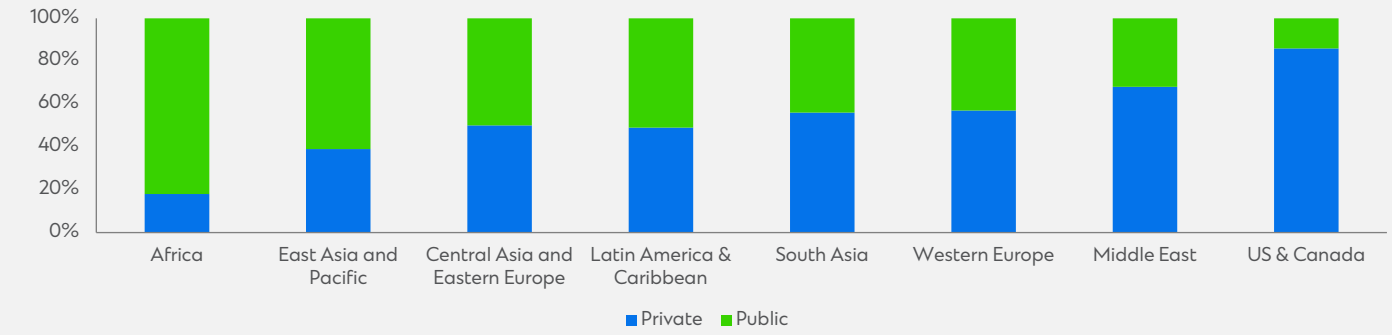
Irrespective whether African issuers opt for green or blue finance instruments, our analysis suggests that Africa may potentially become a much more active issuer of sustainable debt if country-based blue economy targets are to be met.

Engagement from Africa's institutional asset owners is set to grow rapidly

Private finance accounted for just 18 per cent of climate finance in Africa during the 2021/2022 period which is the lowest of any region (Figure 41). Engaging the private sector presents a significant opportunity to scale climate finance.

The private sector in Africa is likely to become much more engaged with climate finance given that assets managed by pension funds, commercial banks, asset managers and insurance companies are likely to grow going forward. The Blended Finance Taskforce estimates that total assets under management held by banks, insurance companies and pension funds will increase 171 per cent between 2022 and 2040 to reach USD6.5tn (Figure 42). USD1.3tn would become available for climate projects, including blue economy-related activities, if 20 per cent of these assets were allocated to these projects.

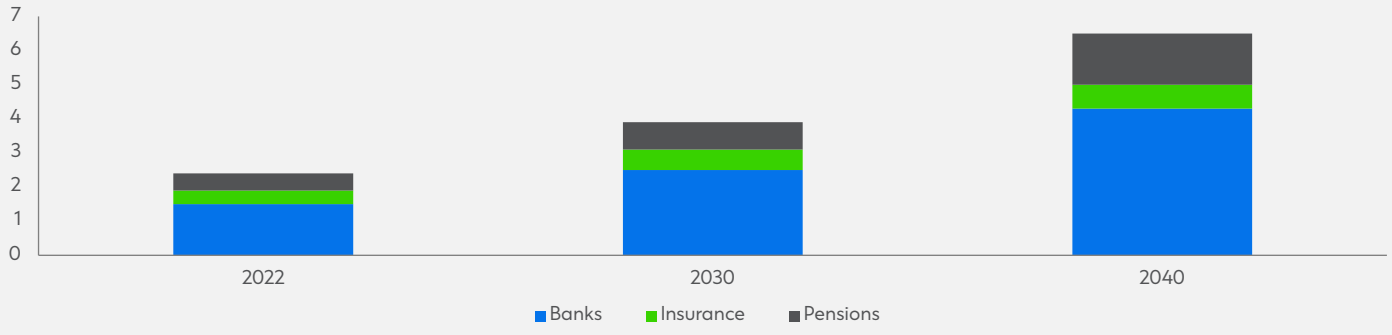
Climate finance: public versus private funding
2021/2022



Source: CPI, Standard Chartered

Figure 41

Private assets under management in Africa
USDbn



Source: CPI, Standard Chartered

Figure 42

Momentum towards blue economy innovators is rising

It has been highlighted that a growing number of governments across Africa are starting to engage with blue finance including blue bonds and debt-for-nature swaps. This is a positive development and should help drive finance towards projects of a public nature including conservation and restoration of marine ecosystems.

Developing a sustainable blue economy not only requires greater public involvement but also increased private capital flows, especially directed at innovative sustainable blue economy solutions. These are often developed by early stage or start-up organisations. The most recent survey by the African Business Angel Network shows that total angel investments to start ups across Africa is low, however, there are positive developments here too.

The number of organisations and approaches that focus on innovative finance solutions to non-governmental organisations is growing. Examples of these organisations include the Blue Action Fund, Wild Trust, Rare, Project Incubator, the Africa Blue Wave initiative, the Regen Wave initiative and the Blue Halo S initiative.

There are also a growing number of organisations that focus on driving early stage and growth capital towards African companies with a focus on the ocean. These include the African Business Angel Network, the African Angel Academy, the Solar Impulse Foundation, Oceanhub Africa, SeaAhead, Fish 2.0, 1000 Ocean Startups and the Sustainable Ocean Initiative.

Improving awareness of the value proposition provided by a sustainable African blue economy is likely to attract greater amounts of private capital. This, in turn, could benefit blue economy solution providers, most of which are private companies. Such a development would not only benefit climate change mitigation and adaptation efforts but also help create a virtuous cycle of job creation, economic growth, deepen local financial markets and help to reduce local debt burdens. Developing an African sustainable blue economy will help put the region on a broad sustainable growth path.

05

Appendix

Country	National BE status	Regional BE approach?	National coordinating unit	Blue economy tools	Progress on 30x30
Algeria	Strategy	No	National Blue Economy Committee		0.07%
Angola	Planning	Yes (ECCAS, SADC)	None	MSP (part of MARISMA)	0.01%
Benin	Planning	Yes (ECOWAS)	None	MSP (ICZM), State of the environment reporting (SoME)	0%
Botswana	Planning	Yes (SADC)	None		Landlocked
Burkina Faso	Strategy	Yes (ECOWAS)	None		Landlocked
Burundi	None	Yes (COMESA, ECCAS)	None		Landlocked
Cabo Verde	Strategy	Yes (ECOWAS)	Ministry of Maritime Economy which houses a national observatory for the blue economy	Blue Bonds, MSP, National Plan for Investment into the Blue Economy	0%
Cameroon	Planning	Yes (ECCAS)	None	ICZM	10.89%
Central African Republic (CAR)	None	Yes (ECCAS)	None		Landlocked
Chad	None	Yes (ECCAS)	None		Landlocked
Comoros	Strategy	Yes (COMESA, SADC)	None	MSP	0.37%
Congo	Strategy	No	None		3.01%
Democratic Republic of Congo	Planning	Yes (COMESA, ECCAS, SADC)	None		0.24%
Cote d'Ivoire	Planning	Yes (ECOWAS)	None	State of the Environment reporting (SoME), MSP (ICZM)	0.07%
Djibouti	Planning	Yes (COMESA, IGAD)	None	BE valuation toolkit	0.17%
Egypt	Strategy	Yes (COMESA)	None		4.95%
Equatorial Guinea	None	Yes (ECCAS)	None		0.24%
Eritrea	Planning	Yes (COMESA, IGAD)	None		0%
Eswatini	None	Yes (SADC)	None		Landlocked
Ethiopia	Strategy	Yes (COMESA, IGAD)	None		Landlocked
Gabon	None	Yes (ECCAS)	None		28.83%
Gambia	None	Yes (ECOWAS)	None		0.60%
Ghana	Planning	Yes (ECOWAS)	None	Draft MSP through Abidjan Convention and Mami Wata Project.	0.10%
Guinea	Planning	Yes (ECOWAS)	None	MSP	0.53%
Guinea-Bissau	Planning	Yes (ECOWAS)	None		8.99%
Kenya	Strategy	Yes (COMESA, IGAD)	Department of Fisheries and Blue Economy, Blue Economy Implementation Committee	MSP ICZM (policy)	0.73%
Lesotho	Planning	Yes (SADC)	None		Landlocked
Liberia	Planning	Yes (ECOWAS)	None		0.10%

Figure 43: Blue economy (BE) approaches taken by African countries Source: March et al, Various media, Standard Chartered

Country	National BE status	Regional BE approach?	National coordinating unit	Blue economy tools	Progress on 30x30
Libya	Planning	Yes (COMESA)	None		0.63%
Madagascar	Strategy	Yes (COMESA, SADC)	Ministry of Fisheries and the Blue Economy	MSP	0.91%
Malawi	Planning	Yes (COMESA, SADC)	None		Landlocked
Mali	None	Yes (ECOWAS)	None		Landlocked
Mauritania	Planning	No	None	MSP under development (part of WESTMED)	4.15%
Mauritius	Action Plan	Yes (COMESA, SADC)	Ministry of Blue Economy, Marine Resources, Fisheries and Shipping (Integrated)	MSP	0%
Morocco	Planning	No	None	MSP (ICZM)	0.26%
Mozambique	Strategy	Yes (SADC)	Ministry of Sea, Inland Water and Fisheries	MSP, Blue financing (MozAzul program), BioFund	2.15%
Namibia	Policy	Yes (SADC)	None	MSP (part of MARISMA)	1.71%
Niger	None	Yes (ECOWAS)	None		Landlocked
Nigeria	Planning	Yes (ECOWAS)	Ministry of Marine and Blue Economy		0.02%
Rwanda	Planning	"Yes (COMESA)	None	BE Valuation toolkit	Landlocked
Sao Tome and Principe	Action Plan	"	Ministry of Planning, Finance and the Blue Economy		0.03%
Senegal	None	Yes (ECCAS, ECOWAS)	None		1.85%
Seychelles	Action Plan Policy	Yes (COMESA, SADC)	Ministry of Fisheries and the Blue Economy	BE Valuation Toolkit, MSP, Blue financing	32.82%
Sierra Leone	Planning	Yes (ECOWAS)	None		1.63%
Somalia	Strategy	Yes (IGAD)	None		0%
South Africa	Action Plan	Yes (SADC)	None	MSP (part of MARISMA and independent)	15.50%
South Sudan	Planning	Yes (COMESA, IGAD)			Landlocked
Sudan	Strategy	Yes (COMESA, IGAD)	Ministry of Finance and Economic Planning (national institution in charge of coordinating BE)		15.96%
Tanzania	Strategy (for Zanzibar only)	Yes (SADC)	Tanzania is planning a BE department/ministry Ministry of Blue economy and Fisheries of Zanzibar (Zanzibar only)		3.05%
Togo	Strategy	Yes (ECOWAS)	High Council of the Sea (HCM)	MSP	0.20%
Tunisia	Planning	No	None		1.04%
Uganda	Strategy	Yes (COMESA, IGAD)	None		Landlocked
Zambia	Strategy	Yes (COMESA, SADC)	None		Landlocked
Zimbabwe	None	Yes (COMESA, SADC)	None		Landlocked

Figure 43: Blue economy (BE) approaches taken by African countries Source: March et al, Various media, Standard Chartered

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Eugène Klerk is the Head of Sustainability Insights at Standard Chartered. In this role, Eugène is responsible for generating and coordinating Standard Chartered's sustainability-related content.

Prior to his current role, Eugène was the Global Head of ESG Research at Standard Chartered. In this role, he was responsible for developing ESG related investment and trading strategies across the major asset classes. Eugène joined Standard Chartered from Credit Suisse, where for 10 years he was responsible for sustainable thematic and ESG research and managed the Global ESG research team. In addition Eugène was the head of the Sustainability pillar of the Credit Suisse Research Institute.

Eugène started his career in the mid 90s as an emerging markets fixed income and equity analyst. During this time, he was responsible for the EMEA Research team at Credit Suisse First Boston and he achieved multiple top 3 rankings in major surveys.

Eugène holds a Master's degree in applied mathematics.

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