

# Jobs and Livelihoods in the Blue Economy

BLUE ECONOMY FOR RESILIENT AFRICA PROGRAM



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# Acknowledgments

This brief was written by Phoebe Girouard Spencer (Environmental Economist). The series of briefs was prepared by a team led by Lia Carol Sieghart (Practice Manager), Christian Albert Peter (Practice Manager), Sanjay Srivastava (Practice Manager), Maria Sarraf (Practice Manager), Iain Shuker (Practice Manager) and Africa Eshogba Olojoba (Practice Manager). The team includes Peter Kristensen (Lead Environmental Specialist), Marcelo Hector Acerbi (Senior Environmental Specialist), Sajid Anwar (Environmental Specialist), Darshani De Silva (Senior Environmental Specialist), Nagaraja Rao Harshadeep (Lead Environmental Specialist), Kanako Hasegawa (Environmental Specialist), Ede Ijjasz-Vasquez (Lead Consultant), Juliana Castano Isaza (Natural Resources Management Specialist), Federico Scodelaro (Consultant), Madjiguene Seck (Senior Partnership Specialist), Ruth Tiffer-Sotomayor (Senior Environmental Specialist), and Phoebe Girouard Spencer (Environmental Economist).

The publication has greatly benefited from the strategic quidance of Boutheina Guermazi (Director, Africa Regional Integration), Valerie Hickey (Global Director, Environment), Simeon Ehui (Regional Director, West and Central Africa), Paul Noumba Um (Regional Director of Infrastructure and acting Regional Director for Sustainable Development, Middle East and North Africa), Ayat Soliman (Regional Director, East and Southern Africa), Stephen Hammer (Adviser), and Keiko Miwa (Regional Director, Human Development, Middle East and North Africa).

The team benefited from insightful comments and guidance from internal reviewers including Marcelo Acerbi (Senior Environmental Specialist), Sylvia Michele Diez (PROBLUE Program Manager), Ruxandra Floroiu (Lead Environmental Specialist), Ede Ijjasz-Vasquez (Lead Consultant), Christian Peter (Practice Manager), Lia Carol Sieghart (Practice Manager), and Sanjay Srivastava (Practice Manager).

In addition, the team received incisive and helpful advice. comments and input from World Bank colleagues, including Syed Adeel Abbas (Senior Climate Change Specialist), Anjali Acharya (Senior Environmental Engineer), Jacqueline Alder (Consultant), Philippe Ambrosi (Senior Environmental Economist), Tamara Bah (Consultant), Ozgul Calicioglu (Environmental Engineer), Soniya Carvalho (Lead Evaluation Officer), Manon Pascale Cassara (Consultant), Keren Charles (Senior Disaster Risk Management Specialist), Manuela Ravina da Silva (Environmental Specialist), Charlotte De Fontaubert (Senior Fisheries Specialist), Idriss Deffry (Environmental Specialist), Raian Divanbeigi (Senior Economist), Enos Esikuri (Senior Environmental Specialist), Gunilla Greig (Senior Fisheries Specialist), Gabriella Morandi Guimaraes (Consultant), Maged Hamed (Lead Environmental Specialist), Sandrine Jauffret (Senior Natural Resources Management Specialist), Sarah Jung (Consultant), Harrison Charo Karisa (Senior Fisheries Specialist), Jane Kibbassa (Senior Environmental Specialist), Mark Leybourne (Senior Energy Specialist), Maria Lopez (Consultant), João Moura Marques (Natural Resources Management Specialist). Bernhard Metz (Senior Operations Officer), John Morton (Senior Urban Specialist), Dania Mosa (Consultant), Kamakshi Perera Mubarak (Social Development Specialist), Helena Naber (Senior Environmental Specialist), Stefan Ott (Junior Professional Officer), Berengere Prince (Lead Natural Resources Management), Dario Quaranta (Consultant), Hak Joo Song (Junior Professional Officer), and Louise Twining-Ward (Senior Private Sector Specialist).

Support for this report was also provided by PROBLUE, a multi-donor trust fund administered by the World Bank that supports the sustainable and integrated development of marine and coastal resources in healthy oceans.

#### About the <u>Blue Economy for</u> <u>Resilient Africa</u> Program

The Blue Economy generated nearly <u>US\$300 billion for the African continent in 2018</u>, creating 49 million jobs in the process. These and other crucial benefits—most notably food security, livelihoods, biodiversity, and resilience to the effects of climate change—are entirely dependent on the health and productivity of coastal and marine areas.

By safeguarding productive coastal landscapes, countries will be in a better position to take full advantage of future Blue Economy opportunities, which range from sustainable blue energy to aquaculture to blue carbon.

The World Bank's <u>Blue Economy for Resilient Africa Program</u>, announced at COP27, will provide multisectoral analytical, financial, and policy support to Africa's coastal countries and island states to help them leverage the opportunities—and manage the risks—inherent in scaling up their Blue Economies.

#### About this series of briefs

The Blue Solutions for Africa series of operational briefs captures how a thriving Blue Economy can help African countries better manage the development challenges they face while supporting economic growth, sustainable livelihoods, and the health of these precious ecosystems.

#### THE BRIEFS COVER THE FOLLOWING THEMATIC AREAS

- · Climate change
- Coastal and marine biodiversity and habitats
- · Sustainable fisheries
- Marine pollution
- Jobs and livelihoods
- Participatory marine spatial planning

- Data management and knowledge creation
- Innovative financing instruments
- Developing and incentivizing institutions
- New frontiers of innovation



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# Key Messages



The Blue Economy has the potential to create jobs for Africa's growing population while contributing to climate adaptation and mitigation action.



Adopting new technologies and innovative partnerships will drive the creation of such jobs in various emerging sectors.



Marine renewable energy is particularly attractive because it is scalable, has high political and public acceptance, and presents strong potential for job creation, direct investment, and local economic development.



The blue bioeconomy—which turns microorganisms, algae, and invertebrates into food, pharmaceuticals, cosmetics, energy, textiles, and more—also holds promise.



Aquaculture is projected to continue to grow rapidly, and if done sustainably, can serve as a major source of food and a cornerstone of the Blue Economy.



Traditional sectors like fisheries and coastal tourism will continue to play a key role in jobs creation.



### Introduction

The World Bank Group supports climate change mitigation, adaptation, and resilience by promoting Blue Economy job growth in Africa and around the world. From climate-smart and resilient urban development to improving economic participation and decision-making for marginalized groups, the World Bank Group works with a broad toolkit of financing solutions to support governments with both on-the-ground development and institutional strengthening.

The challenge, of course, is how to combine growing the Blue Economy with providing jobs for Africa's working age population, which is expected to grow to 450 million people by 2035. Critical governance and policy reforms for Africa's Blue Economy include building public-sector capacity, aligning economic interests with long-term sustainability, and promoting conditions that encourage business growth in a sustainable seafood sector. Measuring the success of reforms on jobs and livelihoods can be challenging, but when the restoration of mangroves, seagrass beds, and dune vegetation, for example, combine with successful climate-smart job and livelihood support in Africa, the cutting edge of Blue Economy thinking reveals itself.



# The Challenge

Africa's economy is strongly connected to the oceans that touch its coastal states, generating nearly <u>US\$300 billion and supporting 49 million jobs in 2018</u>. By 2030, Africa's Blue Economy is estimated to grow to \$405 billion, including \$100 billion generated by coastal tourism. By then, Africa's Blue Economy sectors are expected to support 57 million jobs.

The sustainable management of Blue Economy sectors has the potential to lift millions out of poverty. The urbanization rate in the coastal areas of Africa is high and increasing quickly, so job opportunities for climatesmart and resilient urban development linked to the Blue Economy are immense. These jobs are crucial: Africa's working age population is expected to grow by 450 million people, or close to 70 percent, by 2035. Without policy changes, only about 100 million new jobs will be available. Blue Economy jobs are an important part of targeted capital investments and policies to support Africa's growing and young work force.

While Blue Economy job growth offers incredible potential for Africa, climate change threatens to undo potential gains. Coastal erosion caused by larger and more frequent storms could destroy fisheries, coastal plants, and beaches frequented by tourists. Ocean warming and acidification threaten species that communities rely on for food and livelihoods. The effects of climate change are already seen along the coasts of Africa. In Morocco, coastal erosion-coupled with plastic pollutionthreatens productive jobs in blue tourism. In Morocco and Tunisia, the tourism industry and its connected value chains are a major source of employment, accounting for 10 percent or more of gross domestic product (GDP) in the region. In Togo, coastal erosion has resulted in rocky shorelines that decrease fish catch, while coconut-oil production slows when the sea takes coastal trees. And in

<u>Côte d'Ivoire</u>, climate change is responsible for displacing river mouths and the disappearance of marine and plant biodiversity, causing economic and social difficulties for coastal communities. Women's livelihoods are especially affected: in some areas, the purchasing power of women has been reduced as they can no longer smoke or sell fish, practice salt extraction, or produce *attiéké*, a West African staple.

African governments face the test of supporting their populations through the challenges of climate change, as well as other compounding challenges including recovery from the COVID-19 pandemic and supply-chain dysfunctions, which threaten food security and economic productivity. Investments to overcome these challenges in coastal areas have mostly been piecemeal, with disparate efforts that center on fisheries governance, improving ports, and reducing marine litter lacking a comprehensive strategy. Policy success in one sector may even be undermined by externalities from activities in another sector. For example, weak institutional capacity can undermine coastal zone management efforts if sand mining, poorly managed ports and aquaculture farms, or unregulated tourism developments are left unchecked.

The governments of coastal countries have an opportunity to use the Blue Economy as a driver of better jobs for more people in a sustainable and scalable way. Yet, they also need strong, comprehensive policies and governance initiatives to support competitiveness and resilience to grow their Blue Economy sectors.



The Blue Economy could be a major engine for growing the economies of African countries while creating new jobs both in established and emerging sectors. New technologies and innovative partnerships are proven drivers for growth and job creation. At the same time, marine and coastal natural capital deliver major economic, social, and environmental benefits.

The Blue Economy also has tremendous potential to mitigate carbon emissions and help populations adapt to climate change, creating a win-win solution for Africa and the planet. Oceans constitute a major sink for anthropogenic emissions, absorbing 25 percent of the extra carbon dioxide (CO<sub>2</sub>) added to the Earth's atmosphere by burning fossil fuels. "Blue" carbon sinks—such as mangrove forests, seagrass beds, and other vegetated ocean habitats—are up to five times more effective than tropical forests at sequestering carbon. Nascent industries such as blue biotechnology, ocean energy, and aquaculture have high potential for development and job creation while contributing to climate adaptation and mitigation.

Technological advances in marine renewable energy offer a wealth of opportunities that are politically attractive, scalable, and have high public acceptance, with strong potential for job creation, direct investment, and local economic development on the continent. The technical potential for offshore wind totals 1.1 terawatts (TW) in the Middle East and North Africa region, and 2.8 TW in Sub-Saharan Africa, signaling substantial investment opportunities. Successfully attracting investors requires a stable policy environment coupled with logical procurement plans and approaches (for example, moving from set tariff demonstration projects to competitively auctioned, commercial-scale projects once the market has matured).

Africa's <u>blue bioeconomy</u> involves turning microorganisms, algae, and invertebrates into food, pharmaceuticals, cosmetics, energy, textiles, and more. The field of marine biotechnology has attracted investments totaling

€262 million (more than US\$252 million) since 2014 from the European Union alone, covering life sciences, bioeconomy, agri-food, new materials, and bioenergy.

The <u>aquaculture</u> subsector is projected to continue growing rapidly and, if done sustainably, can serve as a major source of food and a cornerstone of the Blue Economy. Advances in seaweed production hold promise to replace fishmeal and animal feeds with less-polluting plant materials. <u>Seaweed aquaculture</u>, which has been growing at a rate of 6.2 percent per year since 2000, is an important source of food, fodder, and fertilizer. It also creates a marine habitat for ocean life and has excellent climate change mitigation potential, sequestering and sinking carbon. Cultivated seaweed can also reduce ocean pollution by removing excess nutrients and has multiple applications in medicine, packaging, and textiles.

Innovative approaches to more traditional Blue Economy sectors such as fishing and tourism can also play a prominent role in developing a strong Blue Economy for African nations (see Table 1). Fishing, the largest of Africa's Blue Economy sectors, is expected to support an estimated 20.7 million jobs by 2030, and 21.6 million by 2050 under a business-as-usual scenario. Approximately 2.6 people will be employed indirectly along fisheries and aquaculture value chains for every person directly employed in the fish-production stage. Supporting sustainability and resilience in this sector includes promoting new approaches to combat overfishing—for instance, by creating new markets through increased consumer awareness and demand for less popular and more abundant (not overfished) species.

Table 1: Components of the Blue Economy | Source: World Bank Group, 2016

Type of Activity	Ocean Service	Industry	Drivers of Growth
Harvest of living resources	Seafood	Fisheries	Food security
		Aquaculture	Demand for protein
	Marine biotechnology	Pharmaceuticals, chemicals	R&D for healthcare and industry
Extraction of non- living resources, generation of new resources	Minerals	Seabed mining	Demand for minerals
	Energy	Oil and gas Renewables	Demand for alternative energy sources
	Fresh water	Desalination	Demand for fresh water
Commerce and trade in and around the oceans	Transport and trade	Shipping Port infrastructure and services	Growth in seaborne trades, International regulations
	Tourism and recreation	Tourism	Growth of global tourism
		Coastal development	Coastal urbanization
			Domestic regulations
Response to ocean health challenges	Ocean monitoring and surveillance	Technology and R&D	R&D in ocean technologies
	Carbon sequestration	Blue carbon	Growth in coastal and ocean protection and conservation activities.
	Coastal protection	Habitat protection and restoration	
	Waste disposal	Assimilation of nutrition and wastes	

Tourism, and particularly nature-based tourism, provides an important path for Africa's sustainable development. The value of nature-based tourism is expected to increase over time as the supply of pristine natural assets declines while demand, which seems impervious to economic shocks, increases with rising GDPs.

Throughout Africa, burgeoning wildlife economies contribute towards employment and revenues through diverse activities, offering countries a means to use natural resources to pursue sustainable development. Protecting natural assets, growing and diversifying tourism benefits, and sharing economic benefits with local communities can boost sustainable tourism-based livelihoods. Supporting ocean landscapes and biodiversity through innovative financing instruments such as wildlife conservation bonds could further grow and protect livelihood opportunities, while protecting natural capital for the long term.

Maximizing innovation and finance is key to supporting Africa's climate-resilient infrastructure and disaster preparedness, while nature-based solutions will help protect coastal livelihoods. Investing in marine data, spatial planning, and maritime surveillance are key areas for climate-smart finance.

Ensuring engagement across all sectors and levels—community, nationwide, and regional—will support the development of a collective resource pool while bringing fresh perspectives to the way in which livelihoods can be developed. Breaking the status quo through new institutional arrangements and crowding-in resources, for example through blended finance for innovation in incubators and accelerators and innovation competitions, can build the Blue Economy and the livelihoods it supports in lasting ways. Together with improvements to knowledge and key reforms, fostering investment is a core piece of the Blue Economy Development Framework developed by the World Bank Group (Figure 1 on page 6).



# How the World Bank Group Contributes to Solutions

#### Data, Analysis, and Dissemination

Challenge: Data and research capacity hamper









Policy, Institutional and Fiscal Reforms

Challenge: Poor policies, inefficient use of public resources and lack



**Fostering Investment** 

Challenge: Lack of knowledge and poor governance create





Figure 1: Core components of the Blue Economy Development Framework and how each contributes to a Blue Economy Source: PROBLUE, World Bank, and European Commission, no date

#### Case study

#### **DIVERSIFYING LIVELIHOODS THROUGH** TARGETED GRANT-MAKING AND SCHOLARSHIPS

The US\$100 million, five-year Kenya Marine Fisheries and Socio-Economic Development Project, launched in 2020, aims to reach more than 200,000 beneficiaries in targeted coastal areas by giving them access to complementary livelihood activities through productive grants, social and environmental grants, and educational scholarships.

At least half of the targeted number of beneficiaries will be women. These grants and scholarships are expected to reduce the beneficiaries' and their households' socioeconomic vulnerability by diversifying livelihood activities and increasing the productivity of natural resources.

Meeting durable investment with strong African partnership approaches allows complex regional and global challenges to be met with practical, holistic, and long-lasting solutions. Solid regional coordination is required for timely course correction, including well-planned data collection on jobs and the livelihood outcomes of development initiatives. Because of the nature of coastal phenomena and their impacts on livelihoods and the environment, integrated systems are needed that collect and share data regionally and focus on coastal areas and marine conditions, land use, climate patterns, and natural hazards.

The World Bank Group supports climate change mitigation, adaptation, and resilience by promoting Blue Economy job growth in Africa and around the world. From climate-smart and resilient urban development to improving economic and decision-making participation for marginalized groups, the World Bank works with a broad toolkit of financing solutions to support governments with both on-the-ground development and institutional strengthening.

The World Bank Group's Jobs and Economic Transformation (JET) and Competitiveness for Jobs and Economic Transformation (C-JET) agendas prioritize support for creating more and better jobs in lower and middle-income countries on the continent, so recognizing positive labor externalities.

Applying the JET agenda within the fisheries sector leads to a focus on small-scale fishery value chains, where approximately 90 percent of the world's fishery jobs are found. Most fisheries resources are fully or overexploited. As such, any interventions to create more and better jobs in this realm should be accompanied or preceded by strengthened fisheries management (limiting or, in some cases, reducing fishing activities), to sustain or increase fisheries resource productivity and ensure that price signals do not encourage increased fishing effort and overexploitation. As an example, fisheries management projects funded by the Global Environment Facility under the SWIOFish project series in the Seychelles involves supporting management plans; building the capacity of steering committees of the fisheries management plans and fishers' associations; boosting communication between artisanal fishers and the government; improving monitoring; and providing legal and certification support. In Mozambique, the SWIOFish1 project reached more than 98,000 beneficiaries through activities related to coastal fishing community livelihoods. Nearly half of these beneficiaries—more than 47,000 people—were

The SWIOFish1 project also involved the Mais Peixe Sustentável Matching Grants Scheme, which reported several jobs-related successes. The Aquapesca Company in Zambezia, for example, was able to train community members-many of them women-in shrimp, clam, and tilapia production to promote local entrepreneurship and create permanent jobs for 200

A C-JET funded grant being implemented by the World Bank is supporting Cabo Verde's recently adopted Blue Economy strategy. It does this by promoting investments, driving the diversification of tourism products through research on high-potential segments, and supporting an integrated supplier development program to increase backward linkages with existing tourism operators. These activities and more aim to help strengthen Cabo Verde's policy actions, increase the competitiveness of its tourism sector, and enable economic recovery that is sustainable and environmentally friendly.

The C-JET agenda also supports the Integrated Development and Competitiveness Project in Comoros. This project promotes the development of micro, small, and medium enterprises and relevant value chain actors in the agriculture, tourism, and associated sectors by financing activities to develop economic ties with the Comorian diaspora. It also facilitates their investment (of finance, skills, mentoring, and networking) through public-private dialogues. These dialogues also serve to:

- Identify priority areas for reform
- Provide capacity-building to the national investment promotion agency
- Bridge communication gaps
- Promote reforms that to facilitate market access and investment opportunities.

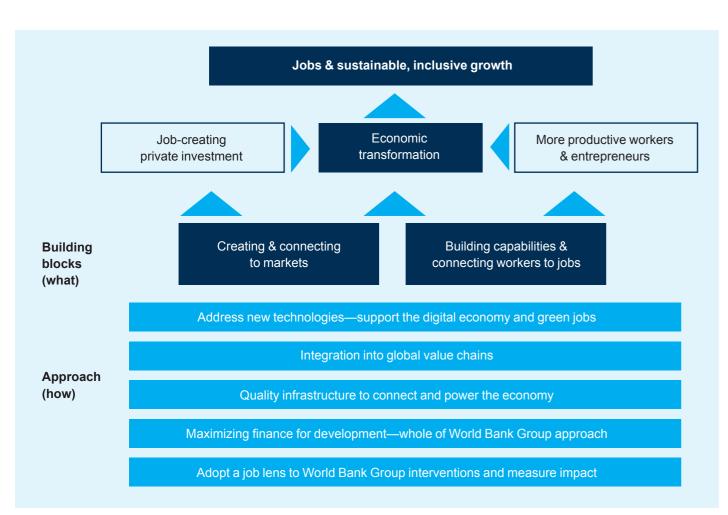


Figure 2: The World Bank's JET Framework | Source: World Bank, 2019

Jobs programs in Africa need to look beyond short-term employment to create enduring industries that are environmentally sustainable. In the Red Sea and Gulf of Aden, the World Bank Group is helping governments foster job growth by supporting micro, small, and medium enterprises, entrepreneurs, and cooperatives. Larger-scale programs require strong institutions across Blue Economy sectors and beyond. With supportive, enabling environments in place, African governments could benefit from "blue wager"

programs—such as the one undertaken by the World Bank in the Black Sea—which offer an innovative path to the way in which employment opportunities and environmental conservation/adaptation are approached in tandem. The blue wager concept builds on the model of the Civilian Conservation Corps in the United States, a <a href="strong-early-example">strong-early-example</a> of a green economic recovery project that trained many people and helped establish businesses, a number of which still exist today.

#### Case study

#### IMPROVING LIVELIHOODS—AND RESILIENCE—IN WEST AFRICA

The West Africa Coastal Areas Resilience Investment Project 1 has already brought several benefits for livelihoods and jobs to people in Benin, Côte d'Ivoire, Senegal, and São Tomé and Príncipe.

In São Tomé and Príncipe, an estimated 1,250 fishers have been supported with safety-at-sea equipment and training, with an aim to reach 2,500 fishers by end of the project in 2023. These skills improve their job and livelihood safety while improving their resilience to climate change. The project has also created an estimated 98 jobs though infrastructure development projects to improve coastal resilience (including sea walls, safe expansion zones, rock revetments, and social infrastructure, including schools). The number of infrastructure-related jobs is expected to double by the end of the project. While these jobs are generally temporary, the infrastructure they build is expected to strengthen local economies beyond the project lifespan, thus supporting livelihoods in the long term.

The project is also successfully reforesting mangroves in Senegal and Benin. Mangroves are not just needed for coastal resilience to climate change, but also for fish habitats that are necessary for fishing livelihoods. Restoring and protecting mangroves both creates new jobs while making existing livelihoods more resilient to climate change.

In Ouidah, Benin, the project works with a bio-fertilizing enterprise to support organic agriculture, generating about 120 jobs in the process. The enterprise includes a cooperative with 20 women that organize collection of raw material (wild plants and herbs) and initiate production. With financial support from the West Africa Coastal Areas Management Program, the enterprise is expected to double its production capacity in the next two years, generating more jobs.

To encourage more committed and dynamic participation by women and to strengthen their power to act, three women's networks were created in Côte d'Ivoire in December 2021 in the Braffedon, Grand-Lahou, and Lahou-Kpanda communities.

The upcoming follow-on project, the West Africa Coastal Areas Resilience Investment Project 2, will see women in The Gambia benefit from the development of technical skills relevant to key recycling value chains, helping them to participate more formally and effectively in solid waste management, tree planting, mangrove restoration, and urban-farming markets. The project aims to help close gender gaps in wage employment by generating opportunities that ensure women will be paid on par with men and gain access to their earnings. (Currently, 75 percent of working-age women have no access to their earnings.) Historically, women have been disadvantaged in accessing jobs and living wages from the solid waste management sector. Efforts to economically include women in solid waste management will enhance urban sanitation and expand the circular economy while reducing waste.



The Aquabusiness Investment Advisory Platform—a joint collaboration between the World Bank, the International Finance Corporation, the Global Environment Facility, the Food and Agriculture Organization of the United Nations, among others—has conducted a comprehensive study on new seaweed markets, including those in Africa, in anticipation of increased production from the offshore cultivation of seaweed. For processing purposes, additional markets and increased capacity will be needed. This platform is funded by PROBLUE, a multidonor trust fund.

The World Bank also supports the development of new seaweed and shellfish markets in Morocco. This comes as the government works to establish 14 new shellfish and seaweed farms, which hold the potential to upscale production, attract future investment, and generate new jobs for women and youth. This initiative is expected to increase production by more than 700 tons per year and create up to 250 direct and indirect jobs.

World Bank supports the development of comprehensive policy packages that can help African countries build a strong Blue Economy and attract private investment. Circular economy policies, for example, can reduce pollution while turning existing waste into profit. Such policies reduce revenues within linear value chains (consisting of upstream plastic producers, converters, and consumer goods companies), while increasing the profits of circular, green business models. This, in turn, attracts private investors and service providers to circular business models, reducing reliance on public finance to mitigate plastic pollution.

Circular solutions can also have positive effects on the climate and jobs. Upstream circular policy interventions and investments can drive reductions in waste generation while raising revenues that can, in principle, be used to offset negative impacts on poor and vulnerable households.



Figure 3: A woman washes plastics at a recycling area

Source: Mel D. Cole for World Bank/WACA

The World Bank Group and PROBLUE are helping governments in Africa and beyond to promote tourism to coastal and marine protected areas, as a recipe for job creation in diverse contexts. Inspired by the success of the <u>Banking on Protected Areas project</u>—which found that tourism to the Mamanuca islands created 8,304 jobs in Fiji, employing 13 percent of the local population, and 46,800 jobs in Brazil's Whale coast region—PROBLUE is supporting a similar exercise to determine the economic benefits Madagascar's marine protected areas have on local communities.

#### Case study

#### NEW CABO VERDE PROJECT TARGETS ECONOMIC DIVERSIFICATION, JOBS, AND SUSTAINABLE RESOURCE USE

The Republic of Cabo Verde's new Resilient Tourism and Blue Economy Development project is supported by PROBLUE, a multidonor trust fund hosted by the World Bank, and will focus on integrated investment across key ocean-economy sectors.

The project aims to diversify local economies and create jobs while maximizing cross-sectoral links and the sustainable use of coastal and marine resources. Support for coastal planning includes the development of tourism zoning plans and coastal zoning plans in Sal, Santiago, and São Vicente, and the consolidated regulation of maritime tourism.

Integrating tourism and fisheries value chains by exploring tourism as a new source of demand has been seen to improve the sustainability of fishing practices and their sanitary conditions, and to reinforce access to markets. The result is the enhanced sustainability of coastal tourism sites, activities, and services that responsibly share marine and coastal areas and resources.

The Resilient Tourism and Blue Economy Development project also seeks to examine new opportunities and innovative approaches; the scope for targeting new, deep-sea demersal resources; and the feasibility of a traceability and certification/labelling mechanism for use in a study on climate change and marine fisheries.

World Bank Group actions are supported by robust analytics. The Pathways Out of Plastic Pollution report, for example, compares estimates of direct greenhouse gas emissions across the whole plastic life cycle in the business-as-usual scenario, versus those of alternative policy reform packages. The results indicate that a comprehensive circular policy package could mitigate climate change by keeping greenhouse gas emissions at current levels, compared with the absence of policy action. Such reforms also have the potential to shift employment from low-skilled jobs in waste management to more productive knowledge- and technology-

Another successful analytical tool is the World Bank Group's Geo-Enabling initiative for Monitoring and Supervision, which is building local capacity among project implementation units, government staff, partners, and World Bank colleagues in the creation of customized digital data collection and analysis systems. These systems facilitate the collection of granular, geotagged data from field activities and their outcomes. Data captured includes indicators, field photos, GPS coordinates (which are automatically mapped), and other quantitative and qualitative data, all of which feed into digital dashboards.

intensive jobs across the plastics value chain.



What Success will Look Like

Successful climate-smart job and livelihood support in Africa is expected to result in overall economic growth in the continent's coastal areas. Importantly, this type of growth should be inclusive, as new opportunities open for those whose livelihoods are threatened by climate change due to coastal erosion, salination, and other forms of degradation.

Labor-intensive Blue Economy activities—such as the restoration of mangroves, seagrass beds, and dune vegetation—can be a good investment to provide quick livelihood support that mobilizes and provides employment to communities. These types of activities also contribute to the development of nature-based solutions, while providing supporting to communities in need of economic recovery, thereby paving the road for more systematic medium-term programs.

Longer-term solutions can further strengthen the participation of marginalized groups, including women and people with disabilities. These solutions typically focus on skills development for sustainable jobs, the provision of start-up capital, and addressing barriers to job participation (for instance, the lack of availability of childcare). Staying on the cutting edge of Blue Economy projects – utilizing new technologies, capitalizing on growing sectors, and promoting circular economy solutions—is a proven way to boost jobs and

livelihoods while contributing to the global fight against climate change. Bringing stakeholders and financing opportunities together builds strong development programs.

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Critical governance and policy reforms for Africa's Blue Economy include building public sector capacity, aligning economic interests with long-term sustainability, and promoting conditions that encourage business growth in a sustainable seafood sector. Public-private dialogue, stakeholder inclusion, and strategic partnerships with donors, technical expertise, the private sector, and clients are also critical for poverty alleviation, climate change, and food security.

Measuring the success of reforms on jobs and livelihoods can be challenging, but estimating the economic impact of jobs and investment can begin to show worthy change. Morocco's Blue Economy Program for Results, for example, estimates that it will attract over \$500 million in private capital, supporting up to 8,000 additional jobs (see "Blue Economy Program for Results to bring jobs to Morocco").

#### Case study

#### BLUE ECONOMY PROGRAM FOR RESULTS TO BRING JOBS TO MOROCCO

The World Bank is supporting the Government of Morocco in launching a national program to build a more inclusive and resilient Blue Economy that drives economic growth while creating jobs.

Morocco's coastal areas contribute 59 percent of GDP and provide 52 percent of jobs in the country. The fisheries sector alone contributes 1.5 percent of GDP and provides 700,000 direct and indirect jobs. According to the Exchange Office (Office des Changes), exports from the fisheries sector account for 7.1 percent of total export.

In 2021, the Government of Morocco set a target of creating 450,000 jobs in maritime fishery and the agri-food industry within five years, as part of overall efforts to create new jobs and help the national economy recover from the COVID-19 pandemic. The government's 2020 Halieutis Strategy identified aquaculture as a subsector with high growth potential, driven by steady growth in international and domestic demand for seafood. The successful operationalization of aquaculture farming (mariculture) has the potential to upscale production, attract future investment, and create jobs that enhance inclusiveness within the subsector.

#### Case study

## PROGRAM ON SUSTAINABLE FISHERY DEVELOPMENT IN RED SEA AND GULF OF ADEN

This US\$3.5 million investment aims, in part, to build the capacity of the Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden (PERSGA) in compiling data on catch and fishing efforts and analyzing the relevant statistics received from its member states, four of which are in Africa—Egypt, Sudan, Djibouti, and Somalia.

By enhancing data quality and bringing knowledge-sharing to the forefront of regional fishing operations, this effort can simultaneously make fishing more sustainable and more lucrative for those that rely on its catch. The project also establishes regional platforms for capacity building and regional coordination of sustainable fisheries and aquaculture, and works to enhance citizen, private sector, and development partner engagement in the regional sustainable fishery mechanism through enhanced knowledge management, communication strategies, and awareness.

Together, these components will help build strong livelihoods dependent on the Red Sea and Gulf of Aden and will manage blue resources such that they can be relied upon.

