



West Africa Coastal Areas
Management Program

Cross-Border Investments: Togo and Benin

IMPACT STORIES



WORLD BANK GROUP

West Africa's coastline is being degraded by coastal erosion and flooding, with significant and potentially irreversible loss of critical ecosystems such as beaches, wetlands, and mangroves. These ecosystems provide important protective and social services, including livelihoods, food security, energy, wood, and protection from storm surges. The scale of the problem is such that in 2017, coastal degradation cost Benin, Côte d'Ivoire, Senegal, and Togo about US\$3.8 billion, or about 5.3 percent of the countries' combined GDP.

As countries restore their coastal environments, working in isolation does not work. The reason is that natural geomorphological processes—including the movement of sand along shores—stretch beyond national borders. In the Togo-Benin area, for example, coastal protection measures in Togo inevitably impact the coast in Benin due to the predominant west-to-east coastal current. In other words, the nature of the challenge is shared. In this context, a cross-border approach is imperative to achieve the two countries' shared vision of managing their blue economy for prosperity. This example also demonstrates that a livable planet cannot be achieved without cross-border collaboration.



About the West Africa Coastal Areas Management Program

The World Bank's West Africa Coastal Areas Management Program (WACA) was launched in 2018 to enhance coastal resilience. The \$630 million program works with countries to better manage shared resources by fighting erosion, flooding, and pollution. The \$630 million program is currently in nine countries—Benin, Côte d'Ivoire, The Gambia, Ghana, Guinea-Bissau, Mauritania, São Tomé and Príncipe, Senegal, and Togo—although its regional engagements extend to all 17 countries in the region.

WACA is a collaborative effort that would not have been possible without the support of its financial, implementation, and programmatic partners. Our 11 regional institutions are coordinated by the West African Economic and Monetary Union (WAEMU) to ensure that the work is harmonized and owned by the beneficiary countries. The World Bank and its partners are now exploring ways to scale WACA's results by boosting Africa's Blue Economy to generate blue foods and blue jobs, and to protect ecosystems for resilience.

About this Series

This series of stories, which was funded by the Nordic Development Fund, PROBLUE, and the World Bank, showcases WACA's most impactful flagship projects in the

region to date from various perspectives. This publication focuses on examples of where WACA is working across borders to improve coastal protection.

Publications in the Series

[1. Regional Integration](#)

[2. Coastal Protection](#)

[3. Cross-Border Investments](#)

[4. Social Resilience](#)

[5. Financial Scaling](#)

[6. Partnering with the Private Sector](#)

[7. Marine and Coastal Plastics Pollution](#)

[8. Growing the Knowledge Base](#)

Why WACA Works Across Borders in Togo and Benin

Human interventions and climate change are driving high levels of erosion almost everywhere along the shorelines of Togo and Benin. Although both countries have relatively short coasts (at 124 kilometers [km] for Benin and 56 km for Togo), these shorelines are nonetheless centres of high economic activity that are experiencing severe coastal erosion—the highest coastal erosion rates in the Gulf of Guinea—along with severe flooding, which is causing coastal communities to retreat inland putting their livelihoods at risk.

Erosion along the Togo-Benin coastline can reach up to 30 m per year at the most critical hotspots, causing the loss of valuable urban and agricultural land, assets, and natural resources. The cost of coastal erosion in Benin totaled 2.5 percent of GDP in 2017, highlighting the economic burden it imposes on the country. Togo is also heavily affected by coastal erosion, with about 56 percent of its coastline experiencing an average erosion rate of 10m per year, mostly of high-value urban land, generating significant economic losses. In 2017, the cost of coastal erosion in Togo totaled 6.4 percent of GDP, which is higher than the cost of coastal erosion in Benin. In Togo, the economic loss of bare land due to coastal erosion for 2022 alone was estimated at US\$71.2 million.

The projected increase in coastal erosion is expected to amplify these economic losses. The causes of coastal erosion are multifaceted and include the retention of sediment at hydroelectric dams and obstruction of sediment flow by ports. Sea-level rise, which is exacerbated by climate change, is also a factor, and when combined with extreme weather events and tides, hard-to-predict coastal erosion events can cause thousands of people at some sites to lose their dwellings. Exploitation of natural resources such as quarrying for sand and gravel also affects the coastal "sediment budget". The scale and cross-border nature of these challenges creates opportunities to work collaboratively to address these problems.



Flagship Activity

Togo and Benin's Joint Coastal Protection Works

How a joint high-level committee achieved economies of scale with shared benefits

The stretch of coastline that Togo and Benin share experiences significant eastward sand movement, primarily due to the Guinea current, but also due to flow from coastal lagoons and rivers. Several inland and coastal constructions (dams and ports) have also played a role by trapping sediments.

These natural and manmade processes have led to widespread erosion along the coastal barrier, causing areas of shoreline to recede by up to 25 m, reaching up to 60 m in the case of extreme weather events.



How the WACA Program contributes to solutions

The escalating erosion problem prompted Togo and Benin to establish—with the World Bank's support—a joint committee for WACA. The purpose of this committee was to collaboratively manage coastal erosion and flooding in target areas.

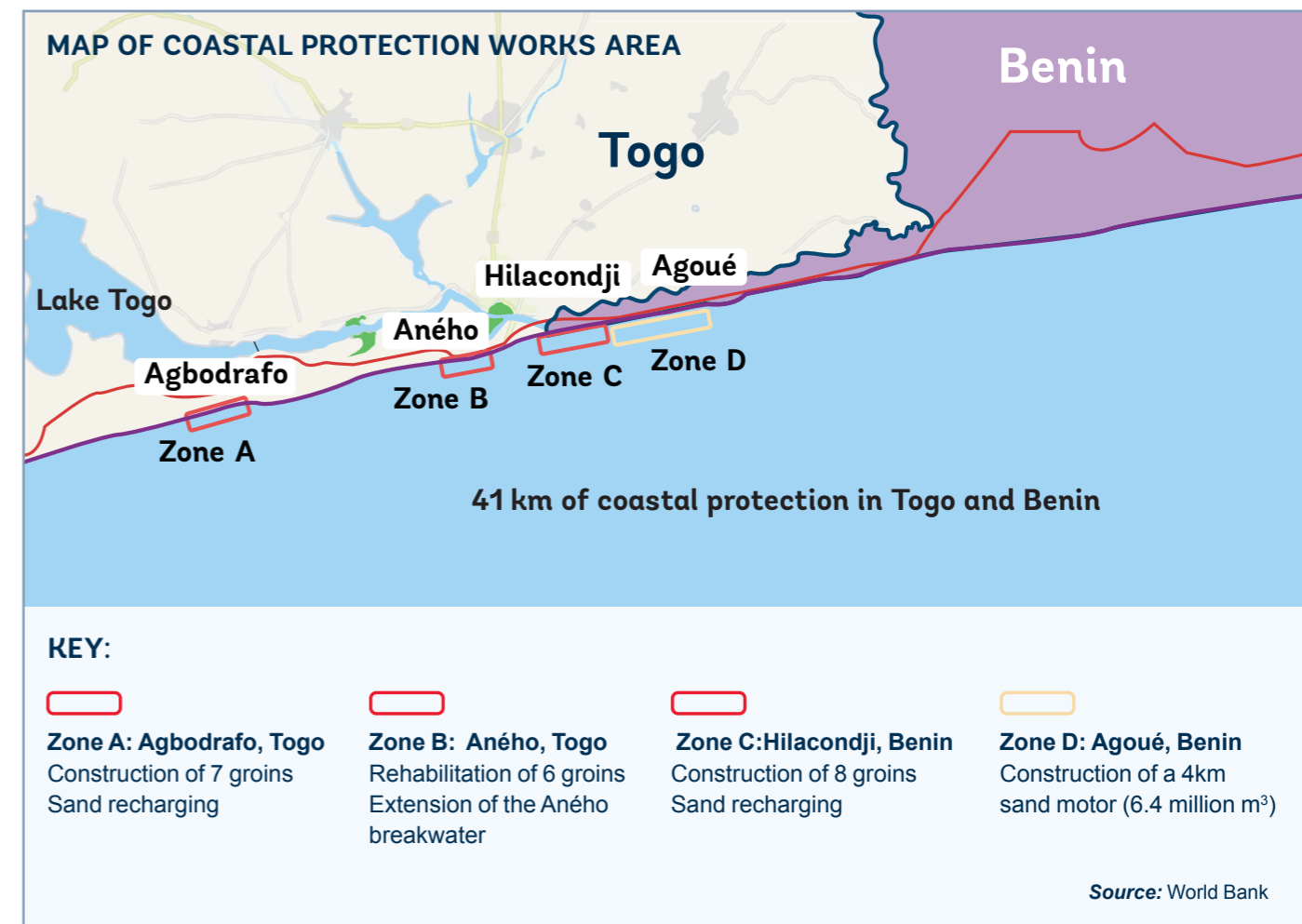
Togo-Benin coastal management measures demonstrate how much-needed cross-border and integrated investments can be jointly developed, approved, and coordinated by a mixed committee consisting of country ministries (which oversee and make decisions based on the technical group's recommendations), a technical group (that supports the country ministries), and a secretariat (to coordinate the project for both countries). Because of this collaboration, WACA's investment into the works benefited from economies of scale in the modeling and design of solutions.

WACA's support for a coordinated approach in Togo and Benin is unique and has contributed to several positive outcomes. The countries worked closely together for 17 months to protect 41 km of coastline (23 km in Benin and 18 km in Togo), through a set of protection works stretching from Agbodrafo commune in Togo to Grand Popo commune in Benin. The works included groins with sand replenishment in between; wave breakers; coastal dune revegetation; the filling of dead lagoon arms; and a sand motor that distributes beach sand along the shore using natural coastal currents.

The following outcomes are the result of coastal protection works over 42 km of coastline complemented by microprojects that focused on implementing nature-based solutions in the area:

-  **More than 27,000 households** (or about 167,000 people) are now less exposed to coastal erosion and flooding.
-  **More than 27,000 hectares of natural habitat** in the coastal zone has been restored.
-  **Nearly 4,200 people, of which 75 percent are women**, have benefited from social subprojects.
-  **About 4,600 full-time jobs** have been created.

In addition, cultural and religious heritage sites, hotels, government buildings, and the Abidjan-Lagos corridor, which includes the Togo-Benin national highway, have all been protected from coastal erosion and flooding.



TOGO	BENIN
Rehabilitated seven groins and replenished sand in Aného	Constructed eight short groins with sand replenishment in between
Constructed seven groins and replenished sand in Agbodrafo	
Filled lagoon arm at Sanvee-Condji	Filled a dead lagoon at the top of the Sanvee-Codji-Hilacondji beach (bordering Togo)
1.2 km sand dike development in Aného	Replenished 6.4 million cubic meters of beach sand
Development of recreational areas: 3.5 km bike lane and planting of 20 hectares of coconut palm trees.	

In addition to financing the collaborative works, WACA also financed emergency protection works to stabilize the banks of the Mono river in Benin to protect households from being flooded every year. However, a more permanent solution is needed to ensure the long-term stabilization and sustainable management of this part of the riverbank.

In the nearby village of Gbékon, in Benin's Grand-Popo area, erosion is sweeping away a large square that is used during the southern region's Ouidah Voodoo Festival. For the communities, this is an absolute tragedy that must be stopped. WACA is working with the Nordic Development Fund to stabilize this area in the long-term. Studies of optimal protection options have been completed and works will soon be under way.

Furthermore, in Togo, the project funded emergency works to shield 940 households from the relentless forces of erosion by implementing locally developed coastal protection measures as a temporary solution. Government leadership, combined with the programmatic approach of WACA, has mobilized joint co-financing from the French Development Agency (€35 million/US\$38 million) and the Dutch Invest International (€25 million/US\$27 million) to develop hybrid solutions that combine groins and beach nourishment to protect the livelihoods and assets of people along an additional 7 km stretch of coastline between Gbodjomé and Agbodrafo.



Flagship Activity

Soft Interventions to Build Resilience

Using soft interventions to restore ecosystems while generating income

As much as 20.1 percent of the population in Benin and 28.4 percent of Togolese people survive on less than US\$2.15 per day. The prevalence of informal employment in Benin is the third highest in Sub-Saharan Africa (SSA). In Togo, the percentage of workers with a waged job stood at 17 percent in 2019, lower than the SSA average of 19 percent and far below aspirational peers such as Morocco (50 percent) and Ghana (26 percent). Only 13.5 percent of women are employed in waged jobs outside agriculture, compared to 54 percent of men. The dependence of Benin and Togo's economic structure on agriculture and informal employment makes its development path highly vulnerable to climate change in the absence of proper adaptation, including in coastal areas.

“Soft” and nature-based interventions are those that draw on natural processes to restore or enhance ecosystems in a non-intrusive way. Such activities are often labor-intensive, creating opportunities to reduce unemployment and improve the livelihoods of communities. In the context of Togo and Benin, soft interventions that restore mangroves or encourage the adoption of alternative livelihoods (by, for example, processing of agri-food products, promoting aquaculture, animal husbandry, and food gardening) would restore the natural ecosystems that provide protection against flooding and erosion.

How the WACA Program contributes to solutions

WACA supports the restoration and protection of key coastal ecosystems and local communities with income-generating activities to improve livelihoods. Below is a selection of supported initiatives and activities:

- **In the Mono Transboundary Biosphere Reserve, a Ramsar Wetland of International Importance**, WACA supported mangrove restoration, the promotion of alternative livelihoods, the control of invasive species, and support for the implementation of management plans for community protected areas. More than 27,000 ha of natural habitat across both countries has been restored with co-financing contributions by the Global Environment Facility under this WACA project.
- **In Benin, WACA financed the establishment of a network of Community Biodiversity Conservation Areas** (also known as ACCBs, for the French *Aires Communautaires de Conservation de la Biodiversité*) on the coastal and cross-border zones. These ACCBs were established in a participatory manner to develop and enhance the country's coastal wetlands and strengthen initiatives for the co-management of natural resources. Nearly 100 ha of mangroves have been restored through this project.

- **In Togo, WACA supported the restoration of nearly 28,000 ha of degraded forest ecosystems; the development and opening of 40 km of monitoring trails in Togodo National Park; and the reforestation of nearly 1,400 ha of land, riverbanks, and mangroves.** The project made it possible to build more than 2 km of drainage canals in two villages and better manage a 7,500 cubic meter water-retention basin to protect 1,144 households from flooding. The project also helped to establish three multifunctional platforms to train communities on alternative livelihood options such as coconut oil production, growing food for the market, breeding livestock, and keeping bees for honey.

Social microprojects have benefited 4,533 people across the two countries (921 people in Togo; 3,552 in Benin, of which 75 percent are women in Benin, and 80 percent in Togo) in the fields of animal husbandry, aquaculture, gardening, and agri-food processing. In addition, about 5,353 full-time jobs have been created (1,801 in Togo and 3,552 in Benin).

This number will increase significantly when Togo initiates a new activity to enhance the resilience of 71 groups of fishers, fishmongers, and market gardeners, for a total of more than 3,200 beneficiaries, including 808 people who will benefit directly.

Outlook

Sustaining and Expanding Impact

The WACA program will continue to support the governments of Togo and Benin in their coastal resilience works, which may include preparedness for emergency coastal protection and long-term sustainability measures. Other measures include improving existing environmental data hubs and research projects and strengthening regional cooperation.

In both countries, there is need to balance grey (construction-based) investments with soft investments that draw on nature-based solutions. These soft investments may include restoring mangroves, investing in blue carbon, supporting ecotourism opportunities, improving livelihoods from coastal fisheries, and managing marine pollution, all in a view to assist countries achieve a sustainable blue economy.



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Special thanks to our partners who have made WACA possible

Agence Française de Développement, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), European Space Agency, French Global Environment Facility, Global Environment Facility, Global Facility For Disaster Reduction And Recovery, Global Infrastructure Facility, Global Program on Sustainability, International Finance Corporation (IFC), Invest International, Korea-World Bank Partnership Facility, Ministry of Ecological and Solidarity Transition (France), NDC Support Facility, Nordic Development Fund, Private Infrastructure Advisory Facility, Quality Infrastructure Investment Partnership, Spanish Agency for International Development Cooperation (AECID), and the World Bank Group.



