



**Global Facility
for Disaster Reduction
and Recovery (GFDRR)**

Senegal

Country Evaluation





Saint Louis. Photo: World Bank.

Senegal was selected for this evaluation as one of the longest running GFDRR programs in Africa, which therefore has had sufficient time to generate and assess the downstream results that GFDRR has contributed to.

Preface

The [Global Facility for Disaster Reduction and Recovery](#) (GFDRR) is a global partnership that helps low- and middle-income countries better understand and reduce their vulnerability to natural hazards and climate change.

This report is the second GFDRR Country Evaluation. A GFDRR Country Evaluation is intended to promote evidence-based accountability and improve performance by learning through experience, helping GFDRR to understand if it is achieving the results it intends through its programs. Senegal was selected for this evaluation as one of the longest running GFDRR programs in Africa, which therefore has had sufficient time to generate and assess the downstream results that GFDRR has contributed to. The evaluation covers GFDRR activities related to Senegal approved over 2011-2025, and assesses the relevance, coherence, and effectiveness of GFDRR activities.

This evaluation is based on a desk review of GFDRR grant progress and completion reports, and World Bank project documents including project appraisal documents, implementation and supervision reports, and implementation completion and results reports, and on interviews with 23 World Bank staff, and government officials from 7 entities as well as beneficiaries, development partners, and other stakeholders. The evaluation included a mission to Dakar, Senegal, in February 2026, to interview government counterparts and World Bank local staff. We are grateful for the support from the Government of Senegal and the World Bank country management unit in welcoming and hosting the mission.

The evaluation is carried out under the supervision of Niels Holms-Nielsen, Manager, GFDRR, and by task team leader Stephen Hutton, Senior Monitoring and Evaluation Specialist, with advice from Ana Campos Garcia, Lead Disaster Risk Management Specialist, and support from Sara Feria, Disaster Risk Management Analyst.

Executive summary

Senegal is exposed to natural hazards including floods, droughts, coastal erosion, and land degradation which generate significant social and economic impacts. These shocks disproportionately impact the poor and vulnerable populations through damage to assets, loss of livelihoods, impacts on human health, reduced agricultural productivity rising food prices and recurrent displacement in coastal and flood-prone areas.

To address these, the Global Facility for Disaster Reduction and Recovery (GFDRR) has developed a substantial program of support. GFDRR approved 8 grants valued at \$3.74 million for Senegal since fiscal year 2012. Collectively, these grants informed \$392.25 million in World Bank financing, a ratio of roughly 105:1. GFDRR also provided support through 3 regional or global grants. These grants supported analytical and advisory activities on urban flood risk management, resilient urban planning, disaster preparedness and response, coastal resilience, as well as resilient energy systems and education facilities. This evaluation assesses the relevance and effectiveness of those activities.

Saint Louis, Senegal. Photo: Siempreverde22.





Fishing canoes, Dakar. Photo: World Bank.

GFDRR activities have contributed to and are continuing to contribute to substantial improvements in disaster resilience in Senegal across its objectives.

GFDRR's grants were relevant to disaster risk management (DRM) and well aligned with GFDRR's strategic objectives. All grant objectives and funded activities consistently supported disaster resilience outcomes. GFDRR's demand-driven approach further enhanced strategic relevance by ensuring that activities responded to client priorities and context-specific needs.

GFDRR helped to initiate and expand a substantial World Bank engagement on DRM in Senegal. A GFDRR-funded damage assessment in 2009 helped to catalyze the World Bank's DRM program. GFDRR funded elements of an integrated approach to disaster risk management, prioritizing areas with strong government demand such as urban flood and coastal risk management. Many but not all GFDRR funded activities were clearly linked to World Bank financed lending operations. Global knowledge teams funded by GFDRR global grants provided useful support to the World Bank's Senegal engagement for several topics including urban resilience and nature based solutions.

GFDRR activities have contributed to and are continuing to contribute to substantial improvements in disaster resilience in Senegal across its objectives.

GFDRR has improved evidence and knowledge on disaster risk across its entire engagement. Analytical studies raised awareness of the need for DRM actions or generated hazard and risk information needed for design decisions. Technical assistance helped to embed data-driven and risk-informed decision-making approaches. Capacity building activities primarily focused on supporting project implementers to use risk information, rather than on developing new data themselves. Government counterparts valued how analytical work brought international expertise and good practices. However, a cross-cutting challenge for analytical studies was limited access to government data.

GFDRR contributed to significant advances in risk-sensitive urban planning. GFDRR-funded analytical work assessed urban spatial development patterns and resilience challenges, while technical assistance supported the preparation of detailed urban plans in Dakar and Saint-Louis, as well as the development of key urban planning policy reforms. Since 2012, Projects have supported capacity building and the development of disaster-resilient urban plans, which are contributing to reduced vulnerability to floods. Senegal is integrating disaster resilience in its improved national urban planning frameworks, strengthening land use decisions and reducing flood risk. While urban plans remain challenging to implement and enforce, they are clearly improving planning practices and contributing to reduced disaster vulnerability.

GFDRR activities substantially contributed to reduced flood vulnerability through improved urban drainage for hundreds of thousands of people. GFDRR funded flood risk analysis that informed the design of drainage investments in metropolitan Dakar. This



Coast in Saint Louis. Photo: World Bank.

Severe storms that destroyed coastal housing and highlighted extreme risk for thousands of residents led to a 2018 emergency project supporting emergency housing and preventive resettlement in Saint-Louis.

assistance included analytics and advice that helped introduce nature-based solutions for flood risk management. Drainage engineering investments implemented since 2012 have been and are continuing to be successfully implemented, reducing flood risk for nearly 400,000 people so far, with additional investments still under implementation. However, operations and maintenance of drainage infrastructure remain an ongoing challenge.

GFDRR contributed to the preservation of jobs in the tourism sector by addressing coastal risk. GFDRR funded analytics identified coastal protection design opportunities for a coastal tourism project implemented over 2017-2022. The project restored and protected the beach at Saly, the country's main tourism center, safeguarding jobs and local livelihoods.

GFDRR supported a participatory approach for coastal preventive resettlement, funded by the Africa, Caribbean, and Pacific-European Union DRM Program. Severe storms that destroyed coastal housing and highlighted extreme risk for thousands of residents led to a 2018 emergency project supporting emergency housing and preventive resettlement in Saint-Louis. The resettlement under the project is on-going, with the relocation of roughly 15,000 people expected to be completed by December 2026, substantially reducing exposure to coastal erosion and flooding. The participatory approach was critical to the success of the resettlement process and enabled a strong degree of local ownership of the project. GFDRR also funded studies that identified risk reduction options for Saint-Louis for future investments, which do not yet have financing sources.

GFDRR indirectly supported efforts to reduce coastal erosion by funding the creation of a for the West Africa Coastal Areas Program (WACA) and regional platform for coastal zone management. The platform is contributed to knowledge and political support for elements of a project strengthening coastal zone management governance activities and investments in Senegal.

GFDRR has supported mainstreaming of disaster resilience into key sectors. The Japan Program funded an analysis of disaster resilience in the power sector in 2025. While the reception of the study has been positive, its potential results are not yet fully evident. Similarly, the Japan Program supported an analysis of actions needed to improve disaster resilience for school infrastructure in 2023. However, it is difficult to identify significant impacts from this analysis because of a lack of engagement after the diagnostic.

GFDRR has supported disaster preparedness and institutional reform. A recipient-executed grant over 2011-2015 developed a road map for strengthening the DRM institutional framework. This support has had little impact so far due to a lack of government



Evening on the Corniche. Photo: World Bank.

prioritization of reforms in previous years; however, the work remains relevant and may still achieve impact, especially given recent government support.

The evaluation had limited ability to assess partnerships, but there may be opportunities for improvement in how the World Bank engages other development partners.

Efforts to support gender and inclusion have been an important part of the core DRM engagements, especially in the participatory approach to resettlement in Saint-Louis and in community engagement activities for urban drainage in Dakar.

The evaluation offers a number of lessons to inform future GFDRR approaches and activities.

1. Background

Stormwater flooding is the most serious hazard that Senegal has faced, with floods affecting an estimated 400,000–600,000 people per year over 1980 to 2008.

1. **Senegal is vulnerable to disasters, especially urban and coastal floods.** Senegal is prone to disasters including floods, droughts, coastal erosion, and land degradation. These shocks disproportionately impact the poor through damage to assets, coastal erosion, impacts on human health, and reduced agricultural productivity and higher food prices. Senegal faces particular vulnerability from coastal threats, with 80 percent of economic activity and a majority of the population living near the coast and exposed to coastal erosion, flooding, and sea level rise. Much of Senegal's disaster risk is concentrated in metropolitan Dakar, which is densely populated and provides most of the country's GDP, as well as other low-lying coastal cities including Saint-Louis. While the potential for extreme rainfall events is moderate by global standards, the flood hazard and vulnerability have been exacerbated by rapid urbanization and poorly planned urban growth. Informal settlement has occurred in areas with high flood exposure and has obstructed drainage, creating vulnerability to chronic flooding from seasonal rainfall. Consequently, stormwater flooding is the most serious hazard that Senegal has faced, with floods affecting an estimated 400,000–600,000 people per year over 1980 to 2008. Heavy floods in 2009 and 2012 led government to adopt a flood management program, and request financing support from the world Bank.

Dakar, Senegal. Photo: derejeb.





Rainwater Management. Photo: World Bank.

GFDRR has approved 8 grants (valued at \$3.74 million) for Senegal since fiscal year 2012, as well as providing support through 3 regional or global grants.

2. **GFDRR has approved 8 grants (valued at \$3.74 million) for Senegal since fiscal year 2012, as well as providing support through 3 regional or global grants.** Annex 1 presents full details on the grant and informed project portfolios. Most of these grants were executed by World Bank task teams, while one was executed by the government of Senegal. These grants were:
 - A \$150k grant over 2011-2013 funded analytics that modeled vulnerability to climate hazards and climate change in coastal cities and areas in Senegal, identifying the economic case for risk reduction investments, helping to build the economic case for the [Stormwater Management and Climate Change Adaptation Project](#) (PROGEP), which financed drainage and urban planning in Dakar.
 - A \$1.1 million recipient executed grant over 2011-2015 supporting disaster preparedness, and \$140k Bank executed grant supporting supervision of this.
 - A \$400k grant on climate change and coastal resilience over 2016-2018 supporting the [Senegal Tourism and Enterprise Development Project](#) which financed coastal protection in Saly.
 - A \$400k grant from the Africa, Caribbean, and Pacific-European Union Disaster Risk Management Program (ACP-EU) on urban and coastal resilience over 2019-2021 supporting the [Saint-Louis Emergency Recovery and Resilience Project](#) (SERRP) which financed preventive resettlement in Saint-Louis.
 - A \$500k disaster resilience grant from the Japan Program over 2021-2024 supporting the [Stormwater Management and Climate Change Adaptation Project 2](#) (PROGEP2) which expanded the PROGEP model to additional districts in Dakar.
 - A \$550k grant from 2022 which remains active, supporting disaster risk management policy dialogue, resilient territorial planning, and a potential development policy financing operation with CAT-DDO.
 - A \$500k grant from the Japan Program over 2023-2025 supporting an assessment of disaster vulnerability of the power sector.
3. For these grants, \$3.6 million had been disbursed as of March 2026 while \$0.13 million remained uncommitted and \$0.026 million was canceled. Collectively, these grants informed \$392.25 in World Bank financing, a ratio of roughly 105:1. The informed financing value and ratio would be higher if a planned development policy financing operation is approved.
4. In addition, World Bank teams in Senegal received support from GFDRR regional grants and global thematic area teams (the cost of this support cannot be quantified as the Senegal related activities cannot easily be separated from the larger programs):

- A \$400k grant from the Japan Program over 2021-2023 supporting resilient school diagnostics in both Senegal and Burkina Faso, with the majority of resources supporting Burkina Faso.
- A \$1.125 million grant over 2018-2020 supporting the creation of the regional platform for the West Africa Coastal Areas Program (WACA) by funding consultations, knowledge exchange, and identifying coastal solutions.
- A global knowledge grant on geospatial analysis supported a transport project in Senegal in 2023.

Local bus in Dakar. Photo: Vincent Tremeau / World Bank.





New neighbourhood in Dakar. Photo: World Bank.

2. Relevance of GFDRR activities

Relevance

5. **GFDRR's grants were relevant to disaster risk management (DRM) and to GFDRR's objectives.** All grants had DRM objectives and supported activities that increased access to or use of disaster risk information, DRM-related policies or planning, investments with formal DRM objectives, integration of disaster and climate resilience into engagements with sectoral objectives, or disaster preparedness and response capacity. All funded activities were linked to disaster resilience either directly (such as by funding analytics that informed the design of urban drainage investments) or indirectly (such as by supporting a participatory approach to resettlement as part of preventive resettlement to reduce exposure to coastal flooding).
6. **A GFDRR-funded damage assessment helped to catalyze the World Bank's DRM program in Senegal.** After serious flooding in August 2009 affecting 360,000 people, GFDRR contributed to a [Post Disaster Needs Assessment](#) (PDNA), estimating the cost of the floods to be \$104 million. The study was more than a conventional damage assessment – it generated recommendations and identified and estimated costs for a set of investment priorities for longer term flood management solutions. These included \$41 million for recovery and rehabilitation and \$191 million for reconstruction and disaster risk reduction, primarily for drainage investments. This articulated

a vision for long term risk reduction and served as the basis for discussions within the World Bank and with government on the preparation of a flood risk management project. Subsequent GFDRR grants funded DRM awareness raising and client engagement activities, as well as hydrological studies and the technical assistance on a drainage master plan to inform project design decisions. After further floods in 2010 and 2012 increased the political visibility of the issue, a new government in 2012 approved a ten-year flood management program and requested financing support from the World Bank and other partners. The World Bank financed PROGEP based on the studies and plans developed under GFDRR funding, which was the first major flood management project financed by the World Bank in West Africa, covering two districts in Dakar constituting 1.3 million people. Other development partners provided complementary support for the government plan, financing flood risk management investments in other districts. PROGEP developed a successful model for stormwater management, receiving additional financing in 2015, and a successor project in 2021, PROGEP2, which covered additional districts on the rapidly expanding periphery of Dakar.

7. **GFDRR’s demand driven approach helped to ensure strategic relevance of funded activities.** GFDRR’s business model centers around a decentralized process of World Bank operational teams applying to GFDRR for grants, and then executing those grants themselves, typically overseen by the task team leader who is managing a World Bank lending operation supported by the grant. In Senegal, this enabled resources to be channeled to activities that are connected to clear country needs and are more likely to be impactful. All staff interviewed found the decentralized model to be helpful and an advantage of GFDRR compared to other trust funds.

8. **GFDRR funded elements of an integrated approach to disaster risk management, largely prioritizing areas with strong government demand.** GFDRR supported most elements of the World Bank’s engagement on DRM in Senegal. Risk identification has been at the core of GFDRR’s engagement, with most grants supporting analytics that quantified disaster risk and presented solutions. The most substantial investments have been for disaster risk reduction, through a long-running program on urban drainage and resilient urban planning (PROGEP, PROGEP2), as well as preventive resettlement with resilient reconstruction (SERRP). GFDRR provided initial support for disaster preparedness over 2011–2015, but changing government priorities meant that there was little progress on this agenda, though recent signals suggest this agenda has renewed government interest. Disaster risk finance was not part of the GFDRR engagement, but has been supported by a different trust fund. GFDRR has not supported hydromet or early warning systems. In general, GFDRR and the World Bank influenced and responded to government demand and priorities, focusing on urban flood risk reduction, flood-resilient planning, and

coastal resilience, rather than trying to push other aspects of disaster risk management which may have had less ownership and ability to progress.

9. **Many but not all of GFDRR funded activities were clearly linked to World Bank financed lending operations.** The core disaster risk management grants funded activities linked either to raising government awareness on DRM opportunities and catalyzing demand, on supporting specific DRM investments (PROGEP, PROGEP2, SERRP, Tourism and Enterprise Development project), or on supporting policy dialogue intended to support a pipeline policy lending operation. However, grants supporting diagnostics on resilience in education and energy were not timed to be able to influence current lending operations, though they may influence future investments.
10. **GFDRR funded a full-time consultant who played a critical role in establishing and expanding the World Bank's DRM program.** GFDRR funded an extended term consultant in Senegal over 2010-2012 as part of a pilot effort to build the World Bank's internal DRM capacity. This consultant later became staff, and played a critical role developing and sustaining a substantial DRM engagement, allowing the Bank to build relationships and maintain consistent leadership of the program for nearly 15 years.
11. **Bank teams appreciated the flexibility of GFDRR and the relative ease of the grant proposal and reporting processes.** In interviews, Bank teams highlighted how they valued GFDRR as a trust fund, both in terms of the critical role it played in funding

Senegal's social protection system set up targeting committees in each village, responsible for identifying the poorest families who will benefit from the program. Photo: World Bank.





Drainage repair. Photo: World Bank.

GFDRR global grants fund global knowledge teams that generate knowledge and expertise and apply this to support country engagements.

activities that they could not otherwise resource, and in terms of the flexibility it allowed in letting teams adjust the specific activities that were funded based on evolving needs as long as they were well aligned with grant objectives. Staff appreciated the ability to use GFDRR resources for upstream analytics to raise client awareness on the need for DRM investments and fill critical knowledge gaps. They appreciated the ability of GFDRR to fund a broad range of needed DRM activities, unlike some other trust funds that were more narrowly proscribed. Staff noted that the reporting burden was reasonable, and somewhat less than for other trust funds they used.

12. **Global knowledge teams funded by GFDRR global grants provided useful support to the World Bank’s Senegal engagement in several areas.** GFDRR global grants fund global knowledge teams that generate knowledge and expertise and apply this to support country engagements. The Nature Based solutions team provided informal advice and to Bank team over on the design of water retention basins, with a more substantial engagement in 2023 to conduct a Nature Based Solutions opportunity scan of Dakar and Thies. In interviews, Bank staff in the country team noted how useful this support was, as it brought innovation and technical expertise on issues where they lacked prior experience. CityScans implemented by the City Resilience Program helped provide a high level picture of spatial development that informed the World Bank’s CCDR and its policy engagement on climate adaptation and urban resilience. The global knowledge team for safer schools provided technical advice on terms of reference and consultant supervision for a rapid diagnostic of school infrastructure, which education specialists found helpful as they did not have technical expertise on disaster resilience. Bank teams appreciated the role the GFDRR Tokyo hub played in facilitating the identification of Japanese experts, particularly those supporting the review of flood risk assessments. These experts were able to bring good practice examples from Japan which offered helpful benchmarks for assessing quality.



Bicole village, Fatick district, Senegal. Photo: World Bank.

GFDRR activities have contributed to and are continuing to contribute to substantial improvements in disaster resilience in Senegal.

3. Effectiveness of GFDRR activities

13. **GFDRR activities have contributed to and are continuing to contribute to substantial improvements in disaster resilience in Senegal.** This section assesses how GFDRR's Senegal activities have contributed towards achieving its four strategic objectives under its 2026-2030 strategy, supporting risk-informed decision making, risk-informed policy and planning, risk reduction investments and financial disaster risk management, and improving disaster preparedness.
14. **Government counterparts universally expressed their appreciation for GFDRR support and interest in continued support from the World Bank and GFDRR.** In interviews, government counterparts thanked GFDRR for its support. They described how the negative impacts of recurring disasters demonstrated the importance of the disaster risk management agenda. They described how they benefited from the analytical and advisory work, incorporating it into their own work. They were proud of the accomplishments they had achieved, but all noted possibilities for further progress and were eager for ongoing support, especially for additional training and for study tours to learn from other countries. Project implementers noted that the careful synchronization of grant funded work with project cycles maximized the impact of analytics, by ensuring that there were immediate opportunities to pilot implementation of recommended approaches and to learn by doing.
15. The following sections describe results that GFDRR support has contributed to across its strategic objectives.

Evidence and Knowledge for Risk-informed decision making

16. **GFDRR has improved evidence and knowledge on disaster risk across its entire engagement.** Support for risk identification and disaster analytics occurred across locations and sectors supported by GFDRR, and was part of all grants.
17. **Analytical studies raised awareness of the need for DRM actions or generated hazard and risk information needed for design decisions.** Several grants raised awareness of senior government decisionmakers on the need for disaster resilience investments and policy reforms, catalyzing government demand for new approaches



Maritime municipal sanitation workers. Photo: World Bank.

for managing urban floods and for resilient urban planning. Other grants generated the data needed for government to make strategic design decisions on investments (such as which investments to undertake in which locations). For example:

- i. The 2011 grant on coastal vulnerability assessed threats to coastal areas from climate change and disasters, conducting coastal modeling and generating forecasts for coastal risks in 2030 and 2050 for what would happen without interventions, recommending a strategy of managed coastal retreat. This served to raise awareness of government on disaster risks and how they would be exacerbated by climate change.
- ii. The 2016 grant supporting the tourism project conducted spatial modeling of hazards, vulnerabilities, risks, and climate change impacts. It modeled adaptation options at three sites, conducting cost benefit analysis and generating recommendations which informed government investment decisions.
- iii. The 2019 grant supporting SERRP funded technical reports on the coastal area, including bathymetric and hydrologic studies to identify the design of coastal risk management solutions for Saint-Louis, which may be implemented with future financing.
- iv. The 2021 grant supporting PROGEP2 funded studies which developed a flood hazard model for the project areas in Dakar and quantified the flood risk from floods of various return periods, assessed the role of groundwater in flooding in those areas, and identified and costed investment options. These studies identified that annual expected flood damage for the four project areas would be \$26.9 million, that 21.4% of critical facilities and 16,000 people were exposed to



Co-working space. Photo: World Bank.

flooding in those areas, and that expected investment needs would be between \$40-\$80 million.

- v. The 2021 grant supporting the education sector assessed the vulnerability of school infrastructure, using hazard data and inspections of 19 school sites, and identifying a road map of actions that could be taken to improve school resilience.
- vi. The 2022 grant supporting policy dialog funded analytical studies to assess urban and climate risk analysis for 8 cities using the CityScan tool, informing the World Bank's Country Climate and Development Report and ongoing analytical work on urban development and mobility. It also funded the identification of nature-based solution opportunities for the largest urban areas.
- vii. The 2023 grant supporting the power sector conducted a geospatial analysis and risk-based mapping to assess climate risks to the power sector, identifying the economic cost of disruptions and developing a roadmap for climate adaptation.

18. **Technical assistance helped to embed data and risk-informed decision making approaches.** Grant-funded technical experts sat with government teams and conducting training on how to apply the data and findings in their activities. This improved the ability of these teams to incorporate disaster risk sensitivity in both World Bank financed project activities and also activities conducted with their own resources – for example in the development of risk-informed urban master plans. Datasets generated by the studies were provided to government and became part of data they used for their own decision-making beyond the specific World Bank financed projects.

19. **Capacity building primarily focused on supporting project implementers to use risk information rather than develop it themselves.** While analytic dissemination and training programs invited members from a range of stakeholders in Senegal, capacity building efforts prioritized building the capacity of project implementation agencies. Agencies with project implementation and technical functions, particularly the urban development agency (Agence de Développement Municipal – ADM), benefit from continuity of staff, management, and strategic vision. As a quasi-independent agencies, ADM is partially insulated from changes in direction and priorities that result from changes in government or politically appointed leadership. Building this capacity played a key role in enabling the successful implementation of complex investment projects. Advanced technical analytics were conducted through international consultants with specialist expertise, and in interviews Bank staff argued that it would not be realistic in a country at Senegal's level of development to try to develop such expertise domestically given resource constraints and the difficulty of retaining staff and maintaining systems. However, project experience has expanded domestic capacity in specific areas such as hydrology and hydrodynamic modeling.



Drainage maintenance/repair. Photo: World Bank.

GFDRR and the World Bank have supported a new approach to urban planning which incorporates disaster resilience, incorporating drainage plans and flood risk mapping as part of urban master plans.

20. **Government valued how analytical work brought international expertise and good practices.** In interviews, government officials noted that they greatly valued these analytics and the technical assistance that came with them, helping them to make decisions based on rigorous evidence, adopt new practices, and expand their knowledge. They particularly valued the opportunity to learn from and share experiences with other countries. They noted that the technical support meaningfully contributed to their ability to achieve development impacts.
21. **A cross-cutting challenge for analytical studies was difficulty in accessing government data.** In many analytical reports, contracted firms note that expected data was not shared by government, and that alternative data had to be used, often from global data sources, which reduced the quality and accuracy of the analysis. In interviews, Bank staff acknowledge this challenge, noting that one reason is the lack of a strong and well equipped disaster agency that could serve as a repository and curator for disaster-related data, while also noting that institutional incentives mean that government entities often see their data as an internal asset and expect to receive payment in order to access data.

Risk-informed policy and planning


Urban planning:

22. **GFDRR funded technical assistance and analytics supporting the incorporation of disaster risk considerations into urban planning.** Multiple grants contributed to the urban planning agenda, funding analytics that assessed urban spatial development and resilience challenges as well as technical assistance for both the detailed design of detailed urban plans and for developing key urban planning policy reforms. This included technical reviews and inputs into urban master plans developed under PROGEP, PROGEP2 and SERRP for municipalities in the Dakar and Saint-Louis metropolitan areas, policy dialogue and advice on a new urban code, and CityScans to assess urban growth patterns and resilience opportunities.
23. **Projects have supported capacity building and development of disaster-resilient urban plans, which are reducing vulnerability to floods.** GFDRR and the World Bank have supported a new approach to urban planning which incorporates disaster resilience, incorporating drainage plans and flood risk mapping as part of urban master plans. The Bank-financed projects developed tools to identify and enable urban planning policy priorities, carried out a training program on urban planning, developed detailed urban plans for municipalities in Dakar and Saint-Louis which are now being implemented. Central government has substantially improved its capacity to develop urban master plans that include and incorporate risk information and

resilient requirements, drawing on hydraulic studies and flood maps, and is providing technical support to municipalities who are now responsible for developing these plans but largely lack the technical capacity to do so on their own. These plans are being developed with greater collaboration between municipalities and communities than was done in the past, improving social acceptance and compliance with plans. In the context of rapid urbanization, the plans' ability to enable municipalities to identify where drainage channels, water retention areas, and other flood management works should be located and to identify flood prone areas where construction should be prevented or regulated addresses a key driver of Senegal's disaster vulnerability.

24. **Senegal is integrating disaster resilience in its improved national urban planning, reducing vulnerability to flooding.** Senegal developed and adopted a new urban code in 2023 which mandates the incorporation of disaster resilience into urban plans. Over time and with other resources, plans are being developed for cities across the country using the same approach initiated under the World Bank engagement. The existence of the plans makes it easier to mobilize public or development partner financing for the construction of major works aligned with the plans. The plans are most effective in peri-urban areas undergoing development where a combination of flood risk reduction measures and regulatory controls can be integrated upfront – in contrast, reducing risk in existing neighborhoods is much more difficult and costly because it requires resettlement and neighborhood improvement interventions. Government is working to raise awareness of the need for planning with

Dakar coastline. Photo: Artaxerxes Longhand.

An aerial photograph of the Dakar coastline in Senegal. The image shows a mix of modern, multi-story buildings and older, more densely packed structures. A prominent yellow construction crane stands tall on the right side of the frame. The coastline is visible on the left, with waves breaking onto a sandy beach. The foreground is filled with dry, brownish vegetation, suggesting a hilly or elevated vantage point from which the photo was taken.

Senegal is integrating disaster resilience in its improved national urban planning, reducing vulnerability to flooding.



Residential street in Dakar. Photo: Joesboy.

[...] urban planning interventions have made significant improvements in how land use decisions are made, including in areas experiencing rapid growth on the periphery of Dakar.

urban stakeholders, and is pursuing ongoing reforms for territorial planning and a national urban planning policy with support from the World Bank and other development partners.

25. **Urban plans are challenging to implement and enforce, but are clearly improving land use decisions and are contributing to reduced disaster vulnerability.** Operationalizing urban plans faces the same challenges present in developing countries around the world - it is difficult to enforce land use plans in the face of rapid urbanization and informal settlement. Yet, though the effects cannot easily be quantified, it is clear that urban planning interventions have made significant improvements in how land use decisions are made, including in areas experiencing rapid growth on the periphery of Dakar. In interviews, government officials described how they have and use legal tools to halt illegal construction and conduct efforts to raise public awareness that construction in exposed areas would be flooded regularly.

Other policy reforms:

26. **GFDRR has also supported other efforts aimed at influencing policy, though it is too soon to assess the impact these may have.** An ongoing GFDRR grant has supported a range of activities aimed at informing policy reform. Some of these have addressed specific policies: as discussed below on disaster preparedness and response, policy dialogue has laid the groundwork for important policy reforms on institutional reform that have not yet been adopted. The grant has also supported several other activities that support policy engagement but are less linked to specific reforms. The grant funded analytical inputs into the World Bank's 2024 Country Climate and Development Report (CCDR) including a high-level assessment of urban and climate risk using CityScans. The CCDR then generated specific recommendations on coastal resilience, disaster risk management, and sustainable cities. While it is difficult to assess the extent to which the CCDR is influencing government policy and priorities, it had a substantial outreach program in Senegal in 2025 with high level attendees. The grant also funded policy notes for the incoming government in 2024, and is supporting ongoing analytics on territorial development, urbanization, and urban mobility.

Risk reduction investments and disaster risk finance

27. **GFDRR funded flood risk analysis that informed the design of drainage investments in Dakar.** By providing a detailed analysis of flood exposure and vulnerability, these studies helped prioritize the locations for investments and informed recommendations for specific flood risk management infrastructure, including traditional drainage and nature-based solutions for water retention and runoff management.



Mangrove replantation in Ziguinchor. Photo: JordiRamisa.

The study identified potential NBS solutions to reduce flood risk such as wetlands restoration and conducted a costing exercise to show cost-effective priorities.

The studies included cost-benefit analysis that assessed the investment and operational requirements for drainage and other adaptation measures. They proposed a drainage model that could work in existing neighborhoods with established layouts and infrastructure, as opposed to an alternative that might include theoretically better drainage patterns but require major restructuring of neighborhoods. These studies thus provided the analytical foundation for the main design decisions underpinning the drainage works implemented under the projects.

28. GFDRR assistance included analytics and advice on nature-based solutions.

With support from GFDRR global grants, the World Bank's global knowledge team on nature-based solutions (NBS) provided advice on opportunities to incorporate NBS into drainage plans, including for some of the water retention basins constructed under PROGEP. A grant also funded a nature-based solution opportunity scan for Dakar and Thies in 2023. The study identified potential NBS solutions to reduce flood risk such as wetlands restoration and conducted a costing exercise to show cost-effective priorities. The results of the NBS scan are being integrated into newly produced drainage master plans, helping to reduce the overall cost of drainage investments by building green and blue corridors into spatial plans. Elements of the plans are being incorporated in PROGEP2 investments, using wetlands and lakes as water retention basins, and discouraging dry-season settlement in those areas. NBS were new to government staff, who tended to have traditional engineering training and background, but in interviews officials were pleased with the success of NBS approaches (especially their much lower cost for operations and maintenance) and interested in continuing them, and reported that community acceptance of NBS had been strong.

29. Drainage engineering investments have been and are continuing to be successfully implemented, substantially reducing flood risk.

Under PROGEP, 29.3 km of primary drainage system (and a further 21 km of secondary drainage) was constructed, along with 4 pumping stations and 21 stormwater retention basins, reducing chronic flood risk for 900 hectares and benefiting roughly 167,000 people. Drainage investments have substantially improved stormwater management, reducing peak flood levels and risk of waterborne disease. Floods in 2009 affected 11.74 square kilometers in the project areas, while this was only 1.44 km in 2018. An impact evaluation carried out over 2015–2017 showed that areas covered by the project found that flood-related income losses were lower by 47% and illnesses by 11% compared to a control group. The project substantially improved land values, reflecting the increased desirability of land no longer subject to chronic flooding – an economic analysis conducted at project closure noted that land prices in flood-affected areas increased by 500 percent (in nominal terms) from 2010 to 2019, in part due to the project's drainage works (but also due to inflation, demand, and a construction boom). These benefits

are continuing under the ongoing PROGEP2: as of November 2025, nearly 50 km of primary drainage had been constructed, benefiting 1,330 hectares and 220,000 people in peri-urban Dakar with improved drainage. In interviews with a municipality supported under PROGEP2, officials noted that they had already seen substantial reductions in flooding following initial drainage works, and that communities were eager for planned further planned investments to be implemented.

30. **Operations and maintenance of drainage investments remains an ongoing challenge.** Initial efforts under PROGEP to support operations and maintenance of assets were unsuccessful, as the main government agency responsible for drainage O&M does not have the resources to adequately maintain them, and waste accumulation in drains and retention ponds degrades their functionality while drainage structures are deteriorating. While drains were cleared regularly during the project, planned financing plans for transfers of resources to the agency were not implemented, and funding for operations and maintenance of PROGEP drains remains an ongoing challenge. Both PROGEP and PROGEP2 have applied an innovative model of community-based management for smaller works, especially retention ponds. This offers potential for sustainability by funding activities from revenue generated from facilities constructed near the ponds, such as revenue from sports field rentals. However, this model is not feasible for the major drainage canals, which require resources beyond what the community-based model can handle, and not all project-supported communities have such revenue sources. PROGEP2 is financing the preparation and implementation of a road map to strengthen government capacity for O&M and secure sustainable financing to the sector. Community engagement activities carried out under PROGEP1 and PROGEP2 have helped raise awareness on the need to avoid dumping waste in retention ponds. An impact evaluation carried out in 2017 concluded that communities where awareness raising activities had been conducted were much more likely to undertake drainage clearing activities than a control group.
31. **The PROGEP model has had demonstration effects on similar projects in other countries.** The PROGEP model of drainage investments combined with incorporating flood hazard assessments and drainage plans into urban planning has offered lessons to other countries. In interviews, World Bank staff note that other countries in the region had learned from and sought to replicate elements of the Senegal experience including in Ghana, Benin, Niger, the Republic of Congo, and the Democratic Republic of Congo.

Coastal protection

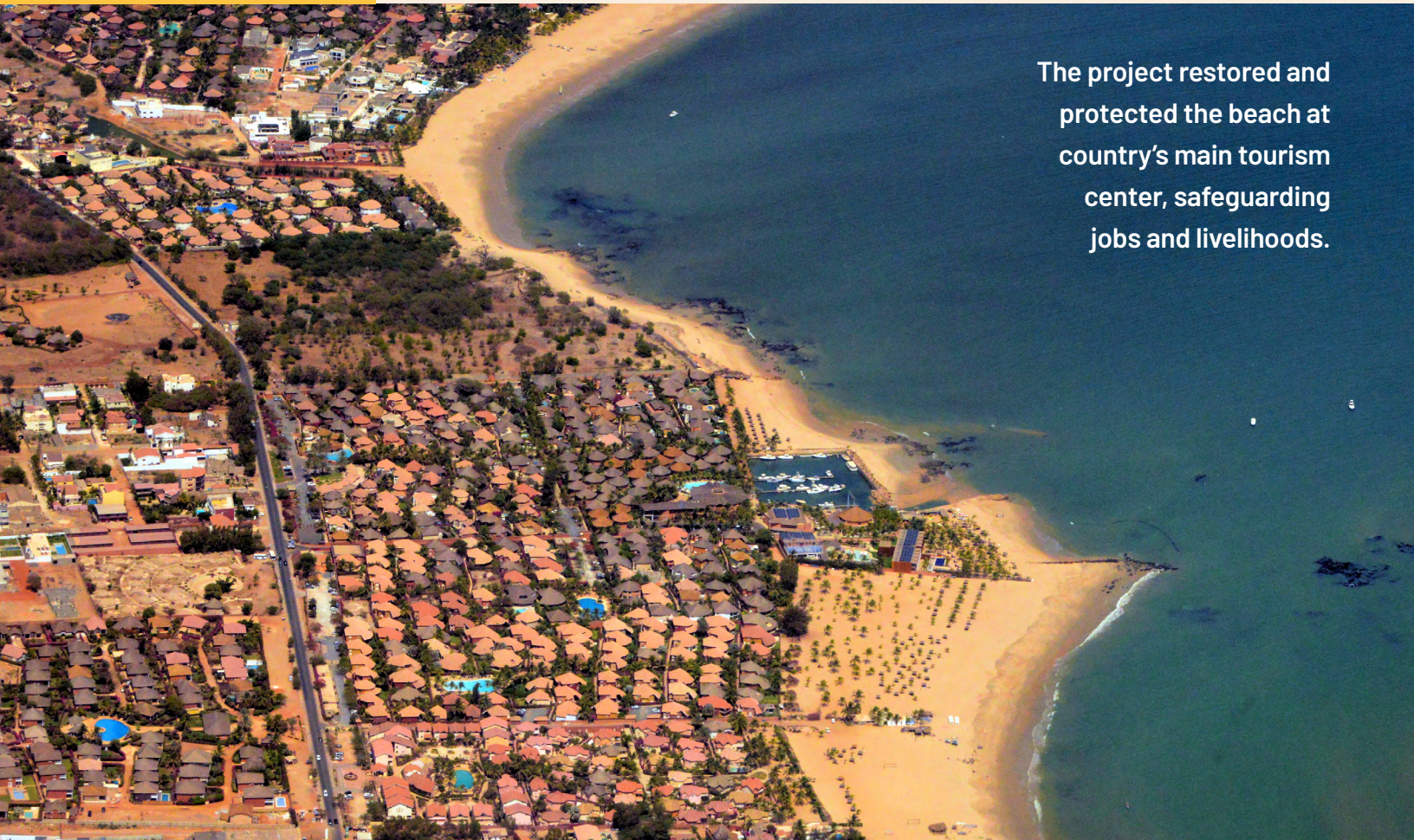
32. **GFDRR-funded analytics identified coastal protection design opportunities for coastal tourism.** GFDRR funded studies that assessed and quantified the threats

from sea level rise and coastal erosion and flooding, providing a cost benefit analysis of and recommendations for climate adaptation options for tourism areas. These helped to persuade government to modify their investment plans to reduce the scale of investment in high-risk zones, to modify the design of investments they were undertaking to incorporate stormwater management, and to undertake beach replenishment and protection measures. They also articulated the need for integrated coastal zone management and proposed models for operations and maintenance of coastal protection assets to be funded by tourism operators. Several of these measures were then incorporated in the World Bank financed Senegal Tourism and Enterprise Development Project.¹ The grant also supported environmental and social risk management studies undertaken for the project, enabling investments to be taken in a way that mitigated negative impacts.

- 33. The project restored and protected the beach at country's main tourism center, safeguarding jobs and livelihoods.** Prior to the project, the tourism sector was at substantial risk because of coastal erosion. Beaches at Saly, the main tourism hub

¹ The project also included a component addressing investment climate, which was not supported by GFDRR.

Seaside resort of Saly Portudal. Photo: mcurado.



The project restored and protected the beach at country's main tourism center, safeguarding jobs and livelihoods.



New housing in Saint-Louis. Photo: World Bank.

GFDRR supported a participatory approach for preventive resettlement in Saint-Louis.

in the country and a substantial source of jobs², were being eroded by up to 6 meters a year, which threatened their appeal to tourists and so the jobs, revenues, and income from the sector. Some hotels had closed due to either damage from erosion or declining visitor numbers. Government had wanted to finance substantial further investments in tourism, but sea level rise and flooding could threaten those areas. The project financed the design and implementation of beach restoration measures using dredged sand, expanding beaches by 375,000 square meters, and constructed 19 groins and breakwaters to mitigate erosion. The project also developed institutional measures for maintenance of the structures, which were established after the project closed. While the project did not measure its impact on private sector investment and potential investments were still unclear at the time the project closed and was evaluated, interviews with government officials and Bank staff suggested that the Saly tourism sector has substantially recovered, several hotels have implemented renovation investments, and that restoring the beach was a critical factor in this. In the long term, the tourism sector still faces substantial threats from sea level rise and erosion.

- 34. GFDRR supported a participatory approach for preventive resettlement in Saint-Louis.** Severe storms in Saint-Louis in 2017-18 destroyed coastal housing and forced the urgent relocation of 1,800 people while raising awareness of the need for relocating roughly 15,000 people living within 20 meters of the coast, and the World Bank financed the SERRP project to accomplish this.³ A GFDRR grant funded technical assistance and specialized expertise from a social facilitation firm to support a participatory approach for urban design for resettlement under the project. Communities were consulted on the design of the areas where people would resettle, including their preferences for housing, selection and layout of community facilities, the design of a livelihoods restoration plan, and other aspects. The grant also funded training for project implementers and communications activities. Interviews made clear that the level of participation was fundamentally different than historic approaches to resettlement, where design approaches had been more top-down based on the expert judgement of architects and engineers, and where public consultations had focused more on communicating to the public rather than seeking their input.
- 35. The resettlement under the project is on-going.** The project supported the immediate relocation of 2,331 people into temporary housing, as well as the urban

² Tourism represented around 12 percent of GDP and 16 percent of exports, with Saly representing roughly half of all leisure tourism).

³ The project supported temporary housing for those who had been displaced and were living in relief camps in poor conditions, and long

planning and construction of long-term housing and community infrastructure⁴ for roughly 15,000 people. As of September 2025, long term resettlement had been completed for 4,500 people (167 buildings), with 265 buildings for a further 7,470 people expected to be completed by July 2026. As of February 2026, 98% of households had agreed to compensation or resettlement, with only a small number of households (13) refusing either option. The project is expected to close by mid-2027, and full resettlement of 15,000 people to be completed in 2026.

36. **The participatory approach was critical to the success of resettlement and enabled a strong degree of local ownership of the project.** The participatory process was critical for building community acceptance of the resettlement, which was a challenging task as people who worked and lived on the coast needed to be resettled to safer areas up to 20km inland. The projects' responsiveness to feedback generated through community engagement mechanisms helped to build social acceptance. For example, the project incorporated requests for additional community spaces that had not been in initial design, and for the construction of housing compounds for multi-family units. The livelihoods restoration program heard and responded to requests from communities that the project include support for livelihoods that remained part of the fisheries value chain – this was important to people whose identities and experience was tied to the fisheries sector. Similarly, the project responded to requests to enable some people to continue their occupation as fishers, constructing warehouses on the coast where people could store fishing equipment and attempting to facilitate transport options for commuters. Interviews with officials from the affected municipalities highlighted the appreciation of municipalities for the project, including the way the project partnered with the municipalities and communities, the participation of local people in project activities (including construction work, conduct of surveys, and as beneficiaries from livelihoods training), and the efforts made to develop social cohesion between the displaced communities and existing residents near the new housing. There have been some positive demonstration effects from the experience, as other urban infrastructure projects in Senegal are seeking to replicate the approach, including in broader consultation for urban planning.
37. **The participatory approach has been time consuming and costly, but necessary given the difficulty of undertaking mass resettlement in a responsible manner.** While the resettlement efforts have been generally successful, they have also been slow and taken substantial resources and time from the Bank team and the project implementer. The World Bank's environmental and social risk management approach includes intensive requirements for resettlement processes, and implementing these

⁴ The project also constructed markets, health centers, schools, religious facilities, and others.



Coastal erosion in Saint Louis. Photo: World Bank.

GFDRR indirectly supported efforts to reduce coastal erosion under the West Africa Coastal Areas Management Program (WACA) by funding the creation of the WACA platform.

successfully has been a major effort. It has taken roughly 8 years for resettlement to take place, and the project has faced significant delays because of the complexity of the resettlement process. The project was approved in June 2018 with an original closing date of June 2023; in 2020 the project received additional financing that expanded the project scope and changed the planned closure date to June 2025; implementation delays have contributed to further extension of the closing date, likely to mid-2027. Yet, it is difficult to imagine that a faster approach would have been as successful given the sensitivity of uprooting and moving thousands of people.

38. **GFDRR also funded studies that identified risk reduction options for Saint-Louis, but these will require a separate project and financing.** The resettlement of people who lived within 20 meters of the coast significantly reduces the vulnerability to coastal erosion and flooding, but risk reduction investments in that zone are also required to reduce medium term vulnerability. The GFDRR grant also funded analyses that identified options for coastal risk reduction, including tree planting, beach nourishment, and expanding a dike constructed in 2016 using financing from Agence Française de Développement (AFD). However, the SERRP project supported only the resettlement; risk reduction activities were not part of the project design, and would need to be covered by future investments, for which financing sources are not yet clear.
39. **GFDRR indirectly supported efforts to reduce coastal erosion under the West Africa Coastal Areas Management Program (WACA) by funding the creation of the WACA platform.** GFDRR provided programmatic support to the WACA program through a \$1.125 million regional grant over 2018–2020. Together with the Nordic Development Fund, this grant helped to establish the WACA platform, a multi-country platform for fostering political dialog, facilitating technical expertise and learning, and mobilizing financing to address coastal zone management including coastal erosion and flooding. The grant funded extensive multi-country consultations and events needed to engage financing partners, government, NGOs and civil society, academia representatives, and private sector representatives to build a shared vision for coastal resilience, enshrined in the WACA Communiqué. This involved defining the knowledge and financial services to be delivered by the platform, the identification of investment priorities, and the creation of a compendium of coastal zone management solutions which emphasized nature-based approaches.⁵ In interviews, staff noted that the ability to share knowledge on coastal solutions from around the world, including other middle income countries, made a substantive difference in building interest and acceptance from West African governments that proposed solutions were feasible.

⁵ The compendium also benefited from knowledge developed under GFDRR global grants for nature-based solutions, with technical inputs and knowledge exchange conducted by the World Bank's NBS global knowledge team.



Electric cables in Senegal. Photo: Clement Tardif.

The power sector faces significant risks from climate hazards, highlighted by floods in 2020 and 2023 that damaged a power station and substations, causing significant outages.

40. **WACA is supporting governance activities and investments in Senegal.** Senegal was one of the first 6 countries to undertake investments under the WACA program, through the World Bank financed West Africa Coastal Resilience Investment Project (WACA ResIP). While GFDRR has not directly supported the project in Senegal, the project benefits from the platform indirectly. The WACA platform and the political attention it brought influenced the government's decision to undertake the project, and the platform facilitates regional approaches and knowledge exchange used by the project. In interviews, government project staff emphasized the importance of regional approaches given the transboundary nature of coastal zone management and the similar challenges across countries that create opportunities for international knowledge sharing. They also noted the importance of the platform in identifying and supporting countries to address coastal governance issues, arguing that the platform helped make possible the political support for the development of a national strategy for Integrated Coastal Zone Management. The project is due to close in June 2026, and has implemented most of its activities. To date, the project has completed 86.7 hectares of nature-based coastal protection measures in the Saint-Louis and Cassamance regions using mangrove restoration, dune protection, and other approaches⁶, and has implemented the majority of a dike around Gorée Island in Dakar, an important site for tourism and cultural heritage. Activities on creating a national coastal observatory are well advanced, though the observatory is not yet operational, and the national strategy has been developed and validated but not yet formally approved as of February 2026.

⁶ The government project team described anecdotal evidence of biodiversity improvements coming from the NBS activities including spread of native plant species, increased numbers and range of animals including jackals, and increased quantities of shellfish.



School children in Senegal. Photo: World Bank.

A joint grant for Senegal and Burkina Faso supported a rapid diagnostic of school infrastructure in Senegal in 2023, which assessed the disaster vulnerability of schools and identified risk factors to inform the development of a strategic plan for enhancing school safety, resilience, and quality.

Energy

41. **The GFDRR Japan Program funded an analysis of disaster resilience in the power sector.** The power sector faces significant risks from climate hazards, highlighted by floods in 2020 and 2023 that damaged a power station and substations, causing significant outages. A Japan Program grant funded a major study that analyzed climate risks to the power sector, including an assessment of the cost of climate-related disruptions to power supply, a geospatial analysis generating risk-based maps, an identification of adaptation needs through an adaptation roadmap, a diagnostic of the enabling environment, and recommendations for infrastructure design and policy actions. These included specific suggestions for how solar plants and substations would be designed to reduce their vulnerability, as well as recommendations on how to operate and maintain assets.
42. **While the reception of the study has been positive, the potential results of the study are not yet fully apparent.** The grant did not directly inform investments, as the active World Bank financed energy access project had already designed and procured its investments by the time the study was completed, as had investments by major development partners such as the Millennium Challenge Corporation. While workshops were carried out as the study was completed, the World Bank energy team acknowledged that competing priorities had meant they had not yet followed up on resilience issues after closure of the grant, but discussed opportunities for incorporating study recommendations into the design of future projects and engagements. In interviews, management of the national power utility SENELEC described their appreciation of the study and the participatory way in which it was conducted, noting that its analyses had influenced their thinking to better understand the risks to the system and that the recommendations were actionable and useful. They described steps they were beginning to take to incorporate the recommendations into their planning processes. However, updating key internal documents such as design standards or incorporating recommendations from the evaluation around the choice and location of assets in their main integrated power sector plan will take some time, and may benefit from additional technical assistance.

Education

43. **GFDRR supported an analysis of actions needed to improve disaster resilience for school infrastructure.** A joint grant for Senegal and Burkina Faso supported a rapid diagnostic of school infrastructure in Senegal in 2023, which assessed the disaster vulnerability of schools and identified risk factors to inform the development of a strategic plan for enhancing school safety, resilience, and quality. The work was supervised by a technical expert from the World Bank's global knowledge team



Roads in Dakar. Photo: World Bank.

So far, there are nearly 300,000 people living within 5km of road sections that have been upgraded, along with travel time reductions and road safety improvements.

on safer schools, drawing on the Roadmap for Safer and Resilient Schools and other global knowledge work supported by GFDRR global grants. The involvement of the global knowledge team was important for quality of the work as disaster, engineering, and construction aspects are outside of the core expertise of the World Bank's education specialists. The study generated recommendations on improving hazard and infrastructure data, standards for site selection for schools, maintenance, investment planning, potential school upgrades, and others.

44. **However, it is difficult to identify significant impacts from the analysis.** The diagnostic was carried out without an education project with the potential to support implementing the activities it recommended. While the World Bank is financing education projects in Senegal including construction of school facilities, those projects had already been designed and procured by the time of the diagnostic. The involvement of the World Bank global knowledge team ended as the grant was completed and the report was disseminated, and there was no follow-up on the issues noted in the study by the education team as school resilience issues were not their main priorities and they did not have other investment projects in pipeline. Turnover in government officials after the change of government in 2024 meant that many government leaders briefed on the study were no longer in office. Interviews indicated that current leadership of the government's school construction department were not aware of the study – though they indicated that they were taking action on their own on some aspects covered by the study (such as incorporating flood risk into school siting decisions).

Transport

45. **GFDRR supported geospatial analysis that informed the strategic design of a road project.** The World Bank's Digital Earth global knowledge team, which is supported by a GFDRR global grant, carried out a geospatial analysis in 2022 to support a transport project. The assessment combined data on road criticality with global data on climate hazards, and helped the project make high level decisions on which regions of the country should be prioritized by the project, steering the project towards parts of the road system that faced higher flood risk. According to World Bank interviews, the engagement was useful in introducing flood risk data to the transport agency's geospatial team, who had not had much experience using climate data. However, the overall flood risk to the road network is relatively low, and flood risk was not a significant factor identified in the detailed engineering design studies for the project. The project is currently under implementation, with 183 km of paved road rehabilitated as of June 2025, out of a total planned 414 km. So far, there are nearly 300,000 people living within 5km of road sections that have been upgraded, along with travel time reductions and road safety improvements.

Disaster Risk Finance

46. **GFDRR did not support disaster risk finance in Senegal, but this was supported by a different trust fund.** While GFDRR did not support disaster risk finance, the World Bank has an ongoing disaster risk finance engagement supported by the Global Shield Financing Facility. This work has supported the creation of a disaster risk finance diagnostic in 2024 and a disaster risk finance strategy in 2025, with ongoing support for operationalizing the strategy including efforts to create a disaster fund and knowledge exchange on insurance for public assets.

Disaster preparedness

47. **GFDRR supported disaster preparedness and institutional reform through a recipient-executed grant.** GFDRR funded a \$1.1 million recipient executed grant to support disaster preparedness over 2011-2015 by developing a road map for strengthening the DRM institutional framework. While government financed the creation of an emergency management center, GFDRR funded a diagnostic study on the preparedness institutional framework and technical assistance to develop tools, plans, and institutional arrangements as well as funding other training and knowledge exchange, including a study tour to Japan to learn about community awareness raising for risk reduction. A wide range of institutional proposals were developed, including a revised institutional framework, an operational disaster response mechanism, plans for a disaster response fund, and a draft law on disaster risk management.
48. **Support for disaster preparedness has had little impact so far.** There was a change in minister and leadership as the grant approached completion, and subsequent leadership did not prioritize implementing the institutional reforms or tools that had been developed and the proposals were not adopted. This included a key institutional reform to elevate the role of the civil protection directorate, which currently lacks the resources or institutional authority it would need to play a major role in convening and coordinating actors to undertake disaster risk management activities. There was also a lack of political consensus on issues such as the role and structure of different emergency response entities. This led to a long period of time where little progress was made on disaster preparedness.
49. **However, the disaster preparedness work remains relevant and may still achieve impact.** Renewed discussions on disaster preparedness reform began in the preparation of a potential Cat DDO in 2019; however across the world planned Cat DDOs were dropped after the 2020 Covid-19 pandemic shifted client priorities to immediate assistance rather than contingent financing. Subsequently, efforts to support key disaster



Drought stunted crops in Kaffrine, Senegal. Photo: World Bank.

preparedness reforms were incorporated into a planned multi-sector development financing operation, but this operation has experienced delays and remains in pipeline. A recent GFDRR grant funded technical assistance to support development of a national disaster risk management strategy aligned with the Sendai framework, and a strategy was drafted, but as of February 2026 had not received technical validation or government approval. However, recent signals of political support suggest that there are new opportunities for building on the older work delivered. The tools and institutional reforms developed under the recipient executed grant remain relevant. In February 2026, the president called for action on disaster preparedness activities, including the validation of the national disaster strategy, the creation of a national center for disaster prevention and risk management, and institutional reforms to strengthen the civil protection directorate. In addition, there is recent activity building on GFDRR funded support for preparation of a Contingent Emergency Response Project, but it is outside the scope of the evaluation and has not been assessed.

50. **GFDRR has not substantially supported hydromet or early warning systems in Senegal.** Though the World Bank developed MOUs with hydromet agencies, included hydromet stakeholders in some training programs, and provided minor financing for rain gauges in Dakar, hydromet and EWS support have not been significant parts of the engagement. In part, this may be because of the country risk profile where much of the disaster risk comes from chronic rainfall rather than hard to predict acute shocks. In interviews, Bank team members had mixed views on whether or not this constituted a strategic gap.

Cross-cutting areas

Partnerships

51. **The evaluation had limited ability to assess partnerships, but there may be opportunities for improvement.** This evaluation had a limited ability to assess partnerships from the program, in part because key staff from multiple development partners have recently retired, and institutional memory of partner engagements was limited. However, interviews suggest that partnership has not been a major focus of the Senegal DRM engagement and there may be opportunities for improvement. The World Bank was able to attract parallel financing to key initiatives, with Nordic Development Fund financing for PROGEP and PROGEP2, including support for technical assistance on resilient urban plans. With other partners, there has been some division of labor, with AFD financing drainage improvements in other parks of Dakar, complementing PROGEP and PROGEP2. Early efforts to promote resilient urban planning benefited from partnership with the Global Environment Facility's Sustainable Cities Program, which gave government decisionmakers the opportunity



Small holder female farmers. Photo: World Bank.

Efforts to support gender and inclusion have been an important part of the core DRM engagements.

to meet with and learn from other countries facing similar challenges, contributing to government's decision to update the urban planning code. Development partners frequently joined dissemination events for analytical studies and appreciated the World Bank's convening of discussion platforms such as its Climate Days. But in general policy dialogue and government engagement has not been joint, and there is little evidence of shared strategy or cross-learning between partners, who largely focus on implementing their own programs.

Gender and inclusion

52. **Efforts to support gender and inclusion have been an important part of the core DRM engagements.** GFDRR's support for the participatory approach for Saint-Louis resettlement included substantial efforts to incorporate gender and inclusion, including in the consultations for participatory urban design and as beneficiaries for livelihoods activities. Consultations specifically targeted the elderly, women, neighborhood heads, young people, and civic associations, and the project incorporated feedback it received from those groups. Efforts were made to ensure female participation in project works. Livelihoods restoration activities targeted and supported female run enterprises including in the fisheries value chain.
53. **Flood risk management projects also carried out extensive community engagement activities which played a key role in their success.** PROGEP and PROGEP2 implemented a model of a local committees for flood control ("COLIGEP") to ensure community participation in stormwater management, drainage operations and maintenance, and flood prevention. The committees received training and equipment under the projects and helped to facilitate community feedback, improve community acceptance of works, raise awareness on the need to avoid dumping and informal settlement in highly exposed areas, drains and water retention basins, manage assets around water retention basins, and facilitate some operations and maintenance activities. COLIGEP's were mandated to have women as at least 30% of decision-making roles, and for there to be gender balance in the presidents of the associations.



Senegal mangroves. Photo: mariusz_prusaczyk.

In Senegal, major floods in 2009 initiated the beginning of GFDRR and the World Bank's engagement on DRM, identifying opportunities for risk reduction investments.

4. Lessons

54. GFDRR's experience in Senegal offers a number of lessons that could be applied to other contexts.
55. **Disaster events have been a critical entry point for DRM interventions.** While analytics can highlight potential future risks, it has been disasters and their consequences that generate public demand and political will for action. In Senegal, major floods in 2009 initiated the beginning of GFDRR and the World Bank's engagement on DRM, identifying opportunities for risk reduction investments. Subsequent floods in 2011 raised the political visibility of the issue, and led to the government's request for a risk reduction project in 2012. Analytics in 2013 on risks to Saint-Louis and coastal areas from climate change and coastal flooding identified extreme risks, but it was after extensive flooding and coastal erosion in 2017–2018 the government requested an emergency response project. Flooding that damaged a substation in 2023 and led to significant power outages motivated a GFDRR funded engagement on disaster resilience in the power sector.
56. **GFDRR analytics and advisory services can contribute to development impacts at scale.** GFDRR funded analytics and technical assistance played a key role in motivating, designing, and implementing projects financed by the World Bank that have improved disaster resilience for hundreds of thousands of people. GFDRR resources were able to inform project investments of roughly 100 times as large.
57. **GFDRR can contribute to greater local involvement in development decisions.** In Senegal, GFDRR supported improved citizen engagement in government projects, bringing international experience to demonstrate and funding local piloting of more participatory approaches. More participatory approaches to drainage, preventive resettlement, and urban planning are improving the impact of interventions and how they are adapted to the needs of local people.
58. **Engagements on topics that are clear government priorities are more likely to be impactful, but World Bank engagement can influence how those topics are addressed, and present solutions that might be unknown locally.** In Senegal, most areas of DRM engagement were on topics that were high priorities for government's core economic development program, addressing urban flooding in the greater Dakar region, and maintaining jobs in the tourism sector. This contributed to the success of those interventions. Much less impact was achieved in areas that did not have

high-level government support, such as on disaster preparedness and response. GFDRR's demand-driven model meant that the resources were largely spent on country needs identified by the World Bank country team, which was largely aligned with government priorities. But the World Bank was also able to influence approaches taken and introduce innovation, including by raising awareness of decision makers on the need to incorporate disaster resilience into urban planning, alongside financing and constructing physical drainage interventions combined with NBS solutions.

59. **Grants not linked to existing or future potential lending opportunities were less effective than those that were clearly linked.** Lending operations are a signal of the government's and World Bank's priorities, they come with their own resources and platforms enable engagement by task teams, and they make it easier to support the government to act on the findings of analytical work. Absent those features, it is easy for studies to have little impact, as in the case of the rapid diagnostic on school infrastructure. However, upstream grants that informed government decisions and influenced priorities and requests for support were also potentially catalytic.
60. **It is possible to influence important policy reform through a variety of instruments, and a reliance on development policy financing can weaken policy traction.** In Senegal, it was possible to achieve the adoption of a revised urban code incorporating disaster resilience through investment project financing and related engagements. Projects piloted and demonstrated the feasibility of developing urban plans that included flood risk, and cross-country knowledge exchange opportunities motivated senior decisionmakers to support the reforms. In contrast, other reform efforts have been under discussion for more than a decade with little progress. DRM teams sought to use development policy financing instruments (which provide regular or contingent budget support) to support these reforms, but the combination of the COVID-19 pandemic, World Bank regional strategies to avoid use of standalone DRM policy lending operations, and macroeconomic issues have meant that these instruments could not be used for many years. This stalled the ability to get traction on critical policy reforms.
61. **Recipient-executed approaches do not guarantee sustained government interest and ownership.** One goal of adopting recipient-executed approaches is to try to increase government ownership of supported activities. However, this did not occur in Senegal, because changes in government and leadership meant that support that existed at the time the recipient-executed grant was initiated was no longer present by the time of its completion. It is difficult to mitigate the risks of changing government priorities and staffing turnover.



Sine Saloum, Senegal. Photo: kemaltaner.

62. Successful models achieve even greater impact by supporting within- and cross-country learning and opportunities for replication. Flood management projects in several countries are learning from the structural solutions, NBS, community engagement approach, and urban planning approaches developed under projects in Senegal. However, these effects were concentrated in the West Africa region, in part because similarities in contexts, but also because replication relied on informal knowledge sharing mechanisms within the World Bank's regional team which are more difficult to apply across regions. Undertaking participatory approaches to urban design and works in Saint-Louis improved the willingness and ability of a key government implementer to use these approaches, influencing how other projects they implement are conducted.

Annex 1: Portfolio details

Senegal grants from GFDRR

Grant name	Trustee	Grant dates	Disbursements (000s)	Undisbursed amount (000s)
Economic Analysis Coastal Adaptation	MDTF	2011-2013	\$150	\$0
(RETF) Disaster Risk Management and Climate Change Adaptation in Senegal	MDTF	2011-2015	\$1,100	\$0
(BETF Supervision) Disaster Risk Management and Climate Change Adaptation in Senegal	MDTF	2011-2015	\$140	\$0
Coastal climate change vulnerabilities assessment	MDTF	2016-2018	\$404	\$0
Saint-Louis, Senegal: Strengthening Urban and Coastal Resilience	ACP-EU	2019-2021	\$399	\$1
Strengthening disaster resilience in Senegal	Japan	2021-2024	\$500	\$0
Senegal vulnerability assessment	Japan	2023-2025	\$475	\$25
Supporting DRM Policy Dialogue in Senegal	MDTF	2022-	\$420	\$130
TOTAL			\$3,587	\$157

Note: this includes only country-specific grants and their funding.

Disbursements are as of March 2026

MDTF = the GFDRR Multi-Donor Trust Fund and its successors

ACP-EU = the Africa, Caribbean, and Pacific-European Union Disaster Risk Management Program

Japan = the Japan-World Bank Program for Mainstreaming Disaster Risk Management

Informed lending project	ProjectID	Project dates	World Bank project financing	Informed World Bank financing (\$000s)
Stormwater management and Climate Change Project (PROGEP)	P122841	2012-2020	\$92,800	\$92,800
Tourism and Enterprise Development Project	P146469	2017-2022	\$74,900	\$49,500
Saint-Louis Emergency Recovery and Resilience Project (SERRP)	P166538	2018-	\$77,550	\$77,550
Stormwater management and Climate Change Project 2 (PROGEP2)	P175830	2021-	\$172,400	\$172,400

Following GFDRR methodology, informed financing counts only the approved World Bank financing for project components or subcomponents substantially informed by GFDRR grants. This does not include grant-linked education and power sector projects that were not substantially informed, the transport project where the GFDRR support was relatively minor, or the pipeline policy lending operation that has not yet been approved.

Annex 2: Methods

This evaluation is based on a desk review of grant and project documentation, interviews with Bank staff and consultants, and a mission to Senegal in February 2026.

Specifically, the evaluation reviewed:

- › GFDRR grant project and completion reports
- › World Bank project documents including project appraisal documents, project supervision reports, implementation completion and results reports, and implementation completion and results report reviews.

Interviews were carried out with 23 Bank staff and consultants based at headquarters, country offices, or in Dakar. These included task team leaders of GFDRR grants, task team leaders or team members of projects supported by the grants, or consultants funded by GFDRR grants, as well as representatives of the World Bank country management unit.

The mission to Senegal carried out interviews with 18 government officials from 7 national government entities, representatives from 3 municipalities, as well as development partners and civil society members.



Petit Ngor Beach in Dakar. Photo: Mltz.



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