

PROPOSAL FOR FINAL CONSIDERATION

C137 - SENEGAL - Senegal Stormwater Management and Climate Change Adaptation Project 2 (PROGEP2)	
Partner Agency	The World Bank (WB)
Executing Agency	Municipal Development Agency (ADM)
Sector	Flood prevention/control CRS code 41050
Country	Senegal
Budget¹ - NDF - Partner Agency - Other Funders	TOTAL EUR 152.3 million (approx. USD 171.7 million) NDF grant EUR 7.1 million (approx. USD 8.0 million) WB (IDA) USD 155.0 million (approx. EUR 137.5 million) Government of Senegal USD 8.7 million (approx. EUR 7.7 million)
Project Period	2021 - 2026
Mode of Finance	EUR 7.0 million as parallel and EUR 0.1 million as joint co-finance
Previous Support to Country	Credits: EUR 14.4 million; SDR 36.9 million Grants: EUR 14.0 million
Rio Markers	Mitigation: 0 Adaptation: 2 (Principal)
Climate Screening Satisfied	Yes
RMF Outcome Alignment	Climate- and disaster-resilience and adaptability of cities, human settlements and infrastructure strengthened
Sustainable Development Goals	1. No poverty; 11. Sustainable Cities and communities; 13. Climate action
Gender Equality Policy Alignment	Yes
Environmental and Social Policy	Compliance: Yes; Risk Category: Substantial; Qualifications: Yes; Compliance Supervision: Yes
Processing Schedule	Pipeline - June 2021 Final - December 2021 Signature - January 2022 Effective - March 2022

¹ 1 EUR = 1.12757 USD rate on 22 November 2021

PROJECT SUMMARY

NDF grant EUR 7.1 million

Project Period: 2021–2026

Partner Agency: World Bank (WB)

Implementing Agency: Municipal Development Agency (ADM)

Objective

The development objective of the project is to reduce flood risks in peri-urban areas of Dakar and improve capacity to plan integrated urban flood risks management for selected cities in Senegal. The specific objectives are to:

- Enhance the capacity of the central and local governments to prepare and implement urban projects informed by climate-resilient urban plans, drainage master plans, and flood risk management plans in four areas of the Dakar region;
- Systematise and promote good practices for integrated urban climate resilience management through pilot studies and demonstration projects of innovative nature-based solutions;
- Augment climate-resilient sanitation approaches in the peri-urban settlements in terms of smart combinations of on-site sanitation and piped sewerage; and
- Promote measures for reducing the gender gap, involving the private sector and generating and disseminating knowledge.

The following outcomes are expected:

- Validate planning documents related to urban resilience and sustainability including climate change comprising the Urban Development Plan (PUD) accompanied by a Drainage Master Plan (PDD) and an integrated Flood Risk Management Plan (PGRI).
- The General Directorate of Town Planning and Architecture (DGUA) actively performs its role, including cooperation with ADM, in management of the project.
- Knowledge generated on the use of innovative and green flood control measures, integrated resilient urban development plans, and how these can contribute to reducing the gender gap.
- Implementation of the communication plan results in increased awareness, tools and use of opportunities for actions to increase climate resilience of people at local and central levels.
- Key stakeholders involved in climate change adaptation trained.
- Innovative peri-urban sanitation solutions like optimal combinations of on-site and piped systems embedded in investment projects.

Financing

The total project cost estimate is EUR 152.3 million. NDF is providing EUR 7.1 million as a grant while the WB and the Government of Senegal provides USD 155.0 million and USD 8.7 million respectively.

TABLE OF CONTENTS

1.	INTRODUCTION AND PROJECT BACKGROUND	1
2.	RELEVANCE AND RATIONALE.....	2
2.1.	Project general objectives and relevance.....	2
2.2.	Relevance to NDF Strategy 2025	3
2.3.	NDF added value.....	3
3.	THE PROPOSED PROJECT.....	4
3.1.	Specific objectives.....	4
3.2.	Project activities.....	4
3.3.	Cost estimates and financing plan.....	5
4.	IMPLEMENTATION ARRANGEMENTS.....	6
4.1.	Technical aspects.....	6
4.2.	Institutional aspects and project organisation.....	7
4.3.	Procurement and contract structure	7
5.	NDF RESULTS MANAGEMENT FRAMEWORK.....	7
6.	ENVIRONMENTAL, SOCIAL AND GENDER ASPECTS	8
6.1.	Environmental and social aspects	8
6.2.	Gender equality policy	8
6.3.	Monitoring and evaluation.....	9
7.	ECONOMIC JUSTIFICATION	9
8.	RISK ANALYSIS.....	10
9.	CONCLUSION	10
10.	RECOMMENDATION	10
	Annex 1 Results chain and monitoring framework	11
	Annex 2 Map of the project area targeted by NDF	13

ABBREVIATIONS

ADM	Municipal Development Agency (Agence de Développement Municipal)
AIDB	Blaise Diagne International Airport (Aéroport International Blaise-Diagne)
COLIGEP	Local Flood Management Committees
DGUA	General Directorate of Town Planning and Architecture
ESCP	Environmental and Social Commitment Plan
ESF	Environmental and Social Framework
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
GoS	Government of Senegal
GRM	Grievance and Redress Mechanism
IDA	International Development Association
M&E	Monitoring and Evaluation
NDC	Nationally Determined Contributions
NDF	Nordic Development Fund
ONAS	National Sanitation Office (Office National de l'Assainissement du Senegal)
O&M	Operation and Maintenance
PAD	Project Appraisal Document
PDD	Drainage Master Plan (Plan Directeur de Drainage)
PDGI	Flood Management Program (Programme de Gestion des Inondations)
PDO	Project Development Objective
PDU	Urban Master Plan (Plan Directeur d'Urbanisme)
PGRI	Flood Risk Management Plans (Plan de Gestion des Risques d'Inondation)
PROGEP	Storm-water Management and Climate Change Adaptation Project
PUD	Detailed Urban Plan (Plan d'Urbanisme de Detail)
RAP	Resettlement Action Plan
RMF	Results Monitoring Framework
RPF	Resettlement Policy Framework
SDG	Sustainable Development Goals
SEP	Stakeholder Engagement Plan
TA	Technical Assistance
UMDF	Urban and Municipal Development Fund for Africa
WB	World Bank

1. INTRODUCTION AND PROJECT BACKGROUND

Cities in Senegal, especially Dakar, are experiencing the impacts of a changing climate. Between 1980 and 2008, floods affected an estimated 400,000 to 600,000 people annually. Many lives were lost, families lost their homes and key infrastructure was damaged. In 2009, heavy rainfall once again caused serious flooding in Senegal, particularly in Dakar but also in the rest of the country. About 360,000 people were directly affected, and the cost of the 2009 flooding in Senegal was assessed at USD 104 million. The peri-urban areas of Dakar were the most affected, with damages exceeding USD 82 million.

In 2012, Senegal was again struck by catastrophic flooding, which marked a turning point that led to a 10-year Flood Management Program (PDGI 2012 – 2022) amounting to USD 1.4 billion. The PDGI was supported through the WB: *Senegal Stormwater Management and Climate Change Adaptation Project* (PROGEP1) with a USD 90.6 million IDA credit, an NDF grant of EUR 7 million, and Government of Senegal (GoS) contribution of USD 16.2 million. PROGEP1 was implemented from 2012 to 2021.

The outcomes of PROGEP1 are positive with direct flood protection to 167,000 people while another 1.3 million people benefitted indirectly.² More than 1,000 ha have been conserved and drained in Dakar peri-urban areas. A Drainage Master Plan was developed for the Dakar municipalities of Pikine and Guédiawaye. The built infrastructure consisted of primary and secondary canals, retention ponds, drained paved roads and pumping stations. Furthermore, 68 community investment projects were satisfactorily implemented. Other results include urban plans, flood risk management plans, stormwater management study, modelling and environmental monitoring, and policy studies. Moreover, collaboration between NDF, the Implementing Agency and the World Bank under the parallelly co-financed PROGEP1 has been excellent.

NDF's grant to PROGEP1 contributed to the following results:

- Climate-resilient urban plans, drainage master plans, flood risk management plans, disaster risk management and climate change action plans for the project area³ adopted;
- NDF-financed actions paved the way for new WB investments such as the Saint-Louis Emergency Recover and Resilience Project (WB USD 80 million), built on the NDF-supported comprehensive modelling and environmental monitoring of the coastal zone of Saint-Louis;
- Geographic Information System and Territorial Information System tools developed, integration of climate change into planning;
- NDF-financed studies and action plans contributed to Saint-Louis and Diamniadio embarked on the pathway of developing into sustainable cities; and
- Key stakeholders benefited from improved knowledge of flood prevention and climate change adaptation.

Despite notable achievements of PROGEP1 in reducing flooding in parts of greater Dakar, critical issues remain to comprehensively and sustainably address urban flooding. In September 2020, exceptionally heavy rainfall caused widespread flooding in cities across Senegal including Dakar, Saint-Louis, Kaolack, Kaffrine, Thies and Ziguinchor. More than 150,000 people were affected, people died and were injured, and more than 3,500 families lost their houses.

Confronted with increasingly frequent urban flooding due to a changing climate, the Government of Senegal has put the reduction of flood disaster risks high on its development agenda. A top priority of its Nationally Determined Contributions (NDC), with an estimated investment budget around USD 2 billion, flood management is leading to a major shift in policymaking in Senegal. As a result of this situation, Senegal has requested financing support to extend PROGEP1's integrated flood management approach to new sites in Dakar peri-urban at-risk areas, and for planning further interventions in the other regions such as Saint-Louis, Mbour and Thiès.

² WB's Implementation Completion and Results Report Nr 5030 for PROGEP1 (draft), p. 18 and 26

³ Pikine, Guediawaye, the Diamniadio Urban Pole and the Greater Saint-Louis area.

One issue of particular concern is how to handle increased household wastewater and rainwater. This represents not only a health problem, but also threatens biodiversity and ecosystem services. Nature-based and on-site ecological sanitation solutions could be more cost-effective compared to traditional piped and treatment systems. This solution is being considered for the Mbaou watershed, but the detailed studies are yet to be prepared.

PROGEP2 was approved by the WB Board on 28 May 2021 through the Bank's Urgent Need procedure. Its development objective is to reduce flood risks in peri-urban areas of Dakar and improve capacity to plan integrated urban flood risks management for selected cities in Senegal. The total budget is EUR 152 million (WB, NDF and GoS) and includes the following components:

- A) Integrated urban planning and management accounting for climate risk and sustainability;
- B) Drainage investment and management, community engagement, environmental and social management;
- C) Contingent emergency response; and
- D) Project management

An NDF grant of EUR 7.1 million is proposed to support activities under components A, B and D, under a parallel co-financing modality and using the same institutional arrangement that worked well under PROGEP1. NDF financing targets selected areas in peri-urban Dakar that are shown in the map in Annex 2, in addition to providing capacity-building support that will benefit the entire country.

Over the past months, NDF and the Government of Senegal have been discussing an issue related to the pending reimbursement of taxes by the Government of Senegal to companies contracted with NDF-financing under PROGEP1. This issue has now been agreed upon with the Government of Senegal. The NDF grant will focus on financing climate change adaptation activities and will not cover any kind of taxes.

2. RELEVANCE AND RATIONALE

2.1. Project general objectives and relevance

The project's overall aim to reduce flood risks in peri-urban areas of greater Dakar and improve the capacity to integrate flood risks and climate resilience actions in urban development planning, notably through nature-based solutions and green infrastructure measures, is highly relevant for the country's high-level objectives. It is also in alignment with the country's national development plan, the Plan Sénégal Emergent, which identifies climate change impacts and the need to develop sustainable solutions for the challenges of floods, coastal erosion, and salinisation. PROGEP2 has a strong linkage with the broader urban, regional, and territorial planning aspects, the lack of basic infrastructure systems, and the impact of increased climate variability. It also aligns well with the principles for locally led adaptation actions that were endorsed at the UN climate change conference (COP26) in Glasgow in 2021.

Climate shocks are also linked to poverty levels and are further exacerbating gender inequality. According to a WB Policy Paper⁴ on poverty dynamics in Senegal, households affected by a natural disaster were 25 percent more likely to fall into poverty during 2006–2011, and surveys conducted in affected areas following the 2009 floods showed that households lost 14 percent of their average income. Despite the efforts that the Government has made to advance the national agenda for gender equality, gender inequalities persist in Senegal, which is ranked 125 out of 189 countries in the 2020 Gender Inequality Index. Women lack access to basic services, and infrastructure is not designed to respond to their needs.

⁴ "Dang, Hai-Anh H.; Lanjouw, Peter F.; Swinkels, Rob. 2014. Who Remained in Poverty, Who Moved Up, and Who Fell Down? An Investigation of Poverty Dynamics in Senegal in the Late 2000s. Policy Research Working Paper

2.2. Relevance to NDF Strategy 2025

The proposed project is well-aligned with the NDF Strategy 2025. The focus is on adaptation and resilience-building in Africa. The project will contribute directly to NDF targets on poverty, climate, and geographical focus.

This is a demand-based **adaptation and resilience** project targeting poor and vulnerable urban areas in Dakar, with potential indirect mitigation co-benefits relating to the smart green city activities. The project will save lives and assets of poor households in addition to co-benefits relating to health and improved urban sanitation.

The project is in line with the NDF strategic pathway **to advance Nordic leadership**. Several Nordic cities including Lappeenranta and Copenhagen are prime examples of storm water management through nature-based solutions, which may be relevant for the project. Nordic companies have strong expertise, for example, in integrated urban planning. Several Nordic companies were shortlisted under PROGEP1, and one Nordic company won a long-term TA contract and contributed to diagnostic studies, climate-resilient urban planning, and the preparation of a sustainable city strategy for Diamniadio. The project complements Nordic development cooperation in the region, which focuses, among others, on building resilience to climate change in the Sahel. Finland has recently opened an embassy in Dakar, which presents an opportunity to promote collaboration during implementation.

NDF will **provide catalytic financing** that will promote the concept of sustainable and resilient cities. The support will cover not only the project area in Dakar, but successful elements can be scaled up and applied in relevant contexts in other cities and countries. A concrete result can be showcased from PROGEP1: NDF's financing paved the way for a new WB investment worth USD 80 million in Saint-Louis. It is expected that the NDF activities proposed for PROGEP2 will catalyse financing in particular for future resilient public sector urban investments, and the studies and pilot projects will explore opportunities for private sector engagement. NDF's support will also generate knowledge and experience on innovative solutions for climate adaptation that will be disseminated through various platforms, projects and initiatives to promote scaling-up and replication, as mentioned further in section 2.3.

The proposed NDF support to climate-resilient urban planning aligns with the strategic pathway to **develop early-stage design and structures**. NDF funding will have an impact on how urban space in Senegal will be built and contribute to sustainable urbanisation in the country. Not only is NDF asked to finance climate-resilient urban planning, which will directly guide urban investments, but NDF is also asked to support institutional capacity-building, expected to have an impact long after the project has been completed. The focus of NDF's support will be on the national General Directorate of Town Planning and Architecture (DGUA), which through an institutional change will be responsible for developing and implementing urban development policy, forecasting, and the development of cities and territorial management.

The principal objective is climate change adaptation (Rio marker CRS code 41050). NDF's financing will contribute to several SDGs: 1. No poverty, 3. Good Health and Well-being, 5. Gender equality, 8. Decent work and economic growth, 11. Sustainable cities and communities, 13. Climate action, 15. Life on land, and 17. Partnerships for the goals.

2.3. NDF added value

NDF has actively participated in the project design of PROGEP2 in collaboration with the WB and stakeholders in Senegal. NDF added value goes beyond the financing, as it will also be contributing to knowledge generation and dissemination. This will be achieved through NDF's direct support to the component on Promoting Good Practices for Integrated Urban Management, including Resilience and Sustainability, and indirectly, through NDF's strong experience from similar projects in other countries. NDF will continue to actively seek to facilitate south-south learning with other NDF initiatives such as the West Africa Coastal Areas Resilience Program (WACA), the Kigali Flood Control and Urban and Integrated Urban Catchment Management project, and the Urban and Municipal Development Fund (UMDF) for Africa. NDF will also explore the possibility of having urban

representatives from Senegal participate in a workshop with Nordic cities planned by the UMDP for 2022.

3. THE PROPOSED PROJECT

3.1. Specific objectives

The development objective of the project is to reduce flood risks in peri-urban areas of Dakar and improve capacity to plan integrated urban flood risks management for selected cities in Senegal.

The specific objectives are to:

- Enhance the capacity of the central and local governments to prepare and implement urban projects informed by climate-resilient urban plans, drainage master plans, and flood risk management plans in four areas of the Dakar region;
- Systematise and promote good practices for integrated urban climate resilience management through pilot studies and demonstration projects of innovative nature-based solutions;
- Augment climate-resilient sanitation approaches in the peri-urban settlements in terms of smart combinations of on-site sanitation and piped sewerage; and
- Promote measures for reducing the gender gap, involving private sector, and the generating and disseminating knowledge and lessons learned.

3.2. Project activities

The proposed NDF components have been developed and aligned with the WB parent project interventions and other relevant projects in a consultative way during the appraisal meeting and follow-up consultations. The proposed components and sub-components of the NDF funding is summarised below. The NDF activities are proposed to be co-financed as a parallel project with a limited number of consultancy contracts described below.

1) Integrated urban planning and management (EUR 3.2 million)

NDF will finance the preparation of plans to better protect the local population, assets and infrastructure from the worsening effects of climate change, notably increased flood risk across five water basins, targeting four poor and vulnerable areas of Dakar: (i) Kayar-Bayakh-Keur Matar Gaye, (ii) Ndayane-Toubab Dialao, (iii) Saly Portudal-Somone-Ngaparou-Nguérine-Malicounda, and (iv) the area north of the Thiès-AIBD highway (see map in Annex 2 below). The plans will include Urban Development Plans (PUD), which will be accompanied by a Drainage Master Plan (PDD) and an Integrated Flood Risk Management Plan (PGRI). These plans will inform the storm water system investments to be funded by the WB under PROGEP2, as well as other future investments anticipated to be financed by Senegal and its development partners. Early implementation of these planning studies will reduce the time needed for launching the forthcoming drainage investments.

It is also the intention that the new planning approaches shall contribute to closing the gender gap. This goal can be reached by including planning elements and obligations that recognise the role of women in urban planning and development, and by concrete actions that will ensure their participation at all community levels. Therefore, the plans will include recommendations and required steps attributed to closing the gender gap as part of the implementation of the urban plans.

Under this activity, NDF will also support capacity-building of the national General Directorate of Town Planning and Architecture (DGUA), with a strong focus on storm water management and flood protection in urban planning. Emphasis will be on practical 'on the job' training of DGUA staff and strengthening institutional systems to enhance sustainability. The planning will enable smart and green city development and help cities adapt to climate change and build resilience.

2) Promoting good practices for integrated urban management, including resilience and sustainability (EUR 2.6 million)

NDF will finance studies in the project area (including Lake Thiourour, the backwater of Mbao wetlands, Mbao forest and other project areas) as well as pilot projects (for example, ponds/dams,

tree planting, urban horticulture, ecoparks, etc.) for climate-friendly and inclusive development of green and open areas. Opportunities for private sector engagement in the pilots will be explored. Once implemented, the pilots will be evaluated to promote upscaling opportunities and feasible solutions that can be integrated in future investments. The component will also generate knowledge products, thematic tools and provide training related to climate change and building resilience. The experience will be disseminated through the communication plan.

The studies and the training will enhance capacity to develop and deliver urban adaptation investments in the project area and at scale across cities in Senegal and elsewhere in West Africa. This activity is also expected to be inspired by lessons learned from the private sector component under the NDF-financed Kigali Flood Control and Urban and Integrated Urban Catchment Management project in Rwanda.

3) Drainage infrastructure construction and flood management (EUR 1.0 million)

NDF will finance a feasibility study for inclusive and cost-effective sanitation and sewerage solutions in the Mbao and Keur Massar catchment areas that can deliver the services needed for public health in the face of growing demand and climate extremes. The study will pay particular attention to climate risks, while addressing poverty issues, identifying opportunities for gender equality and promoting private sector engagement. The study will be undertaken in close cooperation with the National Office of Sanitation of Senegal (ONAS). The recommended solutions and designs will serve as a basis for WB priority investments under PROGEP2.

4) Project management and evaluation (EUR 0.3 million)

Overall project management will be supported by WB-financed technical and fiduciary experts within the Municipal Development Agency (ADM). NDF financing will support data collection, monitoring and evaluation of project activities and outcomes (including gender disaggregated data) to inform NDF's results management framework. This support will be provided in an integrated manner jointly with training and experience sharing, based on a thorough beneficiary and institutional capacity needs assessment.

NDF will provide EUR 100,000 as joint co-financing for the WB's technical implementation support to the NDF activities. This support will capitalise on the WB's country presence and focus on mutually agreed technical areas that may need specific on-the-ground WB support to address operational bottlenecks and risks that may arise during implementation and hamper efforts to reach the results of the project.

3.3. Cost estimates and financing plan

The provisional budget for the NDF-funded components is shown in Table 1.

Table 1 Preliminary budget for NDF funded components

Activities	EUR
1) <i>Integrated urban planning and management that takes into account climate risks and the sustainability of cities</i>	
1.1 Development of resilient urban plans (PUD, PDD, PGRI of Ndayane-Toubab Dialao Port)	590 000
1.2 Development of resilient urban plans (PUD, PGRI, PDD) for the area Saly Portudal-Somone-Ngaparou-Nguérine-Malicounda	590 000
1.3 Development of resilient urban plans (PUD, PGRI, PDD) for the area north of the Thiès-AIBD highway	590 000
1.4 Development of resilient urban plans (PUD, PGRI, PDD) for the area of Kayar-Bayakh-Keur Matar Gaye	590 000
1.5 Technical assistance (TA) to DGUA	840 000
Subtotal	3 200 000

Activities	EUR
2) Promoting good practices for integrated urban management, including resilience and sustainability	
2.1 Pilot projects and demo studies (including environmental and social impact studies): Lake Thiourour, Mbao marigot, Mbao forest and other areas	860 000
2.2 Development and implementation of the project's communication plan (including the ADM web page)	400 000
2.3 Development and implementation of the training plan for project stakeholders	920 000
2.4 Peer-to-peer learning, study tours	270 000
2.5 Experience capitalisation	150 000
Subtotal	2 600 000
3) Drainage infrastructure construction and flood management	
3.1 Mbao and Keur Massar wastewater system studies	1 000 000
Subtotal	1 000 000
4) Project management monitoring and evaluation	
4.1 Support for data collection, monitoring and evaluating project activities and outcomes including gender data	200 000
4.2 Technical implementation support from WB to NDF activities	100 000
Subtotal	300 000
TOTAL	7 100 000

The total cost is EUR 7.1 million to be fully financed by the NDF grant. EUR 7.0 million will be provided as parallel financing, governed by a grant agreement between NDF and the GoS. EUR 0.1 million will be provided as joint financing and will be added to the work plan governed by the agreement between NDF and the WB.

4. IMPLEMENTATION ARRANGEMENTS

4.1. Technical aspects

The selection and design of the NDF components has been based on a participatory approach. There have been thorough discussions with authorities, stakeholders, and other partners during and after the virtual WB/ADM/NDF appraisal meeting mission in March-April 2021. The key stakeholders include sectoral ministries involved in stormwater management, such as the ministries in charge of urban planning, interior, decentralisation, housing, water, urban sanitation and environment. The stakeholders also include municipalities, as well as civil society and community-based organisations in the intervention areas.

During and after the mission, NDF discussed with partners, the contents and synergies between the different sub-components and activities to ensure alignment and coherent expectations and impacts. The NDF scoping report presents some preliminary activities, outputs, and outcomes of the NDF components. The scope and detailed activities have been used as input in the Terms of References to be finalised by ADM for the procurement documents and implementation contracts. NDF with WB assistance will conduct prior review and provide no objections to all procurement.

The NDF activities are thus already well developed and ready for implementation. Advance procurement and expediting the preparation and negotiation of the draft financing could speed up implementation.

4.2. Institutional aspects and project organisation

The Municipal Development Agency (ADM) served as the Implementing Agency of PROGEP1, with reinforced capacity through WB-financed experts. This structure worked well and will continue in PROGEP2, with a reinforcement of skills required for PROGEP2.

ADM has shown satisfactory performance to date in implementing disaster risk reduction and urban development projects with large infrastructure investments and resettlement activities, including PROGEP1, and is familiar and experienced with the WB and NDF policies and procedures. ADM will work in close coordination with the beneficiary municipalities and the other relevant ministries and agencies involved.

4.3. Procurement and contract structure

The procurement activities and quality assurance of the PROGEP contracts, including the NDF-financed activities, are handled by ADM, and will be performed in accordance with NDF's requirements and guidance. ADM has strong technical and fiduciary experience in managing similar projects and will also benefit from lessons learned from PROGEP1.

The contracts need to be large enough to attract international bidders and at the same time be well focused in terms of scope coherence and qualification requirements and well suited for efficient bidding procedures, monitoring, and quality control. Table 2 gives a provisional thematic grouping in possible contract packages of the procurement.

Table 2: Provisional packaging or contracts under NDF's parallel financing

Contract Packages	Amount (EUR)
Package 1: Consultancy development of resilient urban plans	2 360 000
Package 2: Consultancy technical assistance and capacity-building of DGUA	840 000
Package 3: Consultancy for studying and promoting innovative urban green areas and wastewater systems	400 000
Package 4: Consultancy on wastewater systems	1 000 000
Package 5: Consultancy for communication plan development and implementation	400 000
Package 6: Consultancy for capacity-building, training and knowledge transfer, experience capitalisation, study tour and peer to peer learning, and monitoring and evaluation of project activities and outcomes including gender data	1 540 000
Package 7: Equipment and works for resilient and sustainable green areas	460 000
Total	7 000 000

Advanced procurement is recommended and will contribute to ensuring timely delivery of the NDF-financed services and supplies. The preliminary Terms of References for Packages 1, 2, and 3 have been prepared by ADM with input from local experts from relevant stakeholder institutions in Senegal and from the WB's Specialist in Resilient Urban Infrastructure.

5. NDF RESULTS MANAGEMENT FRAMEWORK

The proposed NDF support will deliver on the RMF immediate outcome: Climate- and disaster-resilience and adaptability of cities, human settlements, and infrastructure strengthened.

The outcome is expected to contribute to RMF end of project outcomes (short-term impacts):

- Improved socio-economic conditions of individuals, especially women and girls, vulnerable to climate change;
- Reduced vulnerability of individuals, especially women and girls, to climate-related shocks/hazards.

The RMF outputs that the project will deliver include:

- Cities and human settlements equipped with solutions for increasing climate- and disaster-resilience and adaptability;

- Climate- and disaster-resilient infrastructure assets and services established and/or improved;
- Increased capacities, improved skills and raised awareness.

The NDF-financing support M&E with special focus on safeguarding components reflecting NDF priority values, such as gender equality. The NDF activities are embedded in the overall Result Management Framework for PROGEP2, and this will facilitate coherent performance monitoring, reporting and supervision. Annex 1 contains a more detailed description of PROGEP2's result chain and the monitoring framework for the NDF activities.

6. ENVIRONMENTAL, SOCIAL AND GENDER ASPECTS

6.1. Environmental and social aspects

The project will support poverty reduction goals by reducing losses of public and private assets amongst the poorest population (men and women) living in peri-urban areas. The key cross-cutting issues include climate change resilience-building and gender concerns. Women and children are included among the primary beneficiaries since they often become exposed to flooding followed by permanent high levels of stagnant moisture in their homes and polluted water.

The project is being implemented under the WB Environmental and Social Framework (ESF) and thus fully aligns with NDF's Environmental and Social Policy. The proposed project is rated Substantial for environmental risks and Substantial for social risks. This risk rating reflects the low capacity of the implementing agencies (ADM and the technical agency ONAS with a lesser role related to O&M), other stakeholders involved in working with WB ESF, the nature of the proposed activities (some of which are still unknown), and scale in the overall project, in addition to the context (peri-urban setting).

Environmental and social management will be addressed by one of the WB funded sub-components under Component 2. It will finance the elaboration of the safeguards framework instruments by the Implementing Agency that constitute reference documents for environmental and social management throughout the project. This includes an Environmental and Social Management Framework (ESMF), a Resettlement Policy Framework (RPF), a Stakeholder Engagement Plan (SEP), a grievance and redress mechanism (GRM), and an Environmental and Social Commitment Plan (ESCP). In addition, Environmental and Social Impact Assessments (ESIAs) will be prepared capturing all activities initiated within the project (as well as NDF co-financed activities) including all mitigation measures necessary before and during construction work.

The NDF-financed pilot studies for the development of open space in the project area (Lake Thiourour, Mbao wetland, Mbao forest and other project areas) will include the identification of suitable investments, partnership arrangements, opportunities for financial mobilisation and operations for climate change adaptation measures and investments. Suitable places for pilot projects will be identified within the catchment of the lakes/wetland through analysis of the sites. The appropriate solutions will be selected from a long list of resilience-strengthening measures assessment (including assessment of social and environmental impacts. The contents of these works will depend on the selected appropriate solutions to be demonstrated (for example, ponds/dams, tree planting, urban horticulture, ecoparks, etc). The results will be evaluated (from the perspective of environmental, social, gender equality, flood control, livelihood, private sector opportunities, etc.) and concluded in terms of upscaling opportunities and feasible solutions that can be integrated in future investments.

WB will finance the elaboration of the safeguards instruments. NDF and WB have agreed to ensure that the ESIAs and site-specific instruments to be prepared will capture all activities regardless of funding source (WB or NDF), and that NDF activities can be included in the GRM. NDF and WB will continue to collaborate closely to minimise social and environmental risks relating to PROGEP2.

6.2. Gender equality policy

The gender aspects that were highly focused in PROGEP1 will be further upscaled in PROGEP2 by the WB and NDF in line with NDF's Gender Equality Policy and the Bank's upgraded gender strategy.

The WB has conducted a gender gap analysis for PROGEP2 and activities to improve gender equality are planned in all components.

The WB's Project Appraisal Document (PAD) of PROGEP2 has embedded gender considerations in its result chain by addressing gender gaps identified in the project context and monitoring them through dedicated indicators. The gender gap issues will be addressed in WB-funded interventions by enhancing women's access to income opportunities; that is, ensuring women's labour participation and safeguarding their inclusion in labour-intensive public works. Female voice and action will be supported in urban planning and flood risk management by granting leadership roles to women in the local flood management committees⁵ (COLIGEP).

Gender equality challenges will also be duly embedded in all NDF components related to planning, knowledge generation, capacity-building, and studies involving good practices and climate adaptation opportunities. The challenges to be addressed will comprise (i) women's representation in decision-making especially in urban planning and flood risk management; (ii) gender equality requirements clearly embedded in the Urban Development Plans (PUD), Drainage Master Plans (PDD), and the Flood Risk Management Plans (PGR1); (iii) good practice and knowledge platform shall include arrangements for closing the gender gap, (iv) capacity-building and training in good practices on flood risk management including study tours shall ensure appropriate female participation; and (v) NDF support will involve project implementation monitoring and evaluation with focus on performance related to gender.

6.3. Monitoring and evaluation

ADM's monitoring and evaluation (M&E) arrangement for the PROGEP1 worked well and the new project will be based on an updated version of the M&E system. The NDF components are integrated in the WB's result-based management structure for PROGEP2; hence the M&E arrangements of the parent project will apply for the NDF activities. There will be an M&E Expert reporting on progress simultaneously for the WB-financed and NDF-financed activities.

NDF's financing includes a budget line earmarked for monitoring and evaluation and knowledge products, including monitoring/progress reports, mid-term evaluation, final evaluation/ex-post evaluation, and impact studies. The good collaboration between NDF and the WB during PROGEP1 of jointly planning and implementing supervision missions, the mid-term review, and review of the implementation and results upon completion of the project are expected to continue during PROGEP2.

7. ECONOMIC JUSTIFICATION

The project will scale up the protection of some 120,000 peri-urban residents in densely populated targeted areas from recurrent floods and storm surges that have caused serious economic and human losses in the past and deteriorated the livelihoods of poor people. The rapid urbanisation and increasing climate change impacts will escalate the climate vulnerability of populations, particularly the urban poor. PROGEP2 is aimed to scale up PROGEP1's interventions by supporting climate-resilient urban planning, management, and development in several peri-urban communities in the Dakar region. Likewise, the financing will address financial and economic shortcomings hampering effective urban development and promote improvement measures.

The WB has carried out an economic assessment and cost-benefit analysis of the proposed interventions. The project was found to be viable, and benefits outweigh the costs. Under all three scenarios: pessimistic, base case and optimistic, the project was more sensitive to a decrease in benefits than to an increase in costs under the viable scenarios.

⁵ Many local flood management committees were established under PROGEP1 and new ones will be established under the new project.

8. RISK ANALYSIS

The identified risks and mitigation measures are summarised in Table 3.

Table 3 Assessment of risk and mitigation measures

Risk	Category	Mitigation measure
Risk of delays caused, for example, by the COVID-19 pandemic.	High	COVID-19 remains a risk. NDF and WB will monitor implementation closely and apply necessary COVID-19 procedures.
Implementation capacity risk as activities in multiple sectors are to be implemented in and around sensitive ecosystems by different stakeholders with insufficient capacity.	High	The project will undertake a capacity risk assessment to target and fine-tune capacity-building activities. A fundamental pillar in the project will be the capacity development activities.
Environmental and social risks as the project will intervene in a series of high value ecosystems.	Medium	The WB safeguards framework will apply, and all the applicable instruments will be deployed to mitigate risks and impacts. NDF-finances activities, which will improve stakeholders' ability to plan and design resilient activities in sensitive areas.

9. CONCLUSION

The proposed project is well-aligned with the NDF Strategy 2025. The focus is on adaptation and resilience-building in Africa. The project will contribute directly to NDF targets on poverty, climate, and geographical focus. The gender equality challenges will be addressed in all proposed activities.

The proposed NDF activities are fully integrated into the WB-financed activities and well-aligned with other climate-resilient initiatives in Senegal.

10. RECOMMENDATION

The Board approved grant financing of up to EUR 7.1 million to the C137 SENEGAL STORMWATER MANAGEMENT AND CLIMATE CHANGE ADAPTATION PROJECT (PROGEP2).

Helsinki, 14 December 2021



Karin Isaksson

Managing Director

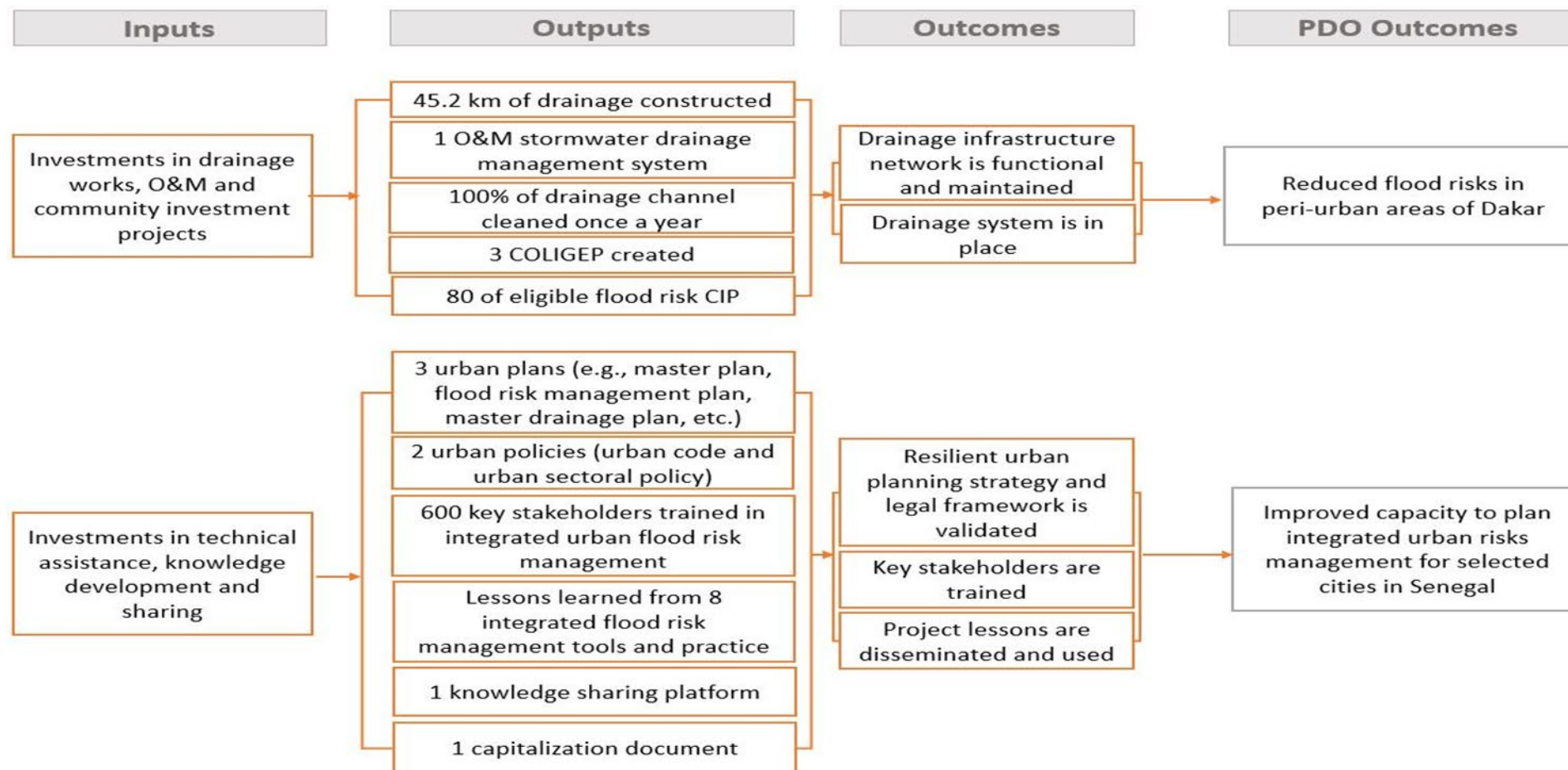


Martina Jägerhorn

Program Manager

Annex 1 Results chain and monitoring framework

PROGEP2 results chain



Notes:

CIP = Community Investment Program

COLIGEP = Local Committees for Flood Control

O&M = Operation and Maintenance

The PROGEP2 result chain is from the World Bank's Project Appraisal Document (PAD)

Monitoring framework

Indicator	BASELINE	END TARGET	DATA SOURCE
1. PROJECT DEVELOPMENT OBJECTIVE INDICATORS FOR PROGEP2			
1.1 Reduced flood risk in peri-urban Dakar			
1.1.1 Area protected (ha)	0	826	Field visit, Progress reports
1.1.2 Number of direct beneficiaries (50% of which are female)	0	120,000	Progress reports, survey reports
1.2 Improved capacity to plan integrated urban flood risk management			
1.2.1 Number of beneficiaries living in areas with improved capacity (50% female)	0	42,000	Progress reports
2. IMMEDIATE RESULTS INDICATORS FOR THE NDF ACTIVITIES			
2.1 Improved capacity to plan integrated urban flood risk management			
2.1.1 Number of institutional actors who have adopted planning tool for integrated flood risk management	0	200	List of participants in the planning process, survey based on an interview guide
2.1.2 Authorised allotments in line with updated urban plans (%)	0	80%	List of authorised allotments
2.2 Integrated Urban Planning and Management that Considers Climate Risks and the Sustainability of Cities			
2.2.1 Number of resilient urban plans (urban master plans, flood risk management plan, drainage master plan, master sanitation plan, detailed urban plan) validated	0	At least 3	Progress reports, validated planning reports
2.2.2 Number of women consulted, involved in the development of the plans, and involved in the capacity-building activities	0	300	Progress reports, meeting reports, list of participants, survey reports
2.3 Promoting Good Practices for Integrated Urban Management Including Enhanced Resilience and Sustainability			
2.3.1 Number of studies prepared for the development of pilots for the space around Lake Thiourour, backwater of Mbao wetland, Mbao forest and other project areas	0	At least 3	Progress reports, planning reports, review and evaluation report, field reports
2.3.2 Number of knowledge and lessons learned documents developed and disseminated in accordance with a communication plan	0	8	Progress reports, workshop reports, field visit and study tours reports
2.3.3 Number of individuals with increased capacities, improved skills and/or raised awareness in sustainable city planning, integrated urban management, flood mgmt. and climate change resilience (% of which are women).	0	80,000	Progress reports, training modules, training reports, surveys, progress, and evaluation reports
2.4 Construction and Management of Drainage Infrastructure			
2.4.1 Catchment management studies for Mbao and Keur Massar prepared and validated	No	Yes	Progress report, study and design report

Annex 2 Map of the project area targeted by NDF

The map highlights the four rapidly urbanising peri-areas of Dakar, for which NDF's financing for climate-resilient urban plans, drainage master plans and flood risk management plans are proposed, including:

- (i) Kayar-Bayakh-Keur Matar Gaye (light green);
- (ii) Ndayane-Toubab Dialao (blue),
- (iii) Saly Portudal-Somone-Ngaparou-Nguérine-Malicounda (yellow), and
- (iv) Area north of the Thiès-AIBD highway (grey).

The map also shows two of the target areas for NDF's studies and pilots for the promotion of good practices for resilient and sustainable integrated urban management: lake Thiourour (dark blue) and Mbao forest (dark green)

