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Report No: PAD3377

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED GRANT

IN THE AMOUNT OF

SDR 31.9 MILLION (US\$44 MILLION EQUIVALENT)

OF WHICH

US\$14 MILLION IS FROM THE IDA18 REFUGEE SUB-WINDOW

TO THE

ISLAMIC REPUBLIC OF MAURITANIA

FOR THE

WATER AND SANITATION SECTORAL PROJECT

March 9, 2020

Water Global Practice Africa Region

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CURRENCY EQUIVALENTS

Exchange Rate Effective December 31, 2019

Currency unit = Mauritanian Ouguiya (MRU) MRU 1 = US\$0.026 US\$1 = SDR 0.723

> FISCAL YEAR January 1 - December 31

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ABBREVIATIONS AND ACRONYMS

ACF	Action Against Hunger (Action Contre la Faim)			
AEP	Small-scale Water Systems (Alimentation en Eau Potable)			
AFD	French Development Agency (Agence Française de Développement)			
AfDB	African Development Bank			
ANEPA	National Potable Water and Sanitation Agency (Agence Nationale de l'Eau Potable			
	et de l'Assainissement)			
ARE	Multisector Regulatory Authority (Autorité de Régulation)			
СВА	Cost-benefit Analysis			
CERC	Contingency Emergency Response Component			
CLTS	Community-led Total Sanitation			
CNCR	National Consultative Commission on Refugees (Commission Nationale			
	Consultative pour les Réfugiés)			
CNRE	National Water Resources Center (Centre National des Ressources en Eau)			
CPF	Country Partnership Framework			
DA	Directorate of Sanitation (Direction de l'Assainissement)			
DH	Directorate of Hydraulics (Direction de l'Hydraulique)			
DRHA	Regional Directorate (Direction Régionale de l'Eau et de l'Assainissement)			
DSP	Delegation of Public Service (Délégation de Service Public)			
EIRR	Economic Internal Rate of Return			
ESCP	Environmental and Social Commitment Plan			
ESIA	Environmental and Social Impact Assessment			
ESMF	Environmental and Social Management Framework			
ESMP	Environmental and Social Management Plan			
ESS	Environmental and Social Standards			
FADES	Arab Fund for Economic and Social Development (Fonds Arabe pour le			
	Développement Economique et Social)			
FIRR	Financial Internal Rate of Return			
FM	Financial Management			
FSM	Fecal Sludge Management			
GBV	Gender-based Violence			
GDP	Gross Domestic Product			
GHG	Greenhouse Gas			
GoM	Government of Mauritania			
GRM	Grievance Redress Mechanism			
НСІ	Human Capital Index			
IDA	International Development Association			
ILO	International Labor Organization			
IMF	International Monetary Fund			
IPF	Investment Project Financing			
LMP	Labor Management Plan			
M&E	Monitoring and Evaluation			
MHA	Ministry of Water and Sanitation (Ministère de l'Hydraulique et de			
	l'Assainissement)			
MIC	Middle-income Country			
-				

MoU	Memorandum of Understanding
MRU	Mauritanian Ouguiya
N/A	Not Applicable
NGO	Non-governmental Organization
NSO	National Statistical Office
NPV	Net Present Value
NRW	Non-Revenue Water
0&M	Operation and Maintenance
ONSER	National Rural Water Agency (Office National des Services d'Eau en Milieu Rural)
OP	Operational Policy
PDO	Project Development Objective
PER	Public Expenditure Review
PIM	Project Implementation Manual
PIU	Project Implementation Unit
PGIRE	Integrated Water Resource Management Project (Projet de Gestion Integrée des
	Ressources en Eau)
РРР	Public-private Partnership
PSP	Private Sector Participation
RAP	Resettlement Action Plan
RSW	Refugee Sub Window
SCAPP	Strategy for Accelerated Growth and Shared Prosperity (Stratégie de Croissance
	Accélérée et de Prospérité Partagée)
SDG	Sustainable Development Goals
SDR	Special Drawing Rights
SEP	Stakeholder Engagement Plan
SNA	National Sanitation Strategy (Stratégie Nationale de l'Assainissement)
SNADEA	National Strategy for Sustainable Access to Water and Sanitation (Stratégie
	Nationale pour un Accès Durable à l'Eau et à l'Assainissement)
SNDE	National Water Corporation (Société Nationale de Distribution d'Eau)
SNFP	National Drilling Corporation (Société Nationale des Forages et Puits)
SORT	Systematic Operations Risk- Rating Tool
SSA	Sub-Saharan Africa
ТА	Technical Assistance
UN	United Nations
UNFPA	United Nations Fund for Population Activities
UNHCR	United Nations High Commissioner for Refugees
UNICEE	United Nations Children's Fund
VIP	Ventilated Improved Pit
WASH	Water Sanitation and Hygiene
WBG	World Bank Group
WHO	World Health Organization
WRM	Water Resources Management
	Water Nesources Wanagement
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BASIC INFORMATION				
Country(ies)	ry(ies) Project Name			
Mauritania	Water and Sanitation Sectoral Project			
Project ID	Financing Instrument	Environmental and Social Risk Classification		
P167328	Investment Project Financing	High		

Financing & Implementation Modalities

[] Multiphase Programmatic Approach (MPA)	$[\checkmark]$ Contingent Emergency Response Component (CERC)
[] Series of Projects (SOP)	[] Fragile State(s)
[] Disbursement-linked Indicators (DLIs)	[] Small State(s)
[] Financial Intermediaries (FI)	$[\checkmark]$ Fragile within a non-fragile Country
[] Project-Based Guarantee	[] Conflict
[] Deferred Drawdown	[] Responding to Natural or Man-made Disaster

[] Alternate Procurement Arrangements (APA)

Expected Approval Date

Expected Closing Date

30-Mar-2020

30-Nov-2025

Bank/IFC Collaboration

No

Proposed Development Objective(s)

To increase access to improved water and sanitation services in selected rural areas and small towns, and to strengthen the performance of sector institutions.

Components

Component Name

Cost (US\$, millions)



Component 1: Improvement of access to drinking water and sanitation in Gorgol, Guidimakha and Assaba	22.50
Component 2: Improving sustainable access to safe water and sanitation for refugees and host communities in Hodh Echargui and Hodh El Gharbi	12.70
Component 3: Institutional Support, Capacity Building and Project Management	13.80
Component 4: Contingency Emergency Response Component	0.00

Organizations

Borrower:	ISLAMIC REPUBLIC OF MAURITANIA
Implementing Agency:	Ministère de l'Hydraulique et de l'Assainissement

PROJECT FINANCING DATA (US\$, Millions)

SUMMARY

Total Project Cost	49.00
Total Financing	49.00
of which IBRD/IDA	44.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Development Association (IDA)	44.00
IDA Grant	44.00
Non-World Bank Group Financing	
Counterpart Funding	5.00
National Government	5.00

IDA Resources (in US\$, Millions)

	Credit Amount	Grant Amount	Guarantee Amount	Total Amount
Mauritania	0.00	44.00	0.00	44.00
National PBA	0.00	30.00	0.00	30.00



Refugee	0.00		14.00		(0.00		14.00	
Total	0.00		44.00		(0.00		44.00	
Expected Disbursements (in	USS Millions)								
Expected Disbuisements (in	103 <i>3,</i> Willions)								
WB Fiscal Year		2020	2021	2022	2023	2024	2025	2026	
Annual		0.24	2.88	5.27	8.83	11.84	11.12	3.83	
Cumulative		0.24	3.11	8.39	17.21	29.05	40.17	44.00	

INSTITUTIONAL DATA

Practice Area (Lead)

Contributing Practice Areas

Water

Climate Change and Disaster Screening

This operation has been screened for short and long-term climate change and disaster risks

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category	Rating
1. Political and Governance	 Substantial
2. Macroeconomic	 Substantial
3. Sector Strategies and Policies	Moderate
4. Technical Design of Project or Program	Moderate
5. Institutional Capacity for Implementation and Sustainability	 Substantial
6. Fiduciary	Substantial
7. Environment and Social	• High
8. Stakeholders	Moderate
9. Other	 Substantial
10. Overall	Substantial



COMPLIANCE

Policy

Does the project depart from the CPF in content or in other significant respects?

[] Yes [√] No

Does the project require any waivers of Bank policies?

[] Yes [√] No

Environmental and Social Standards Relevance Given its Context at the Time of Appraisal

E & S Standards	Relevance
Assessment and Management of Environmental and Social Risks and Impacts	Relevant
Stakeholder Engagement and Information Disclosure	Relevant
Labor and Working Conditions	Relevant
Resource Efficiency and Pollution Prevention and Management	Relevant
Community Health and Safety	Relevant
Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Relevant
Biodiversity Conservation and Sustainable Management of Living Natural Resources	Relevant
Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Not Currently Relevant
Cultural Heritage	Relevant
Financial Intermediaries	Not Currently Relevant

NOTE: For further information regarding the World Bank's due diligence assessment of the Project's potential environmental and social risks and impacts, please refer to the Project's Appraisal Environmental and Social Review Summary (ESRS).

Legal Covenants

Sections and Description

Schedule 2, Section I, A.3. The Recipient shall, no later than three (3) months after the Effective Date, or on any other date agreed upon in writing by the Association, recruit for the Project: (a) an environmental specialist, and (b)



a social and gender specialist; both with terms of reference, experience and qualifications satisfactory to the Association.

Schedule 2, Section I, A.4. The Recipient shall, no later than four (4) months after the Effective Date, or on any other date agreed upon in writing by the Association, (a) acquire, install and customize a computerized accounting software, satisfactory to the Association, as further set forth in the PIM; and (b) recruit for the Project: (i) an internal auditor, (ii) an external auditor, (iii) a procurement officer within MHA, and (iv) a supervising engineer, to support the Project; all with terms of reference, experience and qualifications satisfactory to the Association.
Schedule 2, Section I, B.1. Not later than three (3) months after the Effective Date, or at a later stage agreed upon in writing with the Association, and in order to facilitate the carrying out of the Project, the Recipient, through MHA, shall enter into and maintain a Collaboration Agreement with each Collaborating Entity, under terms and conditions acceptable to the Association, and further described in the PIM, which shall include, inter alia: (i) the respective roles and responsibilities of the Recipient and each Collaborating Entity in the implementation of the relevant parts of the Project; and (ii) arrangements for coordination and supervision for the implementation of the Project.

Schedule 2, Section I,C.1. The Recipient shall, within three (3) months after the Effective Date or at a later date agreed upon in writing with the Association, open a separate treasury account or Bank account (Project Account B) and shall maintain the Project Account B open for a period of not less than eight (8) months after the Closing Date, for the exclusive purpose of depositing funds provided by the Recipient for the financing of the Project ("Counterpart Funding"), in an amount not to exceed five (5) million United States dollars (US\$5,000,000).
Schedule 2, Section I,C.2 The Recipient shall, no later than March 1 in each year of Project implementation, deposit the sum of one million United States dollars (US\$1,000,000), in Project Account B, with the final payment deposited no later than March 1, 2025.

Schedule 2, Section I, 1. The Recipient shall ensure that: (a) throughout Project implementation, (i) sufficient resources required for the maintenance of the water supply and sanitation schemes financed under Parts 1 and 2 of the Project are provided to preserve the productive purpose of the Financing, and (ii) all necessary repairs and renewals of such schemes are made promptly and as needed; and (b) no later than six (6) months upon completion of the civil works for water schemes financed under Parts 1 and 2 of the Project, or at a later date agreed upon in writing with the Association before the Closing Date, bidding processes for the delegation to the private sector of the operation of said schemes have been initiated, pursuant to the requirements of this Agreement, the PIM, and the PPP Law as appropriate.

Schedule 2, Section I, 2. No later than three (3) months after the start of the civil works, or at any later date agreed upon in writing with the Association, the Recipient shall recruit a consultant to support MHA in preparing and managing said bidding processes.

Conditions

Туре	Description
Effectiveness	-Article V., 5.01. (a) the Association is satisfied that the Recipient has an adequate refugee
	protection framework;
	-Article V.,5.01. (b) the Recipient has adopted the Project Manuals in form and substance
	satisfactory to the Association, in accordance with Section I.D. of Schedule 2 to this
	Agreement;
	-Article V.,5.01. (c) the Recipient has established: (i) the Steering Committee, and (ii) the PIU,
	in accordance with Section I.A.1. of Schedule 2 to this Agreement; and



-Article V.,5.01. (d) the Recipient has recruited a financial and administrative officer and a procurement specialist for the Project for the PIU; all with terms of reference, experience and qualifications satisfactory to the Association.



I. STRATEGIC CONTEXT

A. Country Context

1. **Mauritania is an arid country in West Africa, with a complex set of developmental challenges**. Its population of 3.98 million (2018)¹ has grown at 2.8 percent per annum since 2000. Nomadism, once prevalent, is all but disappearing, with half of the country's population made up of former nomads who have settled in recent decades. The urban share of the population (51 percent in 2018) is growing fast and Mauritania now has the second most rapid urbanization rate in Africa. Rural areas make up 49 percent of the population and are comprised of mostly recent settlements that are sparsely populated (60 percent of rural settlements comprise fewer than 150 people).² Rural areas have lagged urban ones on many socio-economic indicators, including poverty, mortality, access to basic services including health care, and drinking water and sanitation.

2. **Mauritania has experienced highly volatile, yet positive growth rates since 2010.** Despite exogenous shocks related to commodity markets, economic growth averaged 4.5 percent over the 2001-2015 period, while inflation remained low (1.5 percent). The International Monetary Fund (IMF) projects that gross domestic product (GDP) will reach 6.7 percent in 2019, compared to an average GDP growth in West Africa of 3.9 percent in 2019³. However, the failure to harness water resources and other natural endowments in livestock and fisheries has constrained economic diversification and employment. Mauritania is vulnerable to periodic droughts and increased desertification of previously inhabited and cultivated areas. Climate change is expected to lead to higher temperatures, prolonged heat waves and heightened rainfall variability heightening this vulnerability⁴.

3. **Mauritania has seen a decline in poverty, but rates remain particularly high in rural areas**. The poverty headcount dropped from 44.5 percent in 2008 to 31 percent in 2014. However, the incidence of poverty remains particularly high in rural areas, where it exceeds 44 percent. The wilayas, or provinces, of Guidimakha, Tagant, Assaba, Gorgol and Hodh Echargui and Hodh El Gharbi are the most rural areas of the country and have the highest rates of poverty. Per capita GDP reached US\$1,120 in 2016, placing the country at the bottom of the middle-income country (MIC) category.

4. The country's Human Capital Index (HCI) is 0.35 and other social outcomes are below those of most MIC and Sub-Saharan Africa (SSA) countries. Although an MIC, Mauritania ranks 150 out of 157 in the 2018 global HCI. Effectively, the score of 0.35 means that a child born today will, as an adult, be 35 percent as productive as an individual who would have benefited from full education and health. On average, children in Mauritania complete 6.3 years of schooling, whereas the SSA average is 8.2. The under-5 mortality rate is 79 deaths per 1,000 births (2017), against the SSA average of 83 and the MIC average of 53.

¹ Source: National Statistical Office (NSO) – Demographic Forecasts 2013-2043 (May 2016). NSO considers as urban the population living in district (*moughatas*) capitals and in centers of more than 5,000 inhabitants. Areas with a population of fewer than 5000 people are considered rural.

² Source: NSO – 2013 Population Census.

³ West Africa Economic Outlook 2018,

https://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/2018AEO/African_Economic_Outlook_2018_West-Africa.pdf

⁴ https://climateknowledgeportal.worldbank.org/country/mauritania/vulnerability



5. As of October 31, 2019, Mauritania is hosting 56,680 registered refugees in the M'Bera camp, 95 percent of whom are Malians who have been arriving since 2012. The host regions are Hodh Ech Chargui, with a population of 467,294, which hosts the M'Bera refugee camp, and Hodh el Gharbi, with a population of 332,646. As United Nations High Commissioner for Refugees (UNHCR) assessments⁵ have shown, the host population and refugee population have managed to co-exist, with little tension between the two groups, which have the same ethnic make-up and speak the same language. Humanitarian actors, led by the UNHCR, have provided the bulk of assistance to refugees, and to some extent, host communities in Mauritania.

6. The Government of Mauritania (GoM) issued a Refugee and Host Community Policy Development Letter in 2018, which lays out strategic directions for the national short- and medium-term response to the situation. GoM also made additional commitments at the inaugural World Forum on Refugees in December 2019, which include: preparing a draft Law on the Right to Asylum which is expected to be adopted in 2020; registering all refugees and granting them an identification number that can allow them to access state services and to be counted in national statistics; providing the same level of treatment for refugees as for nationals; and ensuring that refugees have the same access to the labor market as nationals. The World Bank, following consultation with the UNHCR, assesses that the protection framework continues to be adequate in Mauritania. The International Development Association (hereafter, the Association) will continue to monitor the developments and remain in close contact with both the GoM and UNHCR during implementation.

B. Sectoral and Institutional Context

Water Resources

7. **Mauritania's water resources – particularly its groundwater resources - are largely unexploited and unequally distributed**. Mauritania had an average of 2,800 m³ of water per capita per year in 2014, which is above the water scarcity threshold of 1,000 m³. About 97 percent of the renewable water resources are concentrated in and around the Senegal River, the only permanent river in the country. Groundwater (3 percent of renewable resources) is unevenly distributed and there is little documentation about its quantity, quality and recharge rate. The lack of knowledge or planning is especially critical given the high risk of droughts and flooding in some parts of Mauritania, phenomena that are expected to become more intense and more frequent due to climate change⁶. Mean annual temperature is projected to increase by 2.5°C by 2050 under a high emission scenario (RCP8.5). In addition, the annual number of hot days is expected to increase by 35.4 days between 2040 and 2059, with higher rates of warming in the interior regions of the country than in those closer to the coast. Precipitation will also vary, with an expected shorter rainy season and increased extreme rainfall events, leading to overall drier years and more intense flood events⁷.

Figure 1: Water and Sanitation Services

⁵ For example, the *Diagnostic de l'Impact des Refugies sur la Population Hôte*, Octobre 2019, UNHCR, https://data2.unhcr.org/en/documents/details/72635

⁶ Mauritania has a high risk of flooding (coastal, river and urban flooding) although this risk is mainly concentrated in Nouakchott and surrounding areas. Source: Think Hazard by the Global Facility for Disaster Reduction and Recovery,

http://thinkhazard.org/en/report/159-mauritania/UF

⁷ https://climateknowledgeportal.worldbank.org/country/mauritania/



8. Access to water and sanitation is relatively high, especially in urban areas, but far from universal. As measured by established indicators⁸, national and urban access rates are higher in Mauritania than rates observed on average in SSA (Figure 1). However, only 45 percent of the rural population had access to basic drinking water services in 2015 - 34 percent through piped systems and 11 percent through hand pumps. It should be noted that these figures are for nationals only, and do not include refugees. According to a 2016

inventory of piped systems, solar pumping is used by 80 percent of the water posts and 50 percent of the smallscale water systems (*alimentation en eau potable*, AEP) and mini-AEPs.

9. The development of sanitation lags water supply. In 2015, 63 percent of the urban population, and 20 percent of the rural population had access to an improved sanitation facility (either individually or shared with other households)⁹. Open defecation is prevalent in rural areas, where it is practiced by 61 percent of the population. While there has been some improvement in terms of access to sanitation in institutions and public locations, only 35 percent of schools and 61 percent of health centers have onsite sanitation facilities.

10. Water supply and sanitation services for refugees are managed by UNHCR and partner non-governmental organizations (NGO). The M'Bera refugee camp is equipped with five boreholes from which water is pumped into two separate piped systems supplying 12 stand posts. Although the systems are operational, they were constructed in haste, with frequent turnover among contractors, leading to a jumbled system. Consequently, there are many technical issues, such as lack of pressure, which hinder the quality of service and leads to some residents not receiving reliable water supply, particularly at the tail end of the distribution network. As for sanitation, the camp has been equipped with double ventilated improved pit (VIP) latrines¹⁰ combined with a shower, but the current ratio of four households (about 26 people on average) per latrine is not sustainable. A community organisation (*Volontaires Réfugiés pour la Propreté dans le Camp*, VRPC) provides a fecal desludging service with the support of Action Against Hunger (*Action Contre la Faim*, ACF), an NGO. Relations between host communities and refugees on water and sanitation services have been largely amicable. Both host populations near the M'Bera camp can benefit from the same services (health, education and water supply and sanitation, or WSS) as the refugees living in the camp, which has helped to preempt any tensions. So far, GoM has not been involved in providing water and sanitation services to refugees but discussions are underway with UNHCR for the Government to start progressively taking over services over the short- to medium- term.

⁸ United Nations Children's Fund (UNICEF)/World Health Organization (WHO), Joint Monitoring Program (JMP) – 2015 Estimates Updated in 2017; the access rates shown in Figure 1 refer to the definitions used for monitoring the SDG, namely: (i) the access rate to basic drinking water services (collection time of less than 30 minutes); and (ii) the access rate to basic sanitation services (improved facilities not shared with another household).

⁹ UNICEF/WHO, Joint Monitoring Program – 2015 Estimates Updated in 2017.

¹⁰ In addition, the JMP does not consider that access to shared latrines does not qualify as basic access to improved sanitation.



Performance of key water sector institutions

11. The National Water Corporation (*Société Nationale de Distribution d'Eau*, SNDE), the national water utility, has been increasingly under strain since its founding in 2001. While historically it has focused mostly on Nouakchott, SNDE's coverage zone has tripled in ten years, from 15 centers in 2005 to 46 in 2015. However, many of these centers are financially loss-making and urban tariffs have not increased since 2007. Compounding these financial and operational challenges is SNDE's outdated management model. Contrary to the generally accepted practice in the sub-region, there is no contractual framework governing its objectives and performance. There is also a need to improve SNDE's antiquated tools and processes, as its organizational model was defined in 1995.

12. The National Rural Water Agency (*Office National des Services d'Eau en Milieu Rural*, ONSER), the rural water utility, manages about half of the country's rural piped water systems. It either signs agreements with sub-contractors to operate the systems which are transferred by project implementing entities (Ministry of Water and Sanitation (*Ministère de l'Hydraulique et de l'Assainissement*, MHA) or other agencies) or takes over the full responsibility of operation and maintenance (O&M). While the systems under ONSER's direct operation have had sub-optimal outcomes, the (rather limited) experience of delegated contracts to licensed private operators under the oversight of the Multisector Regulatory Authority (*Autorité de Régulation*, ARE) has shown positive results (Box 1). Tariffs for rural areas have not been revised since a non-governmental entity under private law the National Potable Water and Sanitation Agency (*Agence Nationale de l'Eau potable et de l'Assainissement*, ANEPA) was created in 2002. Lacking a proper asset management system, ONSER responds to day-to-day O&M needs on an ad-hoc basis, without adequate management and monitoring tools, structured objectives, planning and budgeting.

Box 1: ARE's experience in delegating water service to private operators

In accordance with the Water Code, ARE launched in 2009 the first competitive bidding for the private operation of piped systems constructed on behalf of MHA and local governments (communes). The contracts were delegated directly by the MHA and communes in the context of water projects in Gorgol and Guidimakha financed by French Development Agency (*Agence Française de Développement*, AFD) and the European Union in the region of Brakna between 2005 and 2010. The delegation contracts marked a decisive improvement over the sub-contracting agreements used by ONSER by (a) setting a longer duration (five years instead of one-year renewable) and regrouping several systems in a single contract, which increased their attractiveness to professional operators; and (b) introducing performance-based remuneration in accordance with pre-set targets for Non-Revenue Water (NRW) and bill collection. The bidding process was successful and replicated in other systems. Today, eleven contracts are currently being implemented, covering 81 systems.

ARE is in charge of monitoring the execution of the delegation contracts, regulating their tariffs and providing implementation support to the operators. The quality of service and the performance of the operators has been satisfactory, with collection rates over 96 percent, and NRW of about 30 percent (compared to 50 percent for ONSER and its sub-contractors). The tariffs cover operations and maintenance costs.

13. Created in 2001, the National Water Resources Center (*Centre National des Ressources en Eau*, CNRE) is mandated to manage water resources nationwide. However, it has been unable to do so due to weak financial and technical resources. CNRE is primarily financed by budget subsidies, with some additional revenues coming from water abstraction fees and from borehole siting services but only one company pays these fees. CNRE's operational budget has decreased from MRU 40 million in 2005 (about US\$1 million equivalent) to MRU 13 million (about US\$350,000 equivalent) in 2016, the latest figures available, which is not enough to cover its operating



costs. CNRE is unable to collect groundwater data, is poorly equipped to update its databases regularly and lacks procedures for information gathering and dissemination¹¹.

Response to Challenges and Sector Strategies

14. The Government has signaled its willingness to reform and strengthen sector institutions. In September 2019, the newly elected Government defined its priorities for the country in the Prime Minister's Declaration of General Policy, which was approved by the Parliament on September 5, 2019. In the water sector, GoM indicated its intention to improve the country's knowledge and management of water resources and to undertake a "profound" reform of SNDE and ONSER. The options for doing so are explained in Component 3 of the proposed project (see Section II B). In addition, there is a National Strategy for Sustainable Access to Water and Sanitation (*Stratégie Nationale pour un Accès Durable à l'Eau et à l'Assainissement*, SNADEA) which lays out the Government's priorities in the water sector and aligns with the Strategy for Accelerated Growth and Shared Prosperity (*Stratégie de Croissance Accélérée et de Prospérité Partagée*, SCAPP), which is GoM's roadmap to pursue the 2030 Sustainable Development Goals (SDGs). The SNADEA estimates the investment needs to reach the water and sanitation SDGs at US\$802 million until 2030. In addition, the National Sanitation Policy and National Sanitation Strategy (*Stratégie Nationale de l'Assainissement*, SNA) were developed in 2011 and are currently being implemented with the support of various development partners.

C. Relevance to Higher Level Objectives

15. The proposed Water and Sanitation Sectoral Project contributes to the goals of the 2018-2023 Country Partnership Framework (CPF, Report #125012-MR, discussed by the World Bank Group (WBG) Executive Board of Directors on July 12, 2018) particularly Goal 1.3 of Pillar No. 1, i.e. "Promoting economic transition for diversified and resilient growth"¹². The project will support the CPF by strengthening Mauritania's capacity to manage its groundwater resources, which are an important buffer for climate change- related water shortages. In addition, the project aligns well with the CPF's gender strategy, as explained in the gender analysis and action plan for the project (Annex 6). The proposed project is also part of the World Bank program for refugees and host communities in Mauritania. Lastly, by focusing on the poorest regions in Mauritania, the project is aligned with the World Bank's twin goals of eliminating poverty and boosting shared prosperity.

16. While the project is fundamentally rural in scope, it will align with the spatial convergence approach. This approach, defined by the World Bank in the current CPF, consists of concentrating World Bank funding on the southern wilayas, with a focus on intermediate cities with proven economic development potential. In Mauritania, three other projects could be funded by the IDA18 Refugee Sub-Window (RSW): the Mauritania Social Safety Net System Project II (P171125), the Productive and Resilient Intermediate Cities Project (P169332), and the Health System Additional Financing (P170585). Annex 5 provides an overview and a map of the World Bank operations that will be part of the spatial convergence approach. The water project will seek synergies with all the projects and will also build on the Integrated Water Resource Management Project (*Projet de Gestion Integrée des Ressources en Eau*, PGIRE, P131323), which is supporting transboundary management of the Senegal River among riparian countries, including Mauritania.

¹¹ WACDEP/ GWP Med, Etude pour la Consolidation du Système de Suivi et d'Evaluation des Ressources en Eau en Mauritanie, 2017.

¹² World Bank. 2018. Mauritania - Country Partnership Framework for the Period of FY18-FY23 (English). Washington, D.C.: WBG, page 2.



17. The project will build on and complement the efforts of other development partners. The following are some of the major investment projects in the water sector in recent years:

- AFD and the European Union financed a EUR 15 million project to develop 70 rural water networks and a large-scale community led total sanitation (CLTS)¹³ campaign in the wilayas of Assaba, Gorgol, Guidimakha, Hodh Echargui, and Hodh El Gharbi). With the support of the same partners, GoM recently initiated a new project, *Sahel G5*, that will promote CLTS in selected areas.
- Arab Fund for Economic and Social Development (*Fonds Arabe pour le Développement Economique et Social,* FADES), Islamic Development Bank and AFD financed the Aftout Echargui project (US\$100 million), which is currently being completed. FADES also financed the US\$65million) DHAR Project (already completed), which serves urban areas in the two Hodhs.

18. **The project is aligned with the Maximizing Finance for Development approach**. In targeted rural areas and small towns, the project will build, expand or rehabilitate water supply systems currently directly or indirectly operated by ONSER. The O&M of most of these water systems will be systematically transferred to local private operators, under the existing public-private partnership (PPP) framework regulated by ARE.

II. PROJECT DESCRIPTION

A. Project Development Objective (PDO)

PDO Statement

To increase access to improved water and sanitation services in selected rural areas and small towns, and to strengthen the performance of sector institutions.

PDO Level Indicators

- Number of people provided with access to improved water sources (of which host communities)¹⁴;
- Number of people provided with access to improved sanitation facilities (of which refugees; of which host communities);
- Groundwater reports produced and disseminated;
- Proportion of water systems delegated to private operators in project areas;
- MHA staff trained and equipped to undertake strategic planning and project management activities (of which women).

B. Project Components

19. The project components are described in this section in brief and Table 1 provides an overview.

¹³ CLTS is a widely applied approach to eliminating open defecation by encouraging communities to construct their own latrines using their own means i.e. no public subsidy, with a heavy emphasis on communication about the negative externalities of open defecation by any member of the community on all members of the community. While it has had many positive impacts, its effectiveness and sustainability are also contested.

¹⁴ This indicator is disaggregated for host communities but not for refugees because there is no planned increase in access to water for refugees (only an improvement in the operation of the existing water network).



20. Project activities will mainly focus on selected rural and small towns in five wilayas representing 71 percent of Mauritania's rural population. Annex 1 provides an overview of the selection criteria and includes a map of the project areas.¹⁵ These areas generally exhibit poorer results than the country average on indicators related to poverty incidence, child mortality and to the burden created by the particularly harsh conditions of access to water for women and girls. According to the Mauritania public expenditure review (PER)¹⁶, rural areas have also historically been under-funded compared to urban areas: only 21 percent of sector investment spending was allocated to rural and semi-urban areas, compared to 44 percent for urban areas despite the population being roughly the same in both areas. These areas also need support to face climate change and enhance the resilience of local communities to extreme weather events.

Component 1: Improvement of access to drinking water and sanitation in Gorgol, Guidimakha and Assaba¹⁷ (Cost: US\$22.5 million equivalent of which US\$20.5 million IDA, US\$2 million counterpart funding)

1.1. Improving access to improved water supply in the three project areas through:

a) Construction of 26 mini water systems and 70 regular water systems in selected rural areas

21. This component will finance the construction of new AEPs serving communities of between 300 and 600 people and regular AEP systems serving communities with more than 600 people. These new systems will be equipped with solar panels or hybrid pumps to make them more energy efficient and climate resilient. Following the construction of these new systems, the project will support MHA to delegate¹⁸ as many of them as possible to private operators under the delegation of public services (*Délégation de Service Public*, DSP) approach described in Box 1.

b) Rehabilitation and expansion of 128 existing piped water systems in selected rural areas

22. These systems currently suffer from poor design and high physical and commercial losses, thus necessitating rehabilitation. The O&M of the rehabilitated facilities will be subsequently transferred to local private operators as per the DSP approach described in Box 1. When possible, these systems will be equipped with solar or hybrid pumps. In selected centers managed by ONSER in Assaba, some water systems will be expanded in order to serve more people in the coverage zone.¹⁹

c) Rehabilitation and expansion of existing water systems in five small urban areas and Kiffa

¹⁵ Investments in Gorgol and Guidimakha will be limited to rehabilitation works and minor modifications to existing schemes which do not change the existing nature of these schemes. Investments in new schemes or expansion beyond the scope of existing schemes that would change the nature of these existing schemes and which may constitute the use of water or risk of pollution of the Senegal river, its tributaries and alluvial aquifers, are excluded from eligibility for financing.

¹⁶ Revue des dépenses publiques dans le secteur de l'eau en Mauritanie (2006 – 2016), World Bank, Octobre 2017. https://hubs.worldbank.org/docs/imagebank/Pages/docProfile.aspx?nodeid=29752526

¹⁷ Under this component, investments in new schemes and in the expansion beyond the scope of existing schemes that would change their nature will only take place in areas that are not hydrologically linked to internationally shared surface or groundwater systems ¹⁸ For the purposes of the project, "delegate" entails preparing the bidding documents for the water systems and initiating the call for tenders. While the plan is for all the new and rehabilitated systems to be delegated, the project has set a target of 65% to take into account what is likely feasible within the duration of the project.

¹⁹ Expansion of water systems will be excluded in Gorgol and Guidimakha as these centers are connected to the Senegal River, which is a transboundary water source, and notification was not undertaken as per the requirements of OP7.50. However, rehabilitation is permitted under the exception to OP7.50



23. The project will finance the rehabilitation of the water supply systems serving five small towns²⁰ under SNDE management, which are loss-making for the utility. These rehabilitated systems will subsequently be delegated to private operators for O&M, the first time that SNDE will make use of the DSP approach. In addition, the project will rehabilitate and expand the water network in Kiffa²¹ through borehole drilling in the *Grès d'Aïoun* aquifer and the construction of a transfer pipe to the city, which will also benefit neighboring areas. The exploitation of this new water source will diversify Kiffa's water supply²². However, unlike the other systems, Kiffa will not be delegated to a private operator as its size and operating features makes it a financially viable center for SNDE to continue operating.

1.2. Improving access to shared sanitation in institutions and public places in the three wilayas through:

a) Construction of 386 latrines and handwashing facilities in public centers

24. In line with the SNA's guidelines and based on the needs expressed by the Directorate of Sanitation (*Direction de l'Assainissement*, DA), the project will finance the construction of 386 latrines and handwashing facilities in schools, health centers, markets. Special attention will be paid to ensure the safety of women and girls, as described in the gender analysis and action plan (see Annex 6). The new latrines will also prevent fecal contamination of groundwater by offering the local communities an alternative to open defecation.

b) Water, Sanitation and Hygiene (WASH) awareness raising campaigns

25. This activity will support awareness raising campaigns targeting schools, health centers and public market places. NGOs will undertake the campaigns before latrine construction so that managers of the facilities and endusers are sensitized about the correct usage of the latrines and water systems and about good hygiene practices once the facilities are in service. The campaigns will be tailored to specific sub-groups.

Component 2: Improving sustainable access to safe water and sanitation for refugees and host communities in Hodh Echargui and Hodh El Gharbi (Cost: US\$12.7 million equivalent of which 11.2 million IDA, US\$1.5 million counterpart funding)

2.1 Improvement of access to safe and reliable water through:

a) Construction of 74 mini-water systems and six regular water systems in Hodh El Gharbi and Hodh Echargui

26. These activities are similar to those proposed under Component 1.1a) except the geographic scope is different. The water systems will be constructed in the two hodhs, which are host community regions. As with Component 1.1a), the new water systems will be equipped to operate on solar energy.

b) Rehabilitation of the existing 43 piped water systems in Hodh Echargui

27. The project will rehabilitate rural water systems in Hodh Echargui, a host community, in order to improve water supply to beneficiary residents. Forty-one of these systems are currently operated by ONSER and two by

²⁰ The centers include: Monguel and Maghama (Gorgol); Ould Yenje (Guidimakha); as well as Boumdeid and Barkeol (Assaba).

²¹ The GoM requested that the IDA project focus on Kiffa in order to ensure synergies with the Urban project and to respond to urgent water needs in Kiffa, which suffers from water stress.

²² Currently, Kiffa receives water from another aquifer which is located 25km from Kiffa but it no longer produces water. The GoM added a new well site at Nekett. However, Kiffa needs more water and the Gres d'Aioun has been identified as a new water source.



SNDE. As with other water works planned under the project, the rehabilitated systems will be delegated to private operators after the completion of works.

c) Rehabilitation of the existing piped water systems in Camp M'Bera

28. The project will rehabilitate the existing water supply network to ensure that all the camp residents have equitable and reliable water services in the M'Bera camp. Following completion of works, the rehabilitated system will be transferred to MHA, which will decide either to operate it as part of SNDE's service or delegate the system to a private operator.

2.2 Improvement of access to sanitation in Camp M'Bera through:

a) Construction of 2,400 household shared latrines

29. The project plans to reduce the ratio of shared latrine use from one latrine per 24 people to 12 people per latrine, or one latrine shared among two households²³. A total of 2,400 latrines will be built, adding to the 2,330 existing latrines.

b) Improving fecal sludge management in the M'Bera camp

30. Based on the needs expressed by the DA, the project will contribute to the improvement of fecal sludge management (FSM): a zero-emissions collection and transportation system; treatment and disposal; and reuse of the fecal sludge, for instance in reforestation of the camp and surrounding areas. The activity will also finance studies, small works and equipment to improve FSM.

c) Construction of a rainwater drainage system in the M'Bera camp

31. The M'Bera camp and the surrounding area is prone to heavy flooding, with the latest episode in September 2018 leading to fatalities in the nearby district of Bassikounou, destruction to property and ecological degradation. In the camp, 255 households had to be evacuated from their homes. The flooding risk continues to be quite high in the camp and could be exacerbated by climate change. The IDA project will support the installation of a drainage network in the camp, following a detailed topographic study of the camp.

d) Construction of 328 latrine blocs and handwashing facilities in public centers in the two hodhs

32. This activity will follow the same approach as the public latrines activity described in Component 1.2a).

e) WASH awareness raising campaigns in the two hodhs

33. This activity will follow the same approach as the WASH campaigns to be implemented in Assaba, Gorgol and Guidimakha under Component 1.2b).

Component 3: Institutional support, capacity building and project management (Cost: US\$13.8 million equivalent of which 12.3 million IDA, US\$1.5 million counterpart funding).

²³ Currently, 4 families per latrine with an average of 6 people per family, leading to 24 people per latrine.



34. An institutional diagnostic of the water sector was developed during project preparation and an action plan was presented and endorsed by the MHA and other sector entities. The activities retained are as follows.

3.1 Institutional support and capacity building to MHA and sector institutions

a) Implementing institutional reforms within MHA

35. This activity will support MHA's hydraulics and sanitation departments through training and technical support on strategic planning; reinforcing regional directorate (*Direction Régionale de l'Eau et de l'Assainissement*, DRHA); a human resources audit; a water sector database and related data collection mechanisms; an annual water sector review and a tariff study.

b) Improve CNRE's capacity to monitor water resources

36. Support will be provided to CNRE for the modelling and study of the Dhar aquifer and the Grès d'Aioun aquifer, two crucial water sources that can enhance Mauritania's resilience to climate change. Other support activities will include the improvement of the piezometric network for the monitoring of groundwater resources; training and capacity building for CNRE staff; a review of the compensation policy; actions to improve the collection of the water abstraction fee; and strengthening water quality monitoring.

c) Support to public authorities to prepare and undertake the delegation of services in selected areas

37. This activity will help the recently established PPP Unit in the Ministry of Finance and the multisector regulator, ARE, to prepare for the delegation of rural water services in the five targeted *wilayas*. This includes *inter alia* studies, related awareness-raising and outreach activities for each of the entities in their respective domains – preparation of bidding documents (PPP Unit) and the regulation of delegated services (ARE).

d) Develop a draft performance contract between SNDE and the Government

38. The project will support SNDE and GoM to develop a draft performance contract to improve SNDE's operational and financial position. The performance contract will be time-bound and will include compulsory actions for both parties.

e) Improving ONSER's capacity for asset management

39. This activity will support ONSER to improve its asset management functions through (i) developing an asset inventory; (ii) developing a plan for asset renewal, extension and expansion; and (iii) a study on whether establishing an asset holding company would be feasible. If the option of an asset holding company is accepted by the Government and ONSER, the project could support the necessary upstream preparatory work.

3.2 **Project Management**

a) Support to the Project Implementation Unit (PIU) and implementing agencies

40. This sub-component will a) support the PIU, the MHA and collaborating agencies in project management and implementation, including *inter alia* for fiduciary matters, environmental and social standards, procurement,



communication, planning, audits, monitoring and evaluation, Training and Operating Costs. In addition, the subcomponent will b) finance a technical assistance (TA) firm to support project implementation, undertake technical audits of designs and civil works; mobilize supervision engineers; support the WASH campaigns and facilitate the institutional strengthening activities in Component 3. The supervising engineers will be included in the TA firm to support the MHA in its role as *maître d'ouvrages* i.e. the technical design and supervision of infrastructure under MHA's responsibility.

Component 4: Contingency Emergency Response Component (US\$0 million)

41. Should a natural event precipitate a major disaster affecting the livelihoods of people living in the project area, the Government may request the World Bank to reallocate project funds to cover some costs of emergency response and recovery. To trigger this component, GoM needs to declare an emergency or provide a statement of fact justifying the request for the activation of the use of emergency funding. If the WBG agrees with the determination of the disaster and associated response needs, this component would draw uncommitted resources from other expenditure categories and/or allow GoM to request the World Bank to re-categorize and reallocate financing from other project components to cover emergency response and recovery costs. IDA18 RSW funds can only be mobilized for the CERC if these funds support activities dedicated to refugees and host communities.

42. Detailed operational guidelines for implementing the project Contingency Emergency Response Component (CERC) will be prepared and approved by the World Bank as a disbursement condition for this sub-component. All expenditures under the CERC will be in accordance with paragraphs 11, 12, and 13 of World Bank Policy: Investment Project Financing (IPF). They will be appraised and reviewed to determine if they are acceptable to the World Bank before any disbursement is made. Disbursements will be made against an approved list of goods, works, and services required to support crisis mitigation, response, recovery, and reconstruction.

Summary of Activities				
Component 1: Improvement of access	to drinking water and sanitation in Gorgol, Guidimakha and Assaba* (US\$22.5			
million equivalent)				
*Under this component, investments	in new schemes and in the expansion beyond the scope of existing schemes that			
would change their nature will only tal	ke place in areas that are not hydrologically linked to internationally shared surface			
or groundwater systems				
Water supply: Improvement of access	to drinking water			
1.1a) Construction of 26 mini water	Mini: pop. 300 – 600. System includes two stand posts powered by a single main			
systems and 70 regular water	line. All solar.			
systems	Regular: pop > 600. System includes branched networks, individual connections			
	and a limited number of stand posts. All solar.			
	O&M: delegation to private operators.			
1.1b) Rehabilitation and expansion	These are systems currently operated by ONSER.			
of 128 existing piped water systems	Rehabilitation to improve operational efficiency. O&M: delegation to private			
in rural areas	operators. Expansion (in Assaba only) to provide more people with clean water.			
1.1c) Rehabilitation and expansion of	These systems are currently operated by SNDE. Rehabilitation to improve			
existing water systems in five small	operational efficiency, thereby providing more reliable water supply to more			
urban areas and Kiffa	people. Expansion to provide more people with clean water and increase			
	resilience to climate change by diversifying water sources.			
	O&M = delegation to private operators for the five centers (a pilot for SNDE).			

Table 1. Overview of Project Activities



	Kiffa remains under SNDE operation.				
Sanitation: Improving access to share	d sanitation in institutions and public places in the three wilayas				
1.2a) Construction of 386 latrines	Latrines will be built as a bloc of 2 or 3 units with a handwashing stand per latrine				
and handwashing facilities in public	bloc, with security and menstrual hygiene features as appropriate.				
centers	O&M: school officials, students & parents' associations (schools), town or village				
	councils (public latrines) and health center workers (health centers).				
1.2b) WASH Awareness Raising	Campaigns will target schools, health centers and public market places. Will be				
Campaigns	carried out by NGOs under the MHA's supervision. Materials will be customized				
	to target audience.				
Component 2: Improving sustainable	access to safe water and sanitation for refugees and host communities in Hodh				
Echargui and Hodh El Gharbi (US\$12.7	' million equivalent)				
Water supply: Improvement of access	to safe and reliable water				
In the host communities					
2.1a) Construction of 74 mini-water	Same as Component 1.1a).				
systems and 6 regular water systems	Activity will be implemented in both hodhs.				
in Hodh El Gharbi and Hodh Echargui					
2.1b) Rehabilitation of existing 43	Fourty-one of these systems are currently operated by ONSER and two by SNDE				
piped water systems in Hodh	Rehabilitation to improve operational efficiency. O&M: delegation to private				
Echargui and Hod El Gharbi	operators.				
In the refugee camp					
2.1c) Rehabilitation of the existing	The system is currently operated by UNHCR through a contract with an NGO. The				
piped water system in the Camp	rehabilitation will be under the management of the Directorate of Hydraulics				
M'Bera	(Direction de l'Hydraulique, DH).				
	0&M will be through delegation to private operators or directly by SNDE.				
Sanitation: Improvement of access to	sanitation				
In the M'Bera refugee camp					
2.2a) Construction of 2400	The latrines are currently built by HCR through a local NGO.				
household shared latrines	The DA will oversee construction and maintenance of facilities.				
2.2b) Improving fecal sludge	Strengthening collection, transportation, treatment, disposal and reuse. Activity				
management	will be managed by the DA.				
2.2c) Construction of a rainwater	This activity will be managed by the DA. There is no flood drainage system in the				
drainage system	camp at the moment.				
In the host communities					
2.2d) Construction of 328 latrine	As per 1.2a)				
blocs and handwashing facilities in	Activity will be implemented in the two hodhs.				
public centers	, , ,				
2.2e) WASH awareness raising	As per 1.2b)				
campaigns	Activity will be implemented in the two hodhs.				
Component 3: Institutional support, o	apacity building and project management(US\$13.8 million equivalent)				
3.1) Support to sector institutions	Activities include:				
	a) Support to MHA on institutional reforms.				
	b) Support to the water resources agency, CNRE.				
	c) Support to public authorities on the delegation of services.				
	d) Preparation of a performance contract between SNDE and the Government.				
	e) Improving ONSER's capacity for asset management.				
3.2) Project management	a) Support to PIU and implementation agencies including TA for quality control				
, ,	and supervision engineers.				
Component 4: Contingency Emergency Response Component					
This component can be triggered in ca	This component can be triggered in case of any emergency situation that could undermine project activities.				



43. **Project cost and financing.** The total project cost is US\$49 million, with IDA expected to finance SDR 31.9 million (US\$44 million equivalent, of which the RSW will finance US\$14 million) and GoM US\$5 million in counterpart funding. The estimated project costs are presented in Annex 2.

C. Project Beneficiaries

44. The estimated number of total project beneficiaries is 473,000, equivalent to about 10 percent of the total population and about 20 percent of the rural population. The proposed project will help increase access to safe water for up to 131,000 people located in the five wilayas of the project through new infrastructure. In addition, the project will improve the delivery of water services for about 342,000 people (including 56,000 people in the refugee camp – see paragraph below) currently served by piped systems that will be rehabilitated. The total project beneficiaries includes about 15,000 people in the M'Bera refugee camp who will benefit from improved latrines and 15,000 people who will benefit from improved sanitation in health centers, schools and public gathering places.

45. The project will benefit 122,000 refugees and people living in host communities in Hodh Ech Chargui and Hodh El Gharbi: (i) in the Hodh Ech Chargui, the project will benefit about 56,000 refugees in the M'Bera Camp and approximately 28,000 beneficiaries in host communities, including un-registered refugees which to date UNHCR has not been able to quantify, but which the project hopes will be further identified and registered with help of the UNHCR during the implementation of the project; (ii) in Hodh El Gharbi, there will be an estimated **38,000** beneficiaries in host communities and unknown number of unregistered refugees which could possibly be registered with help of the UNHCR during the implementation of the project for a more precise estimate.

46. The interventions in the refugee camp and in the two hodhs require a balance between benefits to refugees and those to host communities. For instance, there has been some isolated cases of tensions over water access points for animals to drink, so the project will ensure the construction of water points in host population for both human and animal needs. In addition, attention will be paid to ensure that workers on project sites in Hodh Ech Chargui and Hodh El Gharbi are recruited from local host communities and that opportunities for skills development, e.g. the activity to reforest the area around the M'Bera camp using treated fecal sludge, benefit both refugees and host communities alike. In this way, the project can help foster cohesion and good relations between the two groups. Similarly, the host communities in Hodh Ech Chargui and Hodh El Gharbi will benefit from the same interventions in terms of drinking water supply, latrines and WASH campaigns under Component 2 of the project. Table 1 provides an overview of these activities.

D. Results Chain

47. **Problem statement**: Lack of and unreliable access WSS services and weak governance and performance of sector institutions adversely affect the health and quality of life of the population, undermining women's empowerment and increasing people's vulnerability to climate change. Table 2 provides an overview of the theory of change.



Table 2. Theory of Change Depiction

PDO Indicators	Activities	Outputs	Outcomes	Higher-level outcomes
1) Number of people provided with access to improved water sources	 Construction of new piped water systems and stand posts Rehabilitation and expansion of existing piped systems 	Household connections and stand posts constructed Boreholes drilled and equipped Water networks rehabilitated & expanded	Increased access to water supply services	-Reduced incidence of water-related diseases -Time saved fetching water for women -Equality in service quality for all users in coverage zone -Enhanced resilience to climate change
2) Number of people provided with access to improved sanitation facilities	 Construction of sanitation facilities in households (M'Bera camp) and public institutions Improving stormwater drainage in the M'Bera camp Improving FSM services along the sanitation chain in M'Bera camp Implementation of WASH awareness campaigns 	Household latrines constructed Latrines and handwashing facilities constructed in schools, health centers and public areas Drainage system constructed in the camp Actions taken to improve fecal sludge containment, treatment, collection, transportation, disposal and reuse WASH messages transmitted to people through awareness campaigns	Increased access to improved sanitation and hygiene services Better flood management practices Environmentally friendly management and use of fecal sludge Improved knowledge of good hygiene practices and use of WASH facilities	 -Improved resilience, dignity and quality of life for the beneficiary population -Increased school enrolment for girls and long-term gains in terms of future earnings -Enhanced resilience to climate change -Better health outcomes
 3) Groundwater reports produced and disseminated 4) Proportion of water services delegated to private operators 5) MHA staff trained and equipped to undertake strategic planning and project management activities 	 Installation of piezometers Support to MHA, PPP unit and ARE on DSP Institutional strengthening measures for MHA Increased gender parity in MHA leading to better hiring and promotion opportunities for women 	Modeling of two aquifers done Training (targeting women) and TA provided on DSP Training, HR audit, support to regional departments	Performance of sector institutions strengthened Knowledge of water resources improved Better project design and supervision of works	 -Improved technical and operational outcomes -Enhanced resilience to climate change -Improved gender equity within sector institutions

Critical Assumption: Water production sources available.



E. Rationale for World Bank Involvement and Role of Partners

48. The previous World Bank financed water supply project in Mauritania closed in 2005. In 2016, GoM and World Bank agreed to explore opportunities for a renewed partnership in the water supply sector. The impetus was to help lagging rural areas to catch up to the significant WSS gains made in the urban areas and to boost Mauritania's Water Resources Management (WRM) capacities. In addition, analytical work undertaken by the World Bank - a Water Sector Engagement Note and a Water PER (October 2017) - helped identify opportunities for improving the operational and financial efficiency of key sector institutions like SNDE and ONSER. The dialogue emanating from this work generated demand for an IDA project that would bring together water supply, sanitation, WRM and institutional support under one project.

49. **The refugee influx required a response that IDA was well placed to provide**. The eligibility of Mauritania for the IDA 18 RSW was approved by the Board in November 2018. The World Bank acknowledged the commitment of GoM to ensuring the protection of refugees while promoting their increased self-reliance and the resilience of host communities, the need to complement UNHCR's efforts and the lack of existing WBG engagement in refugee-affected areas and in the broader region, including neighboring Mali. A programmatic approach was adopted, with the Water and Sanitation Sectoral Project one of four projects receiving support from the Refugee Window. Annex 5 provides an overview of the programmatic approach.

F. Lessons Learned and Reflected in the Project Design

50. The project draws on lessons learned from the experience of implementing the Mauritania Energy/Water/ Sanitation Sector Reform Technical Assistance Project (PARSEAE, P066345), which was approved in 2000 and closed in 2005. This TA was developed at a time when private sector participation (PSP) in infrastructure was a global trend, but in Mauritania, some key enabling factors were missing, which led to unsatisfactory outcomes. Key among these was the lack of government commitment given the socially sensitive nature of PSP in the water sector. The context today is different, with a relatively solid sector regulator in place that oversees private operators of rural systems, which are well accepted by the rural population. The proposed PSP approach is also at a smaller scale than the ambitious PPP attempts of the past.

51. The World Bank's experience with the humanitarian-development nexus was considered in project design. In particular, insights were gleaned from World Bank operations that involve partnering with United Nations (UN) agencies, such as in Yemen, Niger and Chad. The World Bank is also supporting operations in countries hosting refugees, such as a social safety net project in support of refugees and host communities in Burkina Faso, which is being implemented in partnership with UNHCR and where the same refugee profiles exist as in Mauritania. In all cases, the World Bank has sought to bring its developmental support to enhance humanitarian situations, for instance by focusing on environmental and social safeguards; supporting sector institutions; and paying attention to quality control as well as operations and maintenance arrangements in infrastructure works.

III. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

52. A PIU within the MHA's Front Office will be responsible for day-to-day project coordination and management, including: (i) carrying out fiduciary activities; (ii) preparing and implementing annual work plans and budgets in collaboration with sector institutions involved in the project (MHA, SNDE, ONSER and CNRE), to be reviewed by a Steering Committee (described below) and the World Bank; (iii) ensuring compliance with safeguards documents for project activities; and (iv) monitoring and evaluating project activities and preparing Page 21 of 65



progress reports. The PIU will be staffed by: a project coordinator, one procurement specialist, one financial and administrative officer, one environmental specialist, one social and gender specialist and one reporting officer. The details of the constitution and functioning of the PIU will be outlined in the project implementation manual (PIM), drawing on the experiences of other World Bank projects that have taken a similar approach e.g. the recently closed Local Government Development Project (*Projet d'Appui au Programme National Intégré pour la Décentralisation, le Développement Local et l'Emploi* - PNIDDLE) (P127543) in Mauritania.

53. A **Steering Committee will be established**, bringing together representatives of the MHA, sector institutions (CNRE, ONSER and SNDE), ARE, the association of local elected representatives and the Ministry of Economy and Industry. This Committee will serve as a useful platform for regrouping diverse actors and facilitating the coordination of cross-cutting project activities. The Committee will meet once a year to review and advise on the annual work plans and budget prepared by the PIU as well as any other issues relevant to the smooth implementation of project activities.

54. The technical implementation of the first two components of the project will be carried out as follows:

- DH will implement the water supply Sub-components (Sub-components 1.1 a); b); and c); and 2.1 a); b); and c) in cooperation with the DRHA, ONSER, SNDE, the PPP unit, ARE and UNHCR in the refugee camp.
- DA will implement the sanitation Sub-components 1.2 a) and b); and 2.2 a) to e). It will do so in cooperation with UNHCR in the refugee camp.
- Contractors will be hired to undertake the water and sanitation works planned under Components 1 and 2 of the project. A quality control and supervision firm will be hired to oversee day-to-day implementation of civil works. The firm will report to both MHA and the PIU, with the latter responsible for processing payments and the former verifying the firm's technical reports through the DRHA.
- An memorandum of understanding (MoU) will be developed with UNHCR on the transfer of sanitation and water operations in the M'Bera camp to the DA on sanitation and with MHA/ SNDE on water supply.
- SNDE will implement the water supply sub-component in seven small towns and Kiffa, the latter as per the spatial convergence approach described in paragraph 17.
- Component 3 will be implemented by the PIU in collaboration with the technical departments of the MHA, ONSER, SNDE, CNRE, ARE and the PPP unit.

B. Results Monitoring and Evaluation (M&E) Arrangements

55. **M&E will be managed by the PIU**, which will collect and consolidate data from the technical implementation agencies and works supervision teams. Specific indicators on citizen engagement and gender have been included in the result framework. Monitoring will be based on user satisfaction surveys at project initiation, midterm, and completion. To the extent possible, these results will be disaggregated by gender. In addition, a gender indicator on the number of women in MHA trained on project management and strategic planning has been included as a PDO level indicator and an intermediate indicator on the proportion of female interns hired by MHA to boost its pipeline for future recruitment²⁴. Other gender indicators and their M&E arrangements are explained in Annex 6.

56. **Digital innovations will be leveraged to support the M&E of the project during implementation.** In particular, the Geo-Enabling initiative for Monitoring and Supervision under the Kobo Toolbox Platform project will be

²⁴ While an indicator on number of women hired or promoted was considered, it was not retained as MHA does not have autonomy over hiring, and promotions based on gender are not authorized. However, MHA has full discretion on recruiting interns, which would help it build a pipeline for future hires.



leveraged for this project. It will enable the PIU to collect and structure digital data that automatically feeds into a centralized M&E system. The platform will be customized to capture relevant indicators, photos, audio, videos; time and date stamps; and GPS coordinates that allow for automated geo-mapping of the project during implementation. This platform is already used in other Sahel countries and has facilitated remote supervision, frequent safeguards monitoring, and coordination across projects and partners.

C. Sustainability

57. **The long-term sustainability of institutional reforms depends on political support**. The previously mentioned General Policy Statement (*Déclaration de Politique Générale du Gouvernement*), issued by the Government in September 2019, is a strong indication of political will for reforms. The project will ensure that sector institutions receive support – through TA, training, knowledge events and other mechanisms – to continue the momentum of reform over the long-term. In addition, awareness-raising and sensitization campaigns will help prepare the population for the change in tariffs that some of the reforms, notably delegation of services, would entail. Lastly, the sustainability of groundwater resources will be assured through support to CNRE on groundwater monitoring and reporting.

58. The project aims to delegate 65 percent of infrastructure systems (new investments and rehabilitation) to private operators. This will ensure the sustainability of the infrastructure, in line with the empirical evidence presented in Box 1. In addition, the effects of the WASH campaigns will be sustained through the efforts of local actors, including communes, who allocate budget for the supply of soap and cleaning products for latrines; civic associations – who will be implicated in the campaigns during project implementation – and the DRHAs, who will provide technical support for any major upgrades or repairs.

IV. PROJECT APPRAISAL SUMMARY

A. Technical, Economic and Financial Analysis

Technical Analysis

59. No major technical issues are expected because the technologies being considered for WSS are proven and well established. Special attention will be paid to (a) ensuring a maximal use of solar pumping; and (b) considering beneficiaries' preferences in the construction of latrines to ensure the safety of women and girls, provide menstrual hygiene essentials, lighting and other necessary features.

60. As for sectoral reforms, the proposed activities draw on initial analysis undertaken in the sector (e.g. the World Bank's *Note Sectorielle* of March 2017), developed to complement the PER. The proposals also draw guidance from impactful reforms implemented in Mauritania or similar countries. For example, proposals to strengthen CNRE's capacities and protocols for groundwater data and to improve SNDE's performance through a framework contract with the state, are both good practices for boosting the capacity of sector institutions.

Summary of Economic Analysis

61. The economic analysis consists of a cost-benefit analysis (CBA) to assess the economic impact of the water and sanitation related activities of the project (66 percent of total project costs). The full description of costs and benefits is presented in Annex 4. In summary, the water and sanitation benefits include: increased water consumption; time savings for women collecting water; incremental revenues from new connections; reduced energy consumption; reduction of technical losses; health care cost savings; increase in female school attendance



and decreased flood damage in M'Bera camp; and consumer surplus accruing to beneficiaries. However, it should be noted that not all benefits were able to be captured. For example, while there is anecdotal evidence that installing reliable and water supply in rural villages incentivizes women to start market gardening and thus earn some income, there were no solid numbers that could be integrated into the economic analysis.

62. Economic internal rate of return (EIRR) and net present value (NPV). The EIRR is estimated at 7.4 percent, noting that the analysis could not capture all of the positive externalities mentioned above and described in Annex 4. The NPV of the project's benefits and costs is estimated at US\$7.98 million, using a discount rate of 6 percent. The EIRR and NPV associated to the various sub-components are as follows (Table 3):

Table 3: Results by Sub-component

Sub-component	EIRR	NPV @ 6% (US\$ million)
Overall project	7.4%	5.16
Development of access	9.2%	5.86
Systems rehabilitation and expansion	5.2%	-1.15
Sanitation	6.8%	0.29

63. **Sensitivity analysis**. A range of scenarios has been developed to test the sensitivity of the EIRR to the main elements of the economic cash-flows (Table 4). The variables tested were: (i) investment costs; (ii) operating costs; and (iii) water demand. The outcome of the scenarios is given in Table 4, which also provides the switching values of the variables. The project is markedly sensitive to the reduction of water demand, which exhibits the lowest switching value. This primarily affects the sub-component devoted to the development of access. The very strong demand of rural households for service connections could, however, mitigate this risk.

Scenario	EIRR	NPV @ 6% (US\$ million)	Switching value
Base scenario	7.4%	5.16	
Investment cost increase 20%	5.6%	-1.76	14.7%
O&M cost increase 20%	6.8%	2.90	43.5%
Overall demand decrease 20%	4.6%	-4.87	10.1%
Combined Investment cost	4.9%	-4.24	
increase 10%, O&M cost			
increase 10%, Overall demand			
decrease 10%			

Table 4: Results of Sensitivity Analysis

- 64. **Greenhouse gas (GHG) Analysis**: GHG emissions with and without the project were calculated, in line with the economic and financial analysis (EFA). The following factors were considered:
 - Without the project, the average energy consumption of the ONSER, Kiffa, and M'Bera systems would be 676 MWh/year, over 30 years, all based on thermal energy.
 - With the project, the average energy consumption of the ONSER, Kiffa, and M'Bera rehabilitated systems would be 812 MWh/y, over 30 years, 40 percent of which from solar energy, the rest from thermal energy.
 - The new small scale and regular sized water systems' energy consumption would be 171 MWh/year, of which 95 percent would come from solar energy.



65. Based on the above, the project gross emissions are 3,107 Total CO2 Equivalent (tons CO2eq) and the baseline emissions 6,180 Total CO2 Equivalent (tons CO2eq). Therefore, the project's net emissions are -3,073 Total CO2 Equivalent (tons CO2eq). The net average annual emissions are -102 total CO2 Equivalent (tons CO2eq).

Financial Analysis

66. The financial impact of project activities is assessed by the financial internal rate of return (FIRR) derived from the CBA. Financial calculations consider the financial revenues and costs in the with/without project scenarios, including taxes and excluding non-cash generating benefits (consumer surplus). The FIRR is estimated at 2.23 percent. This reflects the rate of return computed from the perspective of the combined partners of the sector (Government, ONSER, SNDE and operators) and outlines the fact that water supply and sanitation investments require concessional financing. On the basis of the experience with delegation of services in Mauritania, where cost recovery tariffs are applied, the operations and maintenance of delegated systems under the project are similarly expected to be financially sustainable.

B. Fiduciary

Financial Management

67. An assessment of MHA's financial management (FM) capacity was carried out in September 2019. The objective was to determine whether MHA has acceptable FM arrangements in place. The assessment entailed a review of its capacity as an implementation agency and its ability to record, control, and manage all the project resources and produce timely, clear, relevant and reliable information for the key stakeholders including GoM and the World Bank.

68. The FM assessment was carried out in accordance with the FM Practices Manual issued by the FM Board on March 1, 2010 and retrofitted on February 4, 2015. These arrangements ensure that the implementing entity: (i) uses project funds only for the intended purposes in an efficient and economical way; (ii) prepares accurate and reliable accounts as well as timely periodic financial reports; (iii) safeguards assets of the project; and (iv) has acceptable auditing arrangements.

69. The assessment revealed that the PIU is not yet established and that MHA does not have relevant experience in the management of projects and programs financed by the World Bank. In addition, the FM system in place has the following capacity constraints: (i) lack of adequate FM staff; (ii) weak internal control; and (iii) lack of adequate accounting and reporting system.

70. As a result of the assessment, the MHA will be required to implement the following action under the PIU that will be established under its responsibility:

Before effectiveness:

- Set up an acceptable project financial and administrative manual;
- Recruit a qualified financial and administrative officer satisfactory to the Association.

No later than four months after effectiveness:

- Acquire, install and customize a computerized accounting software to have an adequate accounting and reporting system;
- Recruit an internal and an external auditor with qualification and experience satisfactory to the World Bank.



71. **Conclusion of the FM assessment**: At present, the FM arrangements in MHA are not yet adequate and do not satisfy the World Bank's minimum requirements under World Bank Policy and Directive on IPF effective in 2017. Consequently, the overall risk for the project is rated as Substantial although mitigating actions will be taken.

Procurement

72. **The New Procurement Framework will be used for all procurement under the project**, in accordance with the 'World Bank Procurement Regulations for IPF Borrowers' dated July 2016 (Procurement Regulations), revised November 2017 and August 2018, and the World Bank's 'Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by International Bank for Reconstruction and Development (IBRD) Loans and IDA Credits and Grants' (revised as of July 1, 2016), as well as the provisions stipulated in the Financing Agreement. MHA prepared the Project Procurement Strategy Document (PPSD), which summarizes the legal and institutional framework for procurement in Mauritania; the processes and key actors; the risks; the quality of the market for contractors, goods and services; and recommendations for contract modalities for the project in light of the Mauritanian context. The MHA also developed the project's procurement plan for the first 18 months. The final list of contracts, their amounts and procurement categories will be defined before project effectiveness and outlined in the PIM and the updated Procurement Plan.

73. A Procurement assessment carried out in May 2019 found that (a) the PIU is not yet established; (b) MHA staff has no relevant experience with World Bank procedures; and (c) neither DH or DA have procurement specialists. To address these gaps, the following actions were included and agreed upon in the Financing Agreement during negotiations:

- Recruitment of a Procurement Specialist for the PIU to ensure quality control of procurement.
- Recruitment of a Procurement Assistant for the DH. This assistant will work in collaboration with the Procurement Specialist of the PIU.

74. In addition, other mitigation actions are foreseen, including:

- Designation, by the Minister of Water Works and Sanitation, of a Procurement Officer (person responsible for procurement management) for the proposed project.
- Creation of an internal Procurement Commission at the project level.
- Training the team in charge of project procurement, the DH and SNDE on the New Procurement Policy for World Bank Investment projects.
- 75. Based on the assessment, the overall risk of implementation in procurement is substantial. The proposed mitigation measures are:
- Update of the SNDE procedures manual and piloting e-procurement within the company, in line with broader efforts to simplify procurement procedures and enhance their transparency in Mauritania.
- Preparation of a manual for administrative and financial procedures and procurement for the PIU; and
- Preparation of a manual for the execution and monitoring of project activities.

C. Legal Operational Policies

Triggered?



Projects on International Waterways OP 7.50	Yes
Projects in Disputed Areas OP 7.60	No

76. Operational Policy (OP) 7.50 has been triggered as the construction of new boreholes and stand posts in Hodh Echargui will draw water from the Dhar de Nema aquifer, a transboundary water resource that is shared with Mali. As per the requirements of OP 7.50, the World Bank notified the Government of Mali on behalf of GoM about this planned intervention. No response was received from the Government of Mali by the end of the notification period. In addition, OP 7.50 was triggered for the rehabilitation activities in Gorgol and Guidimaka, which are expected to draw on waters of the Senegal river, its tributaries or alluvial aquifers. The Senegal River is shared with Senegal, Mali and Guinea. Investments related to the waters of the Senegal River will be limited to rehabilitation and minor expansion, which do not exceed the nature of the existing scheme and will not adversely change the quality or quantity of water flows to other riparian countries. An exception to the notification requirement for these investments was granted by the World Bank regional management on January 30, 2020.

D. Environmental and Social

Environmental and social risks and impacts include the following: (i) sustainability of groundwater resources to support the development and continued functioning of rural and small town water supply systems; (ii) use of local labor for construction in compliance with Mauritanian and ILO standards supplemented by the provisions of the ESS2; (iii) provisions for community health and safety commensurate with community training on construction of household latrines as well as potential increased wastewater associated with increased water supply; poor construction-related waste management, (iv) vegetation clearing; (v) potential negative impacts on physical cultural resources; (vi) management of land acquisition, involuntary resettlement, and voluntary land donation in accordance with national laws and World Bank standards; (vii) access of vulnerable populations to project outcomes. Gender Based Violence assessment will be integrated in site specific ESISs.

Environmental and Social Standards that Apply to the Activities

77. The proposed project is being processed under the new Environmental and Social Framework (ESF) and has been classified moderate for environmental and high for social risks. Eight of the ten environmental and social standards (ESS) are relevant for this project: ESS1 (Assessment and Management of Environmental and Social Risks and Impacts); ESS2 (Labor and Working Conditions); ESS3 (Resource Efficiency and Pollution Prevention and Management); ESS4 (Community Health and Safety); ESS5 (Land Acquisition, Restrictions on Land Use and Involuntary Resettlement); ESS6 (Biodiversity Conservation and Sustainable Management of Living Natural Resources); ESS8 (Cultural Heritage); and ESS10 (Stakeholder Engagement and Information Disclosure). ESS7 (Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities) and ESS9 (Financial Intermediaries) are not currently relevant since no activity will involve financial Intermediaries and there are no Indigenous People in Mauritania.

78. ESS1: The project is classified as High Risk taking into account the high risk of gender-based violence (GBV).

The draft Environmental and Social Management Framework (ESMF) identified the key environmental and social risks and impacts and determined that they are minor, except for GBV. The draft was disclosed in-country on 24 December, 2019 and the final version was disclosed on the Bank website on 13 February 2020. The main GBV risks are associated with: (i) lack of a national framework, and weak capacity, to address GBV; (ii) project activities in rural areas near schools or other places that girls and women use for their daily activities; and (iii)



the recorded high number of GBV cases in refugee camps, where project activities will be carried out. The GBV assessment will be revised within the first year of project implementation once the project sites are specified and as part of the site specific Environmental and Social Impact Assessment (ESIAs). Where needed a GBV Action Plan will then be integrated in the Environmental and Social Management Plan (ESMP). It should be noted that UNHCR already has several GBV preventive and mitigation measures in place, including establishing community structures – a GBV committee, women's groups, school clubs and designating GBV focal points in schools. The security forces also play a major role in the prevention and response to all crimes including GBV in the refugee camp. In addition, a GBV sub-working group comprised of multiple stakeholders meets on monthly basis and a referral pathway has been developed to support any victims of GBV.

79. The overall risks and negative impacts will be managed through the preparation of site-specific environmental and social impact assessments (ESIAs). These will address: (i) sustainability of groundwater resources to support the development and continued functioning of rural and small town water supply systems; (ii) use of local labor for construction in compliance with ESS2; (iii) provisions for community health and safety commensurate with community training on construction of household latrines as well as potential increased wastewater associated with increased water supply; poor construction-related waste management; (iv) vegetation clearing; (v) potential negative impacts on physical cultural resources; (vi) management of land acquisition, involuntary resettlement, and voluntary land donation in accordance with national laws and World Bank standards; and (vii) access of vulnerable populations to project outcomes.

80. The ESMF defines screening mechanisms and monitoring procedures for the identification and management of potential adverse environmental and social impacts and provides a grievance redress mechanism (GRM) with guidance on the collection, recording, handling, and reporting of complaints that may arise during project implementation. The ESMF also includes a robust institutional capacity assessment for the implementation of the ESS and recommends capacity building measures for environmental and social planning and the monitoring of project activities.

81. ESS2: The majority of labor will be locally hired, with the exception of skilled workers who cannot be found in the project location. The risk of labor influx is considered low, given the small-scale nature of the works (e.g. most water schemes serve only a few hundreds of rural residents) and the availability of local contractors to undertake the water and sanitation civil works. A Labor Management Plan (LMP) was prepared and disclosed in-country in December 2019 and on the World Bank website in February 2020 to ensure that ESS2 is applied and complied with. It includes a GRM for all project workers, including provisions for primary supply workers, and the roles and responsibilities for monitoring project workers. Measures relating to occupational health and safety are addressed in the ESMF and will be considered in the site specific ESIAs/ESMPs.

82. ESS3: During the implementation of the project activities, both resource efficiency and pollution prevention and management will be relevant. The site specific ESIAs will determine the source, type, quantity, and risks associated with the waste likely to be generated by the project and, if such waste cannot be avoided, the ESIAs will propose appropriate measures to minimize, reduce and, where not possible, mitigate, the associated risks. In addition, the ESIAs will explore technically and financially feasible measures to improve efficient consumption of water and building materials.

83. **ESS4:** Measures will be put in place to ensure worker safety during civil works, as well as other occupational health and safety preventative measures. As part of this activity, the construction supervision TA firm that will be hired to support project management and ensure that residents and contractors are familiar with, and follow, appropriate safety protocols. Moreover, measures to prevent and mitigate potential GBV risks involving project workers will be included in contractor and worker contracts and codes of conduct.



84. **ESS5: Infrastructure works will be built on existing land owned by the MHA or local municipalities.** However, a more detailed analysis is needed on the impacts on usufructuary rights and private owners. Potential sites will be screened by the Task Team E&S specialist to ensure that negative impacts are minimized and that alternatives are considered in cases where there may be some overlap with private owners or users. A Resettlement Policy Framework, which was disclosed in-country in December 2019 and on the Bank website in February 2020, has been prepared to guide the preparation of subsequent Resettlement Action Plans (RAPs) where land acquisition and involuntary resettlement cannot be avoided. This will be included in the Environmental and Social Commitment Plan (ESCP), which was disclosed in-country and on the Bank website in December 2019.

85. **ESS6:** The ESS on biodiversity conservation and sustainable management of living natural resources is **peripheral to this project**. The ESMF includes provisions excluding water sources that are critical for globally, or nationally cited biodiversity, from being used under the project.

86. **ESS8:** As water supply development, as well as latrine construction, both involve excavation, measures to manage "chance finds" are included in the ESMF. The development of WSS master plans in targeted small towns will include mapping of the oldest known populated areas, as well as any known cultural heritage sites (markets, mosques, burial grounds, etc.) so the screening process will prevent impacts on known cultural heritage.

87. **ESS10:** Stakeholder engagement is a critical tool for social and environmental risk management, project sustainability and success. In consultation with the World Bank, the Recipient has prepared and disclosed on December 24, 2019 a Stakeholder Engagement Plan (SEP) proportional to the nature and scale of the project and associated risks and impacts. The SEP includes a GRM for all stakeholders and will be updated during implementation as needed, and as communications and stakeholder engagement and communications needs evolve. The Recipient will engage in consultations with all stakeholders throughout the project life cycle, paying particular attention to including vulnerable and disadvantaged groups, in order to provide stakeholders with timely, relevant, understandable, and accessible information.

88. The project GRM has been prepared and will be the same for the LMP and the SEP. This GRM consists of two levels. At the internal level: the focal point of the project in the different Wilayas will be in charge of handling complaints. At the external level: there will be four levels of the GRM: local, moughataa (district), wilaya (region) and the central level within the national GRM.

Organizational Capacity and Competency

89. **Responsibility and oversight of the project's overall compliance with national environmental policy and the applicable ESFs of the World Bank will be assigned to the environmental and social specialists within the PIU.** They will serve as the main persons in charge of project implementation and monitoring of environmental and social aspects. In close collaboration with the Environmental Control Directorate within the Ministry of Environment, they will periodically monitor the project's compliance with proposed mitigation measures.

Monitoring and Reporting

90. All bidding documents for civil works will have embedded environmental and social clauses, to enable contractors to follow up on environmental and social due diligence and to mitigate any negative impacts and risks. Contractors will adopt a code of conduct for their workforce in their Contractor-ESMPs. In addition, chance-find procedures will be included in the contractor contracts, and the C-ESMP will include measures to manage physical cultural resources. Overseeing the implementation of the environmental and social clauses will be part of the



tasks of the supervising engineer. Contractors/subcontractors ESMP to be hired for civil works will also include monitoring commitments and regular reporting against them will be expected during implementation.

Citizen Engagement

91. The project will ensure that beneficiaries in project areas are provided with roles in project interventions and provided support to enable them to fully participate as appropriate. The project will consult with civil associations throughout the project cycle, starting before construction until completion of works. This work will build on existing structures in Mauritania, such as the village committees established by UNHCR in 2012 in the Hodh Echargui region. These committees allow rural residents to organize community life, manage their natural resources and prevent conflicts. To complement these structures, the supervision firm will be tasked with holding regular sessions with communities in project areas to explain the proposed interventions, brief them on progress and seek their feedback, which will be reported in the firm's progress reports to the PIU and the World Bank Task Team. With an eye to reducing gender gaps in voice and accountability, separate consultations will be held with women to enable their full participation and women's leadership in the committees will be encouraged.

92. A user satisfaction survey will be conducted as part of project M&E to understand how beneficiaries are being affected, or benefitting from, project interventions. The survey will be undertaken regularly, and its findings of the surveys will be used to improve project implementation and course-correct as needed. Lastly, opportunities to involve young people in civil works will be explored, particularly for those in host communities.

Gender

93. The project has considered ways for closing the gender and/or social inclusion gaps identified in the CPF in line with the WBG gender strategy. A rapid field assessment and a gender analysis were conducted during project preparation to assess gender gaps and propose specific actions and indicators to close these gaps. Annex 6 includes details on the analysis, action plan and M&E framework for gender under the project.

V. GRIEVANCE REDRESS SERVICES

94. Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit <u>http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service.</u> For information on how to submit complaints to the World Bank Inspection Panel, please visit <u>www.inspectionpanel.org</u>.

VI. KEY RISKS

95. **The overall project risk assessment is deemed substantial** (see details in "SORT"). The major anticipated risks of specific relevance to the project and the proposed mitigation measures are described below.



96. **The political and governance policy risk is deemed substantial**. The influence of political elites poses a high risk for inclusive growth and social cohesion. Ethnic stratification and the rapidly growing cohort of youths with no proper job prospects have continued to fuel resentment and undermine the achievement of development goals. Nevertheless, Mauritania has experienced uninterrupted political stability over the last decade and taken a firm stance against radicalization on both political and financial fronts.

97. **The macroeconomic risk is deemed substantial**. Despite the Government's prudent budget policies and the gradual recovery of global commodity prices, the country's economy remains vulnerable to external shocks. Although the current account deficit has dropped, it is still substantial and poses a challenge to external financing mobilization and debt sustainability. In addition to budget support, the three-year program concluded with the IMF will provide financing to sustain macroeconomic stability and reforms aimed at diversification.

98. **The sector strategy and policy risks are deemed moderate**. National and sector strategies have been developed and implemented with the aim of improving access to drinking water and sanitation for all, with the right quantity, quality and at affordable prices. Set out in the Poverty Reduction Strategy Paper 2001-2015 and the sector strategies (2006, 2009 and 2012), this goal has been replicated in a new sector strategy (currently under validation) and in the SCAPP 2016-2030, which formally set out the Mauritania's sustainable development policy objectives to be achieved by 2030.

99. **The technical design risk is deemed moderate.** The technology and process used in the design are wellknown in Mauritania by the MHA as they have been applied in operations financed by other donors (AFD, African Development Bank (AfDB), European Union, etc.)

100. The institutional implementation and sustainability capacity risk is deemed substantial. As the institutional anchor of the project, MHA has entrusted the implementation of the drinking water component to the DH and the sanitation component to the DA. Given MHA's current organization, this two-headed project implementation structure calls for extra coordination. In this regard, the PIU will be tasked with ensuring smooth coordination among all implementation agencies. In addition, water and sanitation engineers will be hired as part of the TA firm to guarantee proper project implementation and build the capacities of the MHA.

101. The fiduciary risk is deemed substantial as the proposed executing agency has no experience with World Bank fiduciary procedures. However, it has some experience with other external financial agencies like AFD and AfDB. To mitigate these risks, the World Bank team will constantly endeavor to build the executing agency's fiduciary management capacities throughout implementation. These efforts will include hiring qualified and experienced procurement and FM specialists for the project.

102. Environment and social risks are deemed moderate for environment and high for social. As previously mentioned, the main E&S risks relate to social risks related to GBV. Discussions with UNHCR highlighted some of the preventive and mitigation measures being taken against GBV in the refugee camp, including putting in place community structures – a GBV committee, women's groups, school clubs and designating GBV focal points in schools – and others. The security forces also play a major role in the prevention and response to all crimes including GBV in the refugee camp. In addition, a GBV sub-working group meets on a monthly basis and sees the participation of all partners and stakeholders including local authorities as well as refugees. The GBV assessment will be revised within the first year of project implementation once the project sites are specified and any residual risks will be managed during project implementation. The risk rating may be adjusted to consider mitigation actions and to align with assessments undertaken by other projects under preparation in Mauritania.

103. The stakeholder risk is deemed moderate. Stakeholders have been involved in the project preparation process in order to ensure their ownership of the project implementation phase. Following experience from



similar water and sanitation projects financed by other lenders, there has been no objection to the implementation of the project components, including relatively sensitive issues like delegating public water services to the private sector.

104. The risks related to the refugees and host community engagement are substantial. Considering that the provision of water and sanitation services in refugee areas is a new area of engagement for the WBG in Mauritania, in which there is limited knowledge and significant sensitivities. However, the Government's overall acceptance of refugees and its general willingness to support their actual inclusion provides a supportive environment for the World Bank's engagement. Key related risks include:

- a) **Refugee protection risk**: While the GoM has developed a Refugee Protection Policy Letter in 2018 and committed to several measures to enhance the wellbeing of refugees (see Annex 5), some risks remain as to whether these measures will be implemented in practice. The Association will continue to monitor the developments and remain in close contact with both the GoM and UNHCR.
- b) Security risk: Increased security threats in Mauritania itself, along the Southern border with Mali (Hodh El Gharbi and Hodh Echargui), would impact the ability of GoM to maintain peace and stability in the area. However, government authorities consulted during project preparation have indicated little security risk in project areas.
- c) **Implementation challenges**: The WBG has very little reach and experience working in the south-eastern part of Mauritania, which will make for a challenging environment during implementation. Mitigation measures will be developed such as protocols for regular works supervision in the PIM; undertaking regular field visits during implementation support missions; and monthly progress reports from the PIU. In addition, the MHA knows the project areas well and will also closely supervise through its DRHAs.



VII. RESULTS FRAMEWORK AND MONITORING

Results Framework

COUNTRY: Mauritania Water and Sanitation Sectoral Project

Project Development Objectives(s)

To increase access to improved water and sanitation services in selected rural areas and small towns, and to strengthen the performance of sector institutions.

Project Development Objective Indicators

Indicator Name	DLI	Baseline	Intermediate Targets	End Target	
			1		
Increasing access to water and sanitation service	s in sele	ected project areas			
Number of people provided with access to improved water sources (Number)		0.00	60,000.00	131,000.00	
Of which host communities (Number)		0.00	15,000.00	35,000.00	
Number of people provided with access to improved sanitation facilities (Number)		0.00	16,000.00	30,000.00	
Of which refugees (Number)		0.00	7,000.00	15,000.00	
Of which host communities (Number)		0.00	3,000.00	7,000.00	
Strengthen the performance of sector institutions					
Groundwater reports produced and disseminated (Yes/No)		No	No	Yes	
Proportion of water systems delegated to private operators in project areas (Percentage)		0.00	25.00	65.00	



Indicator Name	DLI	Baseline	Intermediate Targets	End Target
			1	
MHA staff trained and equipped to undertake strategic planning and project management activities (Number)		0.00	25.00	60.00
Of which women (Number)		0.00	4.00	10.00

Intermediate Results Indicators by Components

Indicator Name	DLI	Baseline Intermediate Targets		End Target				
			1					
Component 1: Access to water and sanitation service	Component 1: Access to water and sanitation services in Assaba, Gorgol and Guidimaka							
Water connections constructed under the project (Number)		0.00	4,000.00	9,500.00				
Standposts constructed under the project (Number)		0.00	120.00	281.00				
Boreholes drilled and equipped under the project (Number)		0.00	40.00	97.00				
Number of people benefitting from improved water services (Number)		0.00	105,000.00	223,000.00				
Number of schools equipped with latrines and handwashing facilities (Number)		0.00	70.00	168.00				
Number of health centers equipped with latrines and handwashing facilities (Number)		0.00	35.00	84.00				
Satisfaction rate of users of WSS services (Percentage)		0.00	50.00	70.00				
of which sanitation services (Percentage)		0.00	50.00	70.00				
of which water services (Percentage)		0.00	50.00	70.00				

Component 2: Access to water and sanitation services in refugee camp and host communities (2 hodhs)



Indicator Name	DLI	Baseline	Intermediate Targets	End Target
			1	
Standposts constructed under the project (Number)		0.00	50.00	119.00
Number of boreholes drilled and equipped under the project (Number)		0.00	35.00	83.00
People benefitting from improved water services (Number)		0.00	50,000.00	118,000.00
of which refugees (Number)		0.00	25,000.00	56,000.00
Number of household latrines constructed under the project (Number)		0.00	1,000.00	2,400.00
Satisfaction rate of users of WSS services (Percentage)		0.00	50.00	70.00
of which water services (Percentage)		0.00	50.00	70.00
of which water services (Percentage)		0.00	50.00	70.00
Component 3: Institutional support, capacity buil	ding an	d project management		
Piezometers constructed under the project (Number)		0.00	8.00	20.00
Technical assistance recruited for MHA on project management (Yes/No)		No	No	Yes
Adoption of SNDE's Performance Contract (Yes/No)		No	No	Yes
Training plan adopted for MHA's departments (Yes/No)		No	Yes	Yes
Completion of studies on groundwater aquifers (Number)		0.00	1.00	2.00
Proportion of interns hired by MHA who are female (Percentage)		0.00	15.00	30.00



Monitoring & Evaluation Plan: PDO Indicators					
Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Number of people provided with access to improved water sources	This indicator measures the cumulative number of people provided with access to improved water sources financed by the Project in targeted areas. This includes piped household connections and community water points (public standposts). The definition of 'improved water sources' follows that of the Joint Monitoring Program of UNICEF and the World Health Organization. The number of people served will be calculated by adding the results of multiplying (a) the actual number of household connections newly installed under the Project, by (b) the estimated number of people per household connection, and of multiplying (c) the actual number of standposts	Semestrial	Operators' commercial information system	Operators will report the cumulative number of connections and standposts to ONSER/ARE	Project Coordination Unit(PCU) will consolidate data verified by ONSER/ARE and proceed with calculations.



	newly installed, by (d) the estimated number of people served per standpost.				
Of which host communities	Number of people in host communities i.e. Hodh Chargui and Hodh Gharbi benefitting from new access to improved water sources (piped water connections or standposts) under the project.	Annual	Supervision engineers	Supervision engineers will submit monthly progress reports to PIU, which will collate and track progress every year.	PIU
Number of people provided with access to improved sanitation facilities	This indicator measures the cumulative number of people who benefited from improved sanitation facilities that have been constructed through the Project in selected areas. Improved sanitation facilities include pit latrine; ventilated improved pit latrine; pit latrine with slab; and composting toilet. The definition of 'improved sanitation facilities' follows that of the UNICEF- World Health Organization Joint Monitoring Program. The number of people provided with access will be estimated by multiplying the	Semestrial	Progress reports	Supervision engineers will report the number of constructed latrines effectively used by households to the PCU.	Project Coordination Unit(PCU)



	actual number of improved sanitation facilities with the estimated number of people per household using the improved sanitation facility.				
Of which refugees					
Of which host communities	Number of people in Hodh Ech Chargui and Hodh el Gharbi benefitting from improved sanitation through public latrines.				
Groundwater reports produced and disseminated	The indicators refers to the delivery of at least 2 reports produced by CNRE on groundwater resources in Mauritania. This will consist of (i) collecting information provided by piezometers (ii) modeling, analyzing and writing a report based on this information and other research and (iii) disseminating the reports nationally and internationally in accordance with agreed format and scope.	Annual	Progress reports	CNRE publication	PCU
Proportion of water systems delegated to private operators in project areas	This indicator will assess the percentage of rehabilitated or new water systems that	Annual	Progress reports	ARE will confirm that all delegation contracts have been prepared	PMU



	are delegated to private operators under the project. For the purposes of the project, "delegate" entails preparing the bidding documents for the water systems and initiating the call for tenders.			and that the bidding process has been launched.	
MHA staff trained and equipped to undertake strategic planning and project management activities	This indicator aims to strengthen MHA's project planning and management abilities across the entire project cycle: setting technical standards and norms; develop investment programs; procurement; works supervision and quality control; and monitoring and reporting. Training and technical assistance will be provided to MHA on these and other related topics in order to improve its performance as a titular authority for water and sanitation.	Annual	MHA	MHA annual reports	MHA and PIU
Of which women	Number of women from water sector institutions trained in planning and project management under the project. Eligible institutions include: MHA departments, SNDE, CNRE	Annual	PMU reports	Training certificates provided to participants after each training is completed.	PMU



	and ONSER.				
	Monitoring & Evaluatio	n Plan: Intern	nediate Results	Indicators	
Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Water connections constructed under the project	Number of household service connections constructed and receiving water in Assaba, Gorgol and Guidimakha	Bi-annual	Supervision firm reports	Contractors will report the cumulative number of standposts to the supervision firm, which will verify the numbers and submit the final number to the PIU.	PIU
Standposts constructed under the project	Number of standposts constructed in Assaba (target = 73), Gorgol (target = 98) and Guidimakha (target = 110) under the project	Bi-annual	Supervision firm reports.	Supervision engineers will submit monthly reports to PIU on the number of standposts constructed during the reporting period. PIU will verify the data and report to the Task Team on the progress during the reporting period.	PIU
Boreholes drilled and equipped under the project	Number of boreholes drilled and effectively producing water in Assaba, Gorgol and Guidimakha	Bi-annual	Progress reports from construction supervision firm	Supervision engineers will submit monthly reports to PIU on the number of standposts constructed during the reporting period. PIU	PIU



				will verify the data and report to the Task Team on the progress during the reporting period.	
Number of people benefitting from improved water services	Number of people served by piped systems rehabilitated under the project in Assaba, Gorgol and Guidimakha.	Bi-annual	Supervision firm reports	Supervision engineers will report on the satisfactory completion of rehabilitation works of each targeted system. PIU will verify the data and report to the Task Team on the progress during the reporting period.	PIU
Number of schools equipped with latrines and handwashing facilities	Cumulative number of schools equipped with latrine blocks and hand- washing facilities in Assaba, Gorgol and Guidimakha under the project.	Bi-annual	Progress reports from supervision firms	Supervision engineers will submit monthly reports to PIU on the number of latrine blocks and hand- washing facilities constructed during the reporting period. PIU will verify the data and report to the Task Team on the progress during the reporting period.	PIU
Number of health centers equipped with latrines and handwashing facilities	Cumulative number of health centers equipped with latrine blocks and hand-washing facilities in	Bi-annual	Progress reports from supervision firms	Supervision engineers will submit monthly reports to PIU on the number of health	PIU



	Assaba, Gorgol and Guidimakha under the project.			centers with latrine blocks and handwashing facilities implemented during the reporting period. PIU will verify the data and report to the Task Team on the progress during the reporting period.	
Satisfaction rate of users of WSS services	Results from survey taken with beneficiaries in Assaba, Gorgol and Guidimakha on their satisfaction with water and sanitation facilities and services project through the project. The survey results will be disaggregated by water and sanitation and further disaggregation will be done for refugees/ host communities and men/ women. However, to keep the results framework simple, only the water/ sanitation parameters will be adopted as part of the official results.	Beginning of project and end of project	Supervision firm reports	The supervision firm will carry out the survey of project beneficiaries at the beginning of the project and at the end. The results will be submitted to the PIU for verification and will then be submitted to the Bank Task Team for use.	PIU
of which sanitation services	Measures the satisfaction of users in Assaba, Gorgol and Guidimaka with the sanitation facilities services	Measured at beginning and end of	Supervision firms and PMU	Supervision firm will undertake the survey under PMU's control.	PMU



	provided under the project.	project (twice)			
of which water services	Measures the satisfaction of users in Assaba, Gorgol and Guidimaka with the water facilities services provided under the project.	Beginning and end of the project (twice).	Supervision firms and PMU	Supervision firms conduct the surveys under the control of the PMU.	PMU
Standposts constructed under the project	Number of standposts constructed in Hodh Chargui (target = 60) and Hodh Gharbi (target = 59) under the project.	Annual	Supervision firm reports, as validated by PIU.	Contractors will report the cumulative number of standposts to the supervision firm, which will verify the numbers and submit the final number to the PIU.	PIU
Number of boreholes drilled and equipped under the project	Number of boreholes drilled and effectively producing water in Hodh Chargui and Hodh Gharbi	Bi-annual	Progress reports from supervision firm	Supervision engineers will submit monthly reports to PIU on the number of boreholes constructed during the reporting period. PIU will verify the data and report to the Task Team on the progress during the reporting period.	PIU
People benefitting from improved water services	Number of people served by piped systems rehabilitated under the project in Hodh Chargui and Hodh Gharbi	Bi-annual	Reports from supervision firm	Supervision engineers will report on the satisfactory completion of rehabilitation works of each targeted system and will provide	PIU



				a count of beneficiaries in the project area. PIU will verify the data and report to the Task Team on the progress during the reporting period.	
of which refugees	Number of refugees in the M'bera Camp benefiting from improved water supply due to the rehabilitated water system under the project.	Annual	Supervision firm progress reports.	Contractors will report on progress in rehabilitating the camp's piped water system to the supervision firm, which will verify the numbers and submit the final number to the PMU.	PMU
Number of household latrines constructed under the project	Cumulative number of household latrines constructed in M'Bera camp under the Project.	Bi-annual	Progress reports from construction supervision firm.	Supervision engineers will submit monthly reports to PIU on the number of household latrines constructed during the reporting period. PIU will verify the data and report to the Task Team on the progress during the reporting period.	PIU
Satisfaction rate of users of WSS services	Results from survey taken with beneficiaries in Hodh Chargui and Hodh Gharbi on their satisfaction with water	Beginning and end of project	Supervision firm reports	Supervision firm will carry out user surveys at the beginning of the project to establish the	PIU



	and sanitation facilities and services project through the project. The survey results will be disaggregated by water and sanitation and further disaggregation will be done for refugees/ host communities and men/ women. However, to keep the results framework simple, only the water/ sanitation parameters will be adopted as part of the official results.			baseline value and again at the end of the project to capture the completion of project interventions. The results will be verified by the PIU and submitted to the Bank Task Team for use.	
of which water services					
of which water services	Measures the satisfaction of users in Assaba, Gorgol and Guidimaka with the water facilities services provided under the project.	Twice: at the beginning of the project and at the end.	Supervision firm and PMU	Supervision firm will conduct the survey under the control and validation of the PMU.	PMU
Piezometers constructed under the project	Cumulative number of piezometers drilled and equipped under the project	Annual	Supervision firm progress reports	Supervision firm will submit reports to PIU and to CNRE for verification. PIU will submit the final report to the Bank.	PIU
Technical assistance recruited for MHA on project management	Technical assistance firm hired to support key institutions - ARE, ONSER,	N/A	PIU progress reports	PIU will verify whether the TA firm has been recruited and is	PIU



	MHA and the PPP Unit - on the project cycle, including: upstream contract preparation, tendering processes, contract award and management, supervision of the engineering firm, works completion, gender, citizen engagement and monitoring and evaluation.			providing the desired services to MHA and sector institutions.	
Adoption of SNDE's Performance Contract	This indicator will assess whether the performance contract has been signed between MHA and SNDE.	Annual	PIU progress reports	PIU will report on the successful development and adoption of the performance contract.	PIU
Training plan adopted for MHA's departments	A training plan developed for MHA, including outline of themes, methodology, budget and M&E plan.	Annual	PIU progress reports	PIU will report to the Bank Task Team on whether the training plan has been finalized and adopted.	PIU
Completion of studies on groundwater aquifers	Completion of the aquifer modeling studies for the Dhar de Nema aquifer and the Grès d'Aioun aquifer.	Annual	CNRE	CNRE will report to PIU on the successful completion of the groundwater studies. PIU will verify and submit the reports to the Bank Task Team.	PIU
Proportion of interns hired by MHA who are female	This indicator measures the share of female interns who are to be hired by MHA	Annual	PIU progress reports.	MHA human resources data	PIU and MHA



during the project cycle.	
This indicator aims to	
strengthen MHA's ability to	
improve the pipeline of	
female water and sanitation	
professionals in its	
structures. Interns will be	
hired from the usual	
channels, including	
universities, vocational	
schools, high schools and	
other academic institutions.	



ANNEX 1: Details on Project Activities

Selection of Project Activities

1. A preliminary selection of project sites was provided by MHA at the identification stage and was carefully examined through a feasibility study. A list of potential project sites was examined during appraisal and validated by the MHA. Several of the sites identified in the feasibility study for new and rehabilitation investments in Gorgol and Guidimakha are located in three Moughataas (Kaedi, Maghama, and Selibaby) which border the Senegal river and include tributaries and areas of its alluvial aquifers. For the final selection of investments to be financed by this project, any new investments which may constitute the use of water or risk of pollution of the Senegal river, its tributaries and alluvial aquifers will be excluded from eligibility for financing. Only rehabilitation works and minor modifications to existing schemes which do not change the existing nature of these scheme will be financed. These criteria for financing will be clearly stated in the project implementation manual. Figure 1.1 provides a map of the project wilayas.

The selection process is primarily based on the needs expressed by the MHA and SNDE, as follows:

2. For drinking water, DH provided a list of investment priorities for the five regions under the project. This list included 210 localities of more than 300 inhabitants that do not have access to safe water facilities. These localities are spread over Gorgol (32), Guidimakha (37), Assaba (18), Hodh Ech Echargui (63) and Hodh El Gharbi (42). The two Hodhs together make up 50 percent of the needs. Following this initial list, a feasibility study was conducted as part of project preparation to verify parameters such as population size and technical feasibility and from this basis, the final list of infrastructures per region was determined.

3. As for urban and semi-urban centers, SNDE expressed its specific needs of infrastructure rehabilitation investments which cover 19 semi-urban centers (localities of more than 5,000 inhabitants), formerly managed by ONSER but which were transferred to SNDE, following the multiple failures of ONSER management. Seven of these centers will benefit from the project through rehabilitation and expansion, after which they will be delegated to private operators.

4. The activities related to sanitation were developed based on the needs expressed by the DA, in consultation with the Ministries of Health and Education. According to the data presented by DA, 1,746 of the 2,283 schools surveyed do not currently have latrines (256 in Assaba, 303 in Gorgol, 193 in Guidimakha, 500 in Hodh Ech Echargui and 494 in Hodh El Gharbi). With regard to health centers, the DA indicated the latrine requirements for 25 centers in Assaba, none in Gorgol, 20 in Guidimakha, 86 in Hodh Ech Echargui and 53 in Hodh El Gharbi.

5. The selection of water and sanitation activities in the M'Bera refugee camp is based on assessments of the existing facilities. A diagnostic report of water and sanitation infrastructure, commissioned by UNHCR, provided useful background information on the profile of the camp, its infrastructure and the surrounding communities. In addition, a World Bank team visited the refugee camp in March 2019 and in November 2019 for field assessments as part of project preparation. Both the report and the field visits helped to inform the design of the water and sanitation interventions in the project design.

6. The activities supporting sector reforms are based on the priority actions identified in the institutional diagnostic that was developed during project preparation.







Source: World Bank's Global Corporate Solutions Cartography Unit, 27 December 2019.



ANNEX 2: Overview of Project Costs

1. The table below provides an overview of the project costs by component and by funding source.

Table 2.1: Overview of Project Costs by Component and Fund	ng Source
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COMPONIENTS	Tatal Dusiant Canta		Of wh	ich IDA
COMPONENTS	Total Project Costs	Of Which Golvi	РВА	RSW
Component 1	22,500,000	2,000,000	20,500,000	0
Component 1.1	21,231,755	1,887,267		
Component 1.2	1,268,245	112,733		
Component 2	12,700,000	1,500,000	0	11,200,000
Component 2.1	8,629,858	1,019,275		
Component 2.2	4,070,142	480,725		
Component 3	13,800,000	1,500,000	9,500,000	2,800,000
Component 3.1	6,708,967	729,236		
Component 3.2	7,091,033	770,764		
TOTAL	49,000,000	5,000,000	30,000,000	14,000,000



ANNEX 3: IMPLEMENTATION ARRANGEMENTS AND SUPPORT PLAN

Implementation Arrangements

1. As described in Section III – Implementation Arrangements of the main text, a Project Implementation Unit (PIU) will be responsible for day-to-day implementation of the project. The scope of the PIU's tasks, as well as the PIU composition, are also described in the main text. As for the technical aspects of the project, these will be implemented by various agencies under the MHA's authority, including the DA, DH, ONSER, SNDE and CNRE, as described in the same section. There will also be a Steering Committee with an advisory and consultative role. As for financial management and disbursement, the PIU will be responsible and a Financial and Administrative Officer will be recruited with the authority to process payments for eligible expenditures under the project.

2. Procurement functions will be shared among various entities. Firstly, MHA will designate a Procurement Officer to manage the preparation of technical documents related to the procurement of civil works for water supply and sanitation for DA, DH and ONSER. An internal Procurement Commission for the project will also be created within MHA to oversee the technical aspects of bidding documents prepared under the project. A Procurement Assistant will be hired to support the DH (which oversees the most volume of investments) in the preparation of technical specifications and tendering documentation. Similarly, SNDE – which has its own Procurement Commission – will be responsible for the technical specifications of procurement documents for the 7 centers it operates that will be part of the project scope. As part of efforts to transition public agencies in Mauritania to e-procurement, the procurement for SNDE centers will be done solely through digital platforms as a pilot under the project. However, for both MHA and SNDE, the bidding process, contracting and contract management will be the responsibility of the PIU. A Procurement Specialist will be hired under the PIU and However, the actual procurement process will be handled by the PIU, which will manage all aspects of contracts once signed.

3. As for environmental and social aspects of the project, the PIU will include both an environmental and social officer, and the latter will be expected to have competencies in gender and citizen engagement. Complementing the PIU's efforts will be the TA firm that will undertake technical audits of designs and civil works; support the WASH campaigns and facilitate the institutional strengthening activities in Component 3. The TA firm will include two supervising engineers who will support the DH in all the technical aspects of the project, including preparation of procurement documents.

Implementation Support Plan

Strategy and Approach for Implementation Support

4. The strategy for implementation support has been developed based on the nature of the project and its risk profile. Special attention will be given to help address risks linked to the reform of the water and sanitation sector and its financial viability, which will include: (i) monitoring the delegation of new built water system to private operators to ensure the sustainability of their financial equilibrium, (ii) assessing progress in designing the sector reform; and (iii) helping to bring consensus on measures designed to maintain the financial equilibrium of the sector.



Implementation Support Plan and Resource Requirements

5. The implementation support plan is built around extensive implementation support provided by the World Bank's technical and operational support staff, including experts in Water and Sanitation and any others needed expertise. It will consist of regular missions, videoconference meetings, and periodic fiduciary and safeguards compliance reviews.

6. The team will conduct missions twice a year to review the project progress and assess any particular constraints or issues for project implementation. Action plans will be prepared at the end of each mission, and adjustments to the project design or institutional arrangements may be recommended as deemed relevant by the missions. Given the large geographic scope of the project, and the fragile environment at the Malian boarder, a national consultant will be hired to conduct site visits in each city every year, while the World Bank staff team will visit two to three localities every year during missions.

7. A mid-term review will be conducted after approximately 30 months of implementation to review performance in depth, based on progress and studies commissioned for the mid-term review, and make any restructuring to the project.

8. The missions will also conduct coordination meetings with main partners (AFD, AfDB, UNICEF, UNHCR, EU) to ensure synergies with other planned and ongoing projects, in the sector. Additionally, the team will maintain regular communication with the UNHCR to ensure alignment with the refugee agenda and proper coordination with other initiatives in Hodh Ech Chargui and Hodh El Gharbi.

9. Based on the outcome of the FM risk assessment, the following implementation support plan is proposed. The objective of the implementation support plan is to ensure that the project maintains a satisfactory FM system throughout the project's life.

FM Activity	Frequency
Desk reviews	
Interim financial reports review	Quarterly
Audit report review of the program	Annually
Review of other relevant information such as interim internal	Continuous as they become
control systems reports.	available
On site visits	
Review of overall operation of the FM system	Annual (Implementation Support
	Mission)
Monitoring of actions taken on issues highlighted in audit reports,	As needed
auditors' management letters, internal audit and other reports	
Transaction reviews (if needed)	As needed
Capacity building support	
FM training sessions	During implementation and as and when needed.

Table 3.1. FM Action Plan



Skill Needs	Number of Staff Weeks (for the duration of the project)	Number of Trips	Comments
Task team leader	40	13	3 implementation support missions during the first year; 2 the following years and technical visits to solve bottlenecks as needed
Water and Sanitation specialists	40	10	Twice a year missions, routine support as needed
Procurement	25	Based in country office	Twice a year missions, routine support as needed
FM	25	6	Once a year mission, routine support as needed
Environmental safeguards specialist	25	10	Twice a year missions, routine support as needed
Social safeguards	25	10	Twice a year missions, routine support as needed
Legal	2	0	Staff weeks if restricting is needed.
Disbursement	2	0	

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ANNEX 4: Economic and Financial Analysis

Methodology and Scope

1. The cost estimates are drawn from: (a) unit costs of mini water systems and regular water systems observed in recent projects; (b) assessments of the rehabilitation needs that were carried out through a previous audit of ONSER systems in the three southern wilayas; (c) SNDE's assessments of the rehabilitation/expansion needs of selected systems in the project areas and of the Kiffa water system; and (d) sanitation costs related to constructing additional latrines. Investment costs consist of: (i) the direct costs of activities of Sub-components 1.1, 1.2, 2.1, and 2.2; (ii) design and supervision costs; and (iii) the cost of Component 3 activities (project management and capacity building activities) that may be partially allocated to the execution of water activities.

2. **Water Supply**. The economic analysis consists of a CBA of the water supply and sanitation activities of the proposed project. The analysis considers an investment program consisting of the water supply sub-components, an allocated portion of the institutional strengthening and project management component, renewal costs, and the incremental (with/without project) costs, as well as the benefits associated with these investments. All calculations are carried out over a 35-year period, using constant 2019 prices and excluding taxes and financing costs.

3. **Investment Costs**. The cost estimates are drawn from: (a) unit costs of mini-AEP and AEP observed in recent projects; (b) assessments of the rehabilitation needs that were carried out in the audit of ONSER systems in the three southern wilayas; (c) SNDE's assessments of the rehabilitation/expansion needs of selected centers in its coverage zone and of the Kiffa water system; and (d) sanitation costs related to constructing additional latrines. Investment costs consist of: (i) the direct costs of activities of Subcomponents 1.1, 1.2, 2.1, and 2.2; (ii) design and supervision costs; and (iii) the cost of Component 3 activities that may be partially allocated to the execution of water activities.

4. **Incremental costs**: Estimates of energy consumption are drawn from Water Master Plans. The unit costs per kWh are based on ARE estimates (for ONSER and small SNDE systems that use diesel-driven generators) and SNDE estimates for Kiffa. The annual maintenance costs of solar pumping are estimated on the basis of similar facilities in the sub-region. As for other O&M costs (Table 4.1), chlorination costs and commercial costs are estimated on the basis of similar facilities in the sub-region; staff cost estimates are drawn from ARE databases; and maintenance costs are estimated on the basis of similar projects in the sub-region.

Item	Mini water system	Regular water system	ONSER system	7 SNDE centers	Kiffa
Energy					
Thermal pumping (MRU/m3 produced)	None	7.4	7.4	7.4	2.5
Solar pumping (MRU/system/year)	12,700	25,400	25,400	25,400	None
Chlorination (MRU/m3 produced)	None	0.29			
Staff costs (MRU/m3 sold)	3.4	6.9	6.9 No incremental costs		
Commercial costs	127 MRU/ new connection/ year				
Maintenance costs	0.5 percent of investments				

Table 4.1: Overview of Project Operating Costs

Sources: MHA, ARE, SNDE and World Bank estimates.

5. **Project Benefits**. As described in the main text, a number of benefits were taken into account for the economic and financial analysis, as summarized in Table 4.2.



Table 4.2: Project Economic Benefits

Activities	Incremental Benefits
Development of access	
Mini and regular water systems	-Incremental water revenues from new stand posts and
	connections, including resale to neighbors.
	-Consumer surplus accruing to beneficiaries
	-Value of time saved.
	-Jobs created and additional income generated.
Systems rehabilitation and expansion	
Rehabilitation and expansion of	-Increased water consumption and increased water revenues
ONSER and SNDE systems and in	from existing users.
Camp M'Bera	-Reduction of energy consumption (thermal pumping) by
	switching to solar.
	-Reduced technical and commercial losses (non-revenue
	water).
	-Jobs created and additional income generated.
Sanitation	
Construction of household latrines	-Direct health benefits (lower incidents of diarrhea and other
and rainwater drainage canals	water borne diseases).
	-Health care cost savings.
	-Increase in female student attendance at school.
	-Decreased flood damage.
	-Incremental revenues from fecal sludge removal.
	-Jobs created and additional income generated.

6. **Incremental Revenues**. The incremental consumption, water prices and revenues are estimated based on: (i) results of household surveys; and (ii) water rates for domestic customers and stand post vendors from the recently approved tariff schedules. The assumptions for estimating incremental revenues accruing to the water utilities are summarized in Table 4.3.

Table 4.3: Consumption and Water Rates

	Consumption (lpcd)		Rate (MRU/m3)		
Location	HH connection Stand post		Household connection	Stand post	
Delegated	35	15	275	300	
services					
ONSER	35	15	250	270	

Source: Household surveys

7. Consumer Surplus. Table 4.4 shows the variation of daily consumption and unit costs paid by:

- Households shifting from fetching water (from distant sources) in the absence of a piped system to a household water connection or to a stand post. The cost of water at stand posts is based on the actual prices per bucket paid by users (from ONSER surveys) and the cost of distant sources on the opportunity costs of fetching water.
- Households living in rehabilitated SNDE centers that would benefit from a service connection. They are assumed to be supplied by neighbors in the "without project" scenario.



8. The consumer surplus is equal to the increase of water consumption multiplied by the difference of the water price paid before and after the project and by the price elasticity (0.5).

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	Without project		With project	
Current/ future source of supply	Consumption (lpcd)	Cost (MRU/m³)	Consumption (lpcd)	Cost (MRU/ m ³)
Distant sources/ stand posts (small water systems)	3	159	15	50
Distant sources/ connection (regular water sources)	3	159	20	25
Neighbor/ own connection				
-7 SNDE centers	8.9	40	20	25
Kiffa	16	40	30	25

Source: ONSER surveys, SNDE and World Bank estimates.

9. **Sensitivity Analysis**. A range of scenarios has been developed to test the sensitivity of the EIRR to the main elements of the economic cash-flows. The variables tested were: (i) investment costs; (ii) operating costs; and (iii) water demand. The outcome of the scenarios is given in Table 4.5, which also provides the switching values of the variables. The project is markedly sensitive to the reduction of water demand, which exhibits the lowest switching value. This primarily affects the sub-component devoted to the development of access. The very strong demand of rural households for service connections could, however, mitigate this risk.

Scenario	EIRR	NPV @ 6% (US\$	Switching value
		million)	
Base scenario	7.4%	5.16	
Investment cost increase 20%	5.6%	-1.76	14.7%
O&M cost increase 20%	6.8%	2.90	43.5%
Overall demand decrease 20%	4.6%	-4.87	10.1%
Combined Investment cost increase	4.9%	-4.24	
10%, O&M cost increase 10%, Overall			
demand decrease 10%			

GHG Emissions

10. The CBA allows to compare the thermal energy consumption of water facilities in the with/without project scenarios. The baseline data are estimated from the thermal energy consumption of existing facilities, while the "with" project scenario accounts for changes resulting from (a) the additional thermal energy consumption generated by the new piped systems, which is quite low, as all mini-AEP and percent of the AEP will use solar pumping; and (b) the thermal energy consumption of the existing facilities after their rehabilitation/expansion, which leads to a shift, whenever feasible, to solar pumping, and to an improvement of energy efficiency and a reduction of NRW. Table 4.6 summarizes the results of the comparison.



Table 4.6: Net Variation of Thermal Energy Consumption (kWh/year)

	2025	2026	2027	2028	2029	2030 and after
Baseline consumption	575,091	593,984	613,533	633,763	654,698	676,363
Consumption of new systems	8,595	8,784	8,978	9,175	9,377	9,584
Consumption of rehabilitated / expanded systems	765,522	768,903	773,224	778,417	784,426	811,624
Net variation	199,027	183,704	168,669	153,829	139,105	144,845



ANNEX 5: Refugee and Host Community – World Bank Program in Mauritania

Country Context

1. One of the more stable countries across the Sahel region, Mauritania hosts a large population of refugees from neighboring conflicts. As of September 2019, Mauritania hosts 56,680 refugees, 95 percent of whom are Malians who have been arriving in the country since 2012. In addition to the large Malian population, there are around 3,000 urban refugees, mostly from Central African Republic (CAR), Syria and Cote d'Ivoire. Most of the refugees in Mauritania live in the arid moughataa (district) of Bassikounou, located approximately 50 kilometers from the Malian border. The Malian refugee population is predominantly concentrated in the M'bera refugee camp, with some small enclaves scattered in host communities near the camp.

2. **Mauritania is a party to several international conventions related to refugees.** These include the 1951 UN Convention Relating to the Status of Refugees, the 1967 UN Protocol Relating to the Status of Refugees, and the 1969 Organization for African Union (OUA) Convention Governing the Specific Aspects of Refugee Problems in Africa. A draft law providing the basis for a national asylum system was developed in 2014 and reviewed by the relevant Government ministries in 2016. The bill is expected to be submitted to the Parliament but the timeline is unclear. The new law would formalize refugee protection, including the commitment to not force refugees to return to insecurity and/or persecution in their country of origin (the principle of "non-refoulement"), grant civil rights and provide access to social services. In the interim, a Decree (number 022 of 2005) regulates the application of the norms contained in the 1951 UN Convention and the 1969 OUA Convention.

3. Assistance for refugees in Mauritania is coordinated by the Ministry of the Interior and Decentralization, through the inter-ministerial National Consultative Commission on Refugees (CNCR). The CNCR has the authority to recommend decisions on the recognition of refugee status for urban refugees, based on positive individual assessments carried out by UNHCR. Refugees from Northern Mali receive their status on a *prima facie* basis. The National Agency for Identification and Population Registration (*Agence Nationale du Registre des Populations et des Titres Sécurisés*, ANRPTS) is responsible for the issuance of identity cards.

4. Humanitarian actors, led by UNHCR and with contributions from the World Food Program, UNICEF, United Nations Fund for Population Activities (UNFPA), International Labor Organization (ILO), Doctors without Borders (*Médecins Sans Frontières, MSF*) and ACF have traditionally provided the bulk of assistance to refugees, and to some extent, host communities in Mauritania. Refugee status, rather than poverty/vulnerability, is the key targeting factor for assistance. Direct support to refugees has been accompanied by the provision of basic social services and activities to promote self-reliance and income generation. However, many of these services are of short duration. Humanitarian actors have opened their services to and made some smaller investments for host populations. However, their support has focused predominantly on refugees and their immediate needs, rather than on social, economic and human capital development to ensure long-term development of both refugee and host communities,

5. Until recently, the southern border regions (Hodh Echargui and Hodh El Gharbi) were not benefitting from much development assistance from the international community. This is changing fast. The Sahel Alliance, a multi-donor initiative that aims to increase financial and technical support to the G5-Sahel countries over 2018-2023, decided to concentrate their efforts there. Similarly, the European Union is supporting an agriculture and pastoralist project in the area. From 2020 onwards,



AFD also plans to support priority infrastructure investments in sectors of wider relevance (Declic II project). AfDB will intervene in these two regions through a project to support the promotion of micro and small enterprises and youth employment more broadly.

6. The local government has limited capacity to support the increasing population and changing service and infrastructure needs in the region. The refugees increase the size of the poor and vulnerable population in the region. Overall, there is weak capacity both in the Bassikounou *moughataa* as well as throughout the region to coordinate an integrated and cost-effective response for regional development. The M'bera refugee camp is an emerging economic center of activities in the sub-region, with impacts key resources such as water, pasture and fire wood. At present, the provision of services and resource management run in parallel between the camp and host region, with little coordination between UNHCR and the relevant line ministries, which limits synergies and cost-effectiveness.

7. Conscious of the likely prolonged nature of forced displacement in the country, GoM is strongly committed to ensuring the protection of refugees while promoting their increased self-reliance and the resilience of the host community. In its 2018 Refugee and Host Community Policy Development Letter, GoM stressed this commitment, including the adoption of a national asylum law. The Government has laid out the following three strategic directions for the national short- and medium-term response to the situation: (i) transforming local economic opportunities in a timely, sustainable, and inclusive manner; (ii) improving social protection and access to basic services; and (iii) strengthening the governance and management of the refugee response.

8. In December 2019, during the first World Refugee Forum, Mauritania, represented by the Minister of Foreign Affairs, made (or reiterated) strong commitments in favor of local solutions for all refugees in Mauritania: (i) to adopt the national asylum law by 2020; (ii) to register all refugees with the civil registry services in order to allow them to 'obtain a national identification number, issue them with a secure national identification card and allow their inclusion in national systems, including statistical systems; (iii) to ensure the inclusion of refugees in health services on the same basis as nationals; and (iv) to ensure that refugees have the same conditions of access to the labor market as nationals.

World Bank Program for refugee and host communities in Mauritania

9. The WBG Board approved Mauritania's eligibility for the IDA 18 RSW in November 2018. Mauritania currently meets the three eligibility criteria: (i) the number of UNHCR-registered refugees, including persons in refugees-like situations, it hosts is at least 25,000 or 0.1 percent of the country population; (ii) the country adheres to an adequate framework for the protection of refugees; and (iii) the country has an action plan, strategy, or similar document in place.

10. The WBG has adopted a programmatic multisectoral approach to support the implementation of the Government's strategy, through policy dialogue, operations and analytical work. The program will take into consideration the fact that this is a new area for the WBG and will complement UNHCR's interventions and policy work. It will also factor in the challenge stemming from a lack of existing WBG engagement in the refugee-affected areas and in the broader region, which borders Mali.

11. The proposed overall development objective of the program is to improve the delivery of basic social and economic services and infrastructure for refugees and host communities in targeted areas. Specifically, this will be achieved through strengthening the institutional capacity of the



Mauritanian Government's social services and selected infrastructure within the two Hodhs. A key synergy across the World Bank programs will be to support the inclusion of the poorest/most vulnerable refugee and host communities' households in targeted interventions to address inequities and promote access to services. Initially the multisectoral program will include sectors prioritized by the Government: (i) health; (ii) social protection; (iii) water and sanitation; and (iv) urban infrastructure—including electricity—and services of intermediate cities. This overall development objective is aligned with the Government strategy, the WBG CPF and the focus areas of the Sahel Alliance.

12. The RSW resources will be allocated to existing projects, building on existing partnerships and delivery mechanisms, or to projects under preparation to extend their activities in the targeted areas. The aim is to create a synergy among those intervention for greater impact to refugees and host communities. The tentative breakdown of the financing between projects is presented in Table 5.1.

Project	PDO	From National PBA	From RSW
Social safety net system II (P171125)	To increase the effectiveness and efficiency of the nationwide adaptive social safety net system and its coverage of poor and vulnerable households, with targeted social transfers, including in refugee and host communities.	US\$27 million	
Support for the health system – Additional Financing (P170585)	To improve utilization and quality of Reproductive Maternal Neonatal and Child Health services in selected regions	US\$8 million	US\$67 million
Water and sanitation sectoral project (P167328)	To Increase access to improved water and sanitation services in selected rural areas and small towns and strengthen the performance of sector institutions.	US\$30 million	
Decentralizati on and urban development (P169332)	To improve (i) improve access to local services in selected localities; and (ii) strengthen the capacity of Local Governments to plan and manage public services	US\$46 million	
TOTAL		US\$111 million	US\$67 million

Table 5.1. Overview of World Bank Pip	peline Operations under the RSW
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13. The Refugee and Host community program will strengthen the "spatial approach" developed by the World Bank in Mauritania and enhance cross-sectoral collaboration between several World Bank Global Practices including Social Protection, Health, Decentration, Urban Development, Water



and Energy (Figure 1 in main section). The spatial approach will also help generate linkages between the host regions and the camp as an economic center. The program will seek to maximize synergies with other existing and pipeline projects (such as the Regional Sahel Pastoralism Project – P147674 – or the Youth Employability Project - P162916). Given the overall development challenges facing the region, many of which are closely linked to efforts at the national level, the WBG could take advantage of many of its core areas of engagement to mitigate some of the existing pressures and to benefit host community and/or refugees. The World Bank program for refugees and host communities will seek to complement other partners' interventions, considering the value-added and current expertise of the WBG in Mauritania as well as donors' ongoing and upcoming operation.



ANNEX 6: Gender Analysis and Action Plan

a) Analysis on gender and WASH

1. A gender assessment has been undertaken to analyze how gender affects the experience of receiving water, sanitation and hygiene services in target areas. Consultations with beneficiaries and government officials during project preparation confirmed that women and girls spend between 30 and 45 minutes a day collecting water. As for sanitation, there is a strong need for female-friendly latrines, which the project will promote in the design and construction phase. Not only do women and girls have different physical needs from men and boys, but they also have greater need for privacy when using toilets and when bathing. Unsecured toilets and bathrooms make them more vulnerable to rape and other forms of gender-based violence. In addition, the lack of latrines and water in schools act as indirect variables for gender-based exclusion to education and early marriage. There is evidence that providing latrines at school reduces absenteeism among the targeted school-age population²⁵, and that separate latrines for girls, including when designed for proper management of menstrual hygiene, substantially increase school attendance and reduction in girls' school dropout rates, resulting in better education and further increased economic opportunities for young adult women.

2. There is also strong evidence on the link between access to clean water and sanitation and health outcomes for women. For instance, approximately 11 percent of maternal deaths are caused by sepsis, an infection that is directly linked to unhygienic conditions during labor and childbirth (Say et al. 2014). Women living in homes with poor sanitation or water supply had on average 3.07 or 1.75 times the odds of maternal mortality, respectively, compared to women with better sanitation or adequate water (Benova, Cumming, Gordon, Magoma & Campbell, 2014). In rural India, a study found that women who reported to open defecate had 2.22 times the odds of experiencing preterm birth (Padhi et al., 2015) while another study, in Nepal, found that women who reported to defecate in the open had 1.71 times the risk of stillbirth (Ghimire et al., 2017). Lastly, research in India showed that deterioration in water quality increases the risk of neonatal mortality by 10 to 15 percentage points (Do et al, 2018).

3. The gender assessment also highlighted gender gaps in water institutions. For instance, MHA lacks a gender strategy and has no experience in integrating gender aspects at a programmatic and strategic level. In addition, women are under-represented in MHA and sector entities, particularly in leadership positions. Of the 230 staff members in MHA, 33 percent are women but only 5 percent of managers are women. Despite the Minister of Hydraulics and Sanitation being a woman, there are no female heads of department anywhere within MHA. This challenge is not unique to Mauritania, as research shows that women are almost universally underrepresented in water sector employment, especially in managerial positions. Gender stereotypes in the labor market often lead to small numbers of women accessing work and being promoted in water utilities. These barriers can be compounded by gender discrimination within these organizations in hiring and in work practices, procedures, and environment, which in turn further constrain women's participation and limit their prospects for career growth in the sector. This low level of participation and lack of diversity can contribute to a narrow vision and gender biases in approaches and management in such organizations, in addition to constraining opportunities for women²⁶.

²⁵ UNESCO estimates 10 percent of girls in Sub-Saharan Africa miss school during their period, often due to the lack of proper WASH facilities.

²⁶ World Bank (2019). Women in Water Utilities (Vol 1: Executive Summary and Vol 2: Breaking Barriers).

http://documents.worldbank.org/curated/en/497101566505167733/Breaking-Barriers



b) Proposed Gender Actions

4. The project will undertake the following actions to reduce the gap in access to water and sanitation services between men and women, to encourage the participation of women in project implementation and to promote gender parity through project interventions. These actions include:

i) **Gender friendly infrastructure**: The project will design latrines in schools, health centers and public places that are adapted to women's needs, with features such as : separate male and female sections; solid cubicle doors that can be locked from the inside; adequate lighting; access to water and soap in each toilet block for cleaning of reusable menstrual products and provision of menstrual waste disposal. These features should see better health outcomes for women and higher enrolment and retention rates for girls in schools. For water supply, the project will increase the number of individual connections to reduce time spent collecting water by girls and women.

ii) **Participation of women in project design, implementation and sustainability**: As per the citizen engagement description, consultations with women's groups will be undertaken to brief them on project progress and receive their feedback. For instance, for the construction of latrines, consultations will be undertaken to discuss the location with women and girls, as they know best which areas are safest and most convenient for them. For the operations and maintenance phase, the project will work with local communes to ensure that male and female caretakers or toilet attendants are appointed and duly paid in all public latrines. The user surveys planned under the project will also provide reporting on female beneficiaries.

iii) **Employment generating activities**: The FSM activity will enable women to use the treated sludge for reforestation outside the camp. While this activity is not expected to be remunerated, training will be provided to the women on this practice, thus providing them a useful skill that can be usefully applied elsewhere. It is also expected that improved access to water will encourage women to engage in market gardening activities and to sell their produce for cash, a practice reported to take place in rural areas that receive water.

iv) **WASH campaigns**: These will incorporate messages targeted at women and girls' health, including menstrual health which is not currently covered by existing campaign materials.

v) **Gender action plan and training for MHA**: Actions include developing and rolling out a gender strategy for the MHA and its water and sanitation specialized agencies. As part of this effort, a review of MHA's human resources policies will be developed including gender equality in hiring, payment, and promotion and measures taken grow the pipeline of women in technical areas and senior management; and reduce the gender pay gap as well as offering training to MHA on mainstreaming and monitoring gender gaps in operations. Specific activities will also be undertaken with CNRE, particularly by creating partnerships with universities and technical institutes to grow a pipeline of women in technical fields (engineers and lower technicians) for instance through internships or CNRE-sponsored academic competitions.

The proposed gender action plan is consistent with the ongoing CPF, which aims to address a wide variety of gender-related constraints to poverty reduction and shared prosperity. This includes activities targeting gender constraints related to schooling, technical, vocational, and business skills, reproductive health and behavior; female genital mutilation and skills training for women through selected ecological projects. The action plans' activities related to latrine construction, water supply, WASH campaigns, fecal sludge management and institutional strengthening all support the CPF.



ANNEX 7: Team Composition

World Bank Staff

Name	Role	Specialization	Unit
Mohamed Nanzoul	Team Leader(ADM Responsible)	Water supply and sanitation (WSS)	SAFW1
Dambudzo Josephine Muzenda	Co- Team Leader	Water supply and sanitation (WSS)	SAFW1
Brahim Hamed	Senior Procurement Specialist(ADM Responsible)	Procurement	EA2RU
Fatou Fall Samba	Senior Governance Specialist (ADM Responsible)	Financial management	EA2G1
Lucienne M. M'Baipor	Senior Social Development Specialist(ADM Responsible)	Social development and safeguards	SAFS4
Medou Lo	Senior Environmental Specialist (ADM Responsible)	Environmental safeguards	SAFE1
Batouly Dieng	Team Member	Program management	AFMMR
Brahim Ould Abdelwedoud	Team Member	Urban and rural development	GSU11
El Hadramy Oubeid	Team Member	Public sector and governance	EA2G1
Farouk Mollah Banna	Team Member	Urban sanitation	SAFU1
Jean Vincent Koua	Team Member	Program management	SAFW1
Laura Bonzanigo	Team Member	Water resources management	SAFW1
Medina Diabira	Team Member	Program assistance	AFMMR
Pier Francesco Mantovani	Team Member	Water supply and sanitation	SAFW2
Derek Ensing	Team Member	Economist	HRDPA

Extended Team

Name	Title	Organization	Location
Richard Verspyck	Consultant	World Bank	Paris, France
Moussa Beddiyouh	Consultant	World Bank	Nouakchott, Mauritania
Amédé Ferré	Consultant	World Bank	Lausanne, Switzerland



ANNEX 8: Map of Bank Interventions as per the Spatial Convergence Approach



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