

INDEPENDENT EVALUATION UNIT
OFFICE OF EVALUATION AND INTERNAL OVERSIGHT

INDEPENDENT TERMINAL EVALUATION

Environmentally Sound Management of Municipal and Hazardous
Solid Waste to Reduce Emissions of Unintentional Persistent
Organic Pollutants in Senegal

UNIDO Project ID: 100114

GEF Project ID: 4888



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

Distr. GENERAL

EIO/IEU/22/R.16

August 2023

Original: English

This evaluation was managed
by the responsible
UNIDO Evaluation Officer
with quality assurance by the
Independent Evaluation Unit

The designations employed and the presentation of material in this publication do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations Industrial Development Organization (UNIDO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

Mention of company names and commercial products does not imply the endorsement of UNIDO. The views and opinions of the team do not necessarily reflect the views of the involved Governments and of UNIDO.

This document has not been formally edited.

Acknowledgements

The Evaluator of the “Environmentally Sound Management of Municipal and Hazardous Solid Waste to Reduce Emissions of Unintentional Persistent Organic Pollutants in Senegal” project would like to thank the many individuals who contributed their time, expertise, observations, and experiences in support of this terminal external evaluation and who provided valuable feedback.

Numerous contributors at the national and local levels enriched the evaluation with their insightful contributions. The Evaluator would like to express her sincere appreciation to the UNIDO HQ team, all the national and local stakeholders including representatives of the civil society in Tivaouane and Ziguinchor who helped obtain a clear understanding of the national perspective.

Special thanks to the Project team for their valuable assistance throughout the evaluation mission and in particular to the National Project Coordinator, Lhyxzas Tchimboungou who spared no effort to ensure that the mission took place in the best conditions.

Nadia Bechraoui, International Expert
Senior Evaluator

Table of Contents

- Acknowledgements2
- Acronyms and abbreviations4
- Executive summary5
- Project Information summary5
- Evaluation purpose and methodology6
- Main conclusions7
- The Evaluation Ratings Table8
- Recommendations Table8
- Lessons learned9
- Good practices9
- 1. Introduction9
 - 1.1. Evaluation objectives and scope9
 - 1.2. Overview of the Project Context9
 - 1.3. Overview of the Project10
 - 1.4. Reconstructed theory of Change11
 - 1.5. Evaluation Methodology13
 - 1.6. Limitations to the terminal evaluation16
- 2. Project’s contribution to development results17
 - 2.1. Project’s achieved results and overall effectiveness17
 - 2.2. Progress towards impact26
 - 2.2.1 Behavioral change26
 - 2.2.2 Broader adoption27
 - 2.2.3 Education of emissions of uPOPs from hazardous and municipal waste27
 - in the two pilot municipalities27
- 3. Project’s quality and performance28
 - 3.1. Design28
 - 3.2. Relevance29
 - 3.3. Efficiency30
 - 3.4. Sustainability32
 - 3.5. Gender mainstreaming33
- 4. Performance of partners34
 - 4.1. UNIDO34
 - 4.2. National counterparts35
- 5. Factors facilitating or limiting the achievements of results35
 - 5.1. Monitoring & evaluation35
 - 5.2. Results-Based Management36
 - 5.3. Other factors36
 - 5.4. Overarching assessment and rating table37
- 6. Conclusions, recommendations and lessons learned38
 - 6.1. Conclusions38
 - 6.2. Recommendations39
 - 6.3. Lessons learned39
 - 6.4. Good practices39
- Annex 1: Evaluation Matrix40
- Annex 2: Interview protocol50
- Annex 3: List of interviewees54
- Annex 4: List of documents consulted56
- Annex 5: Terms of Reference58

ACRONYMS AND ABBREVIATIONS

Acronyms	Definitions
AWP	Annual Work Plan
BAT/BEP	Best Available Technologies/Best Environmental Practices
BMW	Biomedical Waste
CEO	Chief Executive Officer
CRC	Waste interim storage and sorting facilities.
DEEC	Department of Environment and Classified Establishments
EEED	Electrical and Electronical Equipment Dismantling
ESM	Environmentally Sound Management
GEF	Global Environment Facility
GEWE	Gender Equity and Empowerment of Women
HQ	Headquarters
LC	Local Coordinator
MEDD	Ministry of Environment and Sustainable Development
M&E	Monitoring and Evaluation
MTE	Mid-Term Evaluation
PGDSU	Sustainable Urban Solid Waste Management Project
PMU	Project Management Unit
PNC	Project National Coordinator
PNGD	National Program for waste management
PRODEMUD	Project on the Environmentally Sound Management of Municipal and Hazardous Solid Waste to reduce emissions of Unintentional Persistent Organic Pollutants
PROMOGED	Project for the promotion of the integrated management and economy of solid waste
PSC	Project Steering Committee
RBM	Results Based Management
SONAGED	The National Waste Management Company
TE	Terminal Evaluation
TEQ	Tons Equivalent
TOC	Theory of Change
TORs	Terms of Reference
UNIDO	United Nations Industrial Development Organization
uPOPs	Unintentionally Produced Persistent Organic Pollutants

EXECUTIVE SUMMARY

Project Information summary

PROJECT IDENTIFICATION		
GEF Project ID:	4888	
UNIDO SAP ID:	100114	
Region:	Africa	
Country:	The Republic of Senegal	
Project Title:	Environmentally Sound Management of Municipal and Hazardous Solid Waste to Reduce Emissions of Unintentional Persistent Organic Pollutants	
GEF Implementing Agency:	UNIDO	
GEF Executing partners	Ministry of Environment and Sustainable Development - Directorate of Environment and Hazardous Facilities (DEEC), Ministry of Good Governance, Urban planning and Local Authorities, Municipalities of Tivaouane et de Ziguinchor	
GEF Focal area and operational programme	Persistent Organic Pollutants/ CHEM-1/ GEF 5	
DATES		
Milestone	Expected date	Actual date
CEO endorsement/approval	14 October 2014	14 October 2014
Agency approval date	30 October 2014	30 October 2014
Implementation start		20 January 2015
Midterm evaluation		June-August 2019
Project completion	20 January 2020	20 January 2022
		19 October 2022
		31 March 2023
Terminal evaluation completion	19 December 2021	February – March 2023
	30 November 2022	
Project closing		31 March 2023

FINANCIAL INFORMATION				
GEF Contribution	1,820,000		16,656,186	
Project Management cost		180,000	374,000	
TOTAL		2,000,000	17,030,186	
COFINANCING				
SOURCES	NAME	TYPE	PLEDGED	ACTUAL ¹
National Government	MEDD	Cash	1,493,000	5,022,200
National Government	MEDD	In kind	3,955,000	
National Government	PNGD	Cash	6,775,650	5,601,129
GEF Agency	UNIDO	Cash	50,000	50,000
Local Government	Municipality of Ziguinchor	Cash	3,109,725	430,839
Local Government	Municipality of Ziguinchor	In kind	1,554,863	
Local Government	Municipality of Tivaouane	Cash	91,948	14,474
Total co-financing			17,030,186	11,118,642

Evaluation purpose and methodology

The purpose of this terminal evaluation is to provide a comprehensive assessment of the performance of the US\$ 2M GEF-financed project entitled "Environmentally Sound Management of Municipal and Hazardous Solid Waste to Reduce Emissions of Unintentional Persistent Organic Pollutants in Senegal" (hereafter referred to as the PRODEMUD). This project started on 20 January 2015 and is expected to end on 31 March 2023. Its overall objective was to reduce releases of POPs from hazardous and municipal waste in two pilot municipalities, Tivaouane and Ziguinchor, by strengthening the technical and institutional capacities of private sector entities able to sustain and replicate best available technologies/best environmental practices (BAT/BEP) demonstrated under the project. The project was part of the implementation of the National Implementation Plan (NIP) under the Stockholm Convention ratified by the Government of Senegal on 8 October 2003.

The TE was guided by an evaluation matrix (see Annex 1), structured around the OECD DAC evaluation criteria of relevance, coherence, effectiveness, efficiency, sustainability, and impact and additional criteria such as gender mainstreaming, design, performances of partners, Monitoring & Evaluation, and Result-based Management. The evaluation matrix was used to organize available evidence by key evaluation questions, to attribute a performance rating to each criterion, and to draw evidence-based conclusions and recommendations. Gender considerations were

¹ Source: PMU as of 31 August 2022 for the co-financing
Exchange rate : 1US\$ = 500 FCFA

mainstreamed in this evaluation using gender-specific questions to assess the extent to which the project was gender sensitive.

The TE collected, analyzed and triangulated qualitative and quantitative data from primary and secondary sources to ensure the validity of the findings, conclusions and recommendations.

A desk review of all relevant and available project-related documents was conducted. The list of documents consulted is presented in Annex 3.

Over 40 stakeholders, of whom 8 were women, were consulted, using semi-structured face-to-face or remote interviews and focus group interviews. Key informants included UNIDO Staff, project team, government officials at national and local levels, representatives of civil society organizations and beneficiaries at community level. The list of persons consulted is presented in Annex 2.

Field visits with direct observations were organized in the two targeted municipalities of Tivaouane and Ziguinchor, from the 7-16 March 2023. Field visits allowed the Evaluator to see the infrastructures established and the equipment for waste management provided by the project to both municipalities and health structures and to interview local authorities and community members.

Main conclusions

The project was relevant because it was fully aligned with the national priorities and the local needs in terms of waste management. It was coherent by being part of the waste management system already in place while providing added and innovative value in terms of technical expertise in the field of ESM of hazardous and other waste and establishing waste sorting and recycling infrastructures.

The project design suffered from a lack of a clear implementation strategy and monitoring tools (logical framework, indicators, baselines and targets), which did not facilitate the project implementation at its inception.

Main achievements of the project are the following: 1) the project was able to raise awareness among the citizens of the two pilot municipalities of the different characteristics of hazardous waste and their impact on health and the environment, as well as of the need to reduce certain common but inappropriate practices such as the open burning of these types of waste; 2) the project was successful in training medical staff on good practices for the handling of biomedical waste and equipping several health structures with state of art bio medical waste treatment systems thus improving hazardous waste management within these structures; 3) the project also succeeded in setting up facilities for the sorting and dismantling of electrical and electronic waste, equipped with the appropriate equipment, as well as a pre-treatment unit for plastic waste to be operated by a private company, in Tivaouane and Ziguinchor, respectively.

However, budget shortages due to the non-availability of all the national counterpart co-funding impacted the implementation of some planned additional awareness-raising and monitoring activities, which aimed to consolidate the project benefits.

Nevertheless, the project has laid the structural, legal and technical foundations for effective ESM of hazardous waste in the country. But the benefits obtained could be threatened if there is not a

rapid hand-over, institutionally and financially, even if the new national initiative PROMOGED² is called upon to build on the results of the project in the short term.

On gender-related issues, the project has encouraged the participation of women in the project activities aimed at collecting gender-disaggregated statistics, but activities aimed at equity and/or empowerment of women and other vulnerable groups have been very limited or even insufficient.

The Evaluation Ratings Table

1. Monitoring & Evaluation (M&E)	Rating
M&E design at entry	MS
M&E implementation	S
Overall quality of M&E	S
2. Implementing Agency (IA) Implementation & Executing Agency (EA) Execution	Rating
Quality of UNIDO implementation/oversight	S
Quality of implementing Partner execution	MS
Overall quality of implementation/Execution	MS
3. Assessment of outcomes	Rating
Relevance	HS
Effectiveness	HS
Efficiency	S
Overall Project Outcome Rating	HS
4. Sustainability	
Financial sustainability	ML
Socio-political sustainability	ML
Institutional framework and governance sustainability	ML
Environmental sustainability	ML
Overall Likelihood of Sustainability	ML

Recommendations Table

TE Recommendation	Entity Responsible	Timeframe
R1: Training of trainers should be favored to be able to train a critical mass of people in order to ensure sustainability and compensate for staff turnover.	UNIDO/GEF	Immediately
R2: Infrastructure construction work should be the responsibility of the national counterpart or another donor better able to supervise this type of work.	UNIDO/GEF	Immediately
R3: Include gender analysis and budget activities in response to identified needs/priorities in future projects given the importance of the informal sector (vulnerable groups) in the waste sector in developing countries.	UNIDO/GEF	Immediately
R4: DEEC should finalize and sign the Convention with SONAGED and the Municipality of Tivaouane regarding the housing of the platform for the dismantling and recovery of EEE, within the premises of the CRC.	DEEC	Immediately
R5: UNIDO should ensure to have a common understanding and agreement on which procedures to apply to avoid conflict between national and UNIDO procedures.	UNIDO	Short-term

² The project for “the promotion of integrated management systems and economy of solid wastes”, officially launched on June 24, 2021, and whose development objective is to strengthen solid waste management governance in Senegal and improve solid waste management services in selected cities.

Lessons learned

1. In a context of decentralization where local authorities have considerable autonomy from the central government but limited human and financial resources, the establishment of local support in the form of a local coordinator has proved essential to ensure advocacy, implementation, and monitoring of planned activities.
2. Systematically building the capacities of project teams on its administrative, financial, and reporting procedures at project's inception helps to avoid delays and misunderstanding.

Good practices

The project adopted a participatory and inclusive approach that allowed multi-sectoral actors, who were not previously used to working together.

1. Introduction

1.1. Evaluation objectives and scope

Terminal evaluations (TE) are a mandatory requirement for all GEF-financed full-sized projects. Their purpose is to “provide a comprehensive and systematic account of the performance of a completed project by assessing its design, process of implementation, achievements vis-a-vis project objectives endorsed by the GEF including any agreed changes in the objectives during project implementation, and any other results”.

Serving as an important learning and accountability tool, the TE will provide the Government of Senegal, UNIDO, national stakeholders and partners with an independent assessment of the results achieved by the “Environmentally Sound Management of Municipal and Hazardous Solid Waste to Reduce Emissions of Unintentional Persistent Organic Pollutants” project in Senegal (referred to herein as PRODEMUD) that will increase knowledge and understanding of the benefits and challenges of similar interventions in future, ensure accountability and improve future project design and implementation.

The specific objectives of the TE are:

- to assess relevance, effectiveness, efficiency, sustainability, and progress towards impact of the project,
- to outline lessons learned and good practices that can be used in future design and implementation of similar interventions and,
- to provide constructive and practical recommendations based on the findings that could contribute to the sustainability of the project's achieved benefits.

The TE will cover the whole duration of the project from its starting date, on 20 January 2015, to its expected completion date on 31 March 2023. It will focus on project interventions implemented by UNIDO and its national and local stakeholders in the pilot cities of Tivaouane and Ziguinchor.

1.2. Overview of the Project Context

Senegalese municipalities have major difficulties to manage solid municipal waste. In the best cases, there is only a primary waste collection done by NGOs or small local companies. The waste is either left in a transfer site which becomes a dump site or dumped in an open, wild, and uncontrolled landfill, where waste is incinerated in an open-burning condition. In 2017, the World

Bank estimated the collection rate at approximately 55%, which is below the average for countries of South of the Sahara estimated at 65%. These open burning practices are sources of unintentionally produced persistent organic pollutants (uPOPs), which negatively impact the environment and the health and well-being of populations.

The main reasons of this situation in Senegal are the lack of financial resources, the lack of suitable infrastructure, reduced logistical resources, insufficiently effective national policies, and lack of expertise.

The PRODEMUD sought to improve the waste management operations of main stakeholders, especially existing private and informal sectors, to revamp their business and operations for environmentally sound management (ESM) of waste in Senegal and to reduce POPs emissions. The two selected municipalities (Tivaouane and Ziguinchor) were to serve as examples to be replicated in other municipalities at both national and regional levels.

1.3. Overview of the Project

The PRODEMUD is a full-size project, submitted to GEF on August 15, 2012, then re-submitted in January 2013 and approved by the CEO in October 2014. The project actually started on 20 January 2015 and was completed on March 31, 2023, after having benefited from three no cost extensions.

The GEF grant was 2,000,000 USD and the co-financing as planned in the CEO endorsement request amounted to 17,030,186 USD, both in kind and cash, provided by the national government and the two municipalities of Ziguinchor and Tivaouane as well as UNIDO.

According to the project document, the overall objective of PRODEMUD was to reduce releases of POPs from hazardous and municipal waste by strengthening the technical and institutional capacities of a group of private sectors able to sustain and replicate best available technologies/best environmental practices (BAT/BEP) demonstrated under project as part of the implementation of the National Implementation Plan (NIP) under the Stockholm Convention ratified by the Government of Senegal on October 8, 2003.

A 50% reduction in the uPOPs emissions from open burning estimated during the project preparatory phase (0.6 gTEQ/year in Tivaouane and 25 g-TEQ/year in Ziguinchor) was expected as a result of the project intervention including improved sound management of wastes and the application of BAT/BEP at the final disposal premises.

The project had 3 expected outcomes and 16 outputs to achieve in addition to the outcome related to a proper management, monitoring and evaluation of the project.

Expected outcomes and outputs:

Outcome 1: Legal framework and institutional capacities for sound management of hazardous and other wastes strengthened, put in place, and sustained.

- Output 1.1 Existing laws and regulations on the sound management of hazardous and other wastes assessed and the gaps and needs identified.
- Output 1.2 Legal frameworks and institutional capacities to support the environmentally sound management of hazardous and other wastes strengthened.
- Output 1.3. Technical guideline/toolkit on BAT/BEP (in a gender sensitive way) on how to conduct sound waste management in the country developed.
- Output 1.4 National government and municipality officers trained with gender considerations to

- develop sound waste management complying with the regulation and enforcement requirement.

Outcome 2: Stakeholders ready to be engaged in properly disposing, sorting and recycling hazardous and other wastes.

- Output 2.1 National government officers trained on how to establish sound waste management.
- Output 2.2 Municipal government officers trained on how to conduct sound management are provided.
- Output 2.3 Gender-sensitive awareness raising events held and relevant materials on sound waste management activities distributed for the general public.
- Output 2.4 General public trained on reduce, reuse, and recycle (3R) and good waste separation practice.
- Output 2.5 Business operations in private sectors working on sound waste management improved.

Outcome 3: Sound management operations of hazardous and other wastes improved.

- Output 3.1 Hazardous Waste Management Action Plans reviewed and formulated at municipality levels.
- Output 3.2 Facilities established and used to properly collect hazardous and other wastes within the municipalities.
- Output 3.3 Waste interim storage and sorting facilities established and used by the stakeholders of the selected municipalities.
- Output 3.4 Recycling facilities established and used within the municipalities.
- Output 3.5 The management of final disposal facilities reinforced for hazardous and other wastes in the municipalities.
- Output 3.6 Waste management operations by the companies at the municipal levels improved.
- Output 3.7 Open burning controlled to reduce uPOP emissions.

Outcome 4: Project progress properly monitored and evaluated.

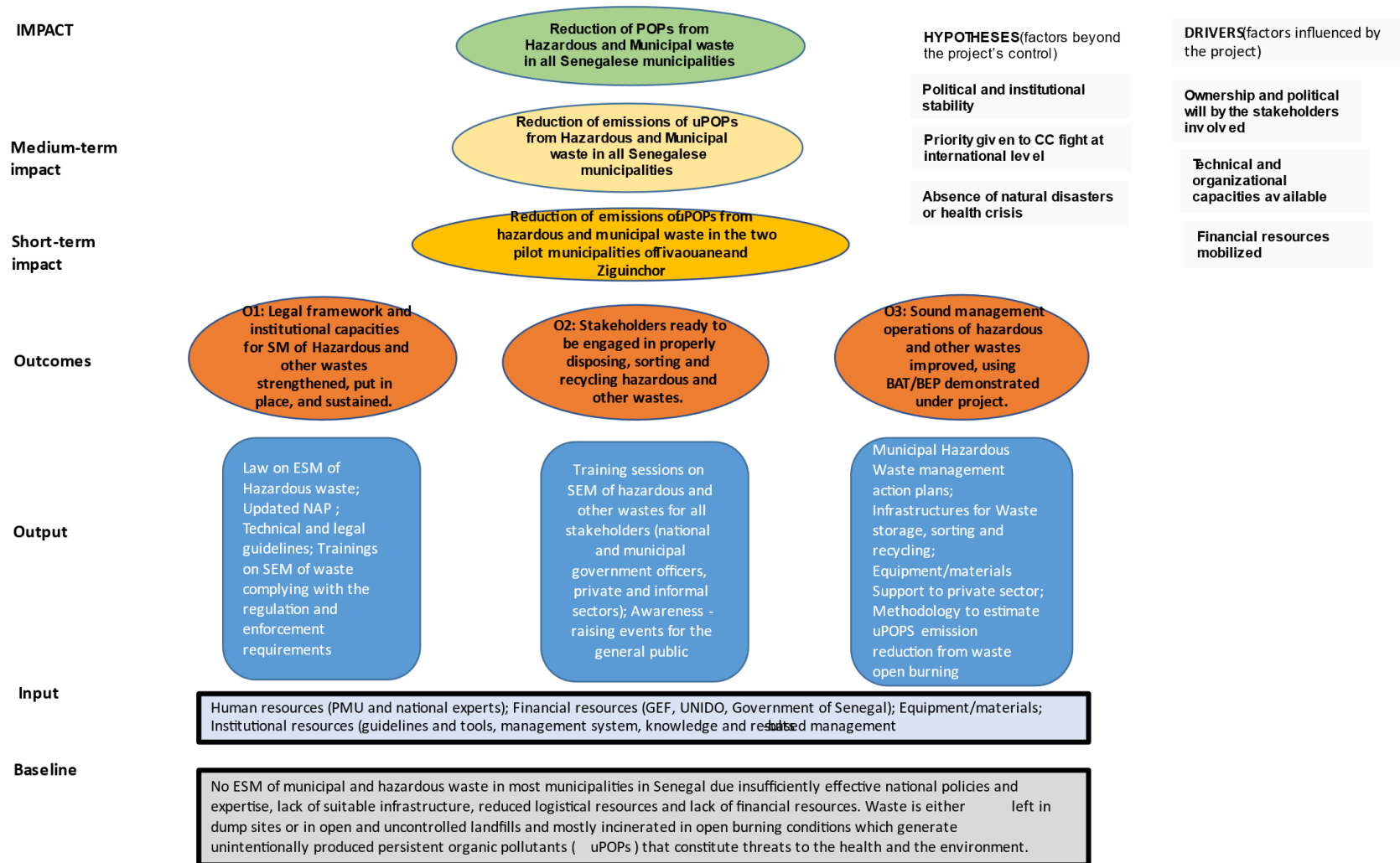
- Output 4.1 Project results monitored and reported including the gender dimension.
- Output 4.2 Mid-term and final external evaluations conducted.

1.4. Reconstructed theory of Change

The project document did not include a theory of change (TOC). Based on information collected during the terminal evaluation, the Evaluator has re-constructed the project's TOC. The TOC "specifies the intervention logic showing how an intervention leads to results". It "shows the linkages between outputs, outcomes and impact". It "identifies barriers to achieving the objectives and the ultimate impact of the intervention as well as drivers of change as a result of a situation analysis"³.

The graphic form of the TOC is as follows:

³ UNIDO Evaluation manual



1.5. Evaluation Methodology

The terminal evaluation was carried out in accordance with the “GEF’s 2008 *Guidelines for Implementing and Executing Agencies to conduct Terminal Evaluations*” as well as the “UNIDO *Evaluation policy*” and the “UNIDO *Guidelines for the Technical Cooperation Programmes and Projects*” and guided by the terms of reference (TORs) developed by UNIDO HQ, in Vienna. It also followed the UNEG Norms and Ethical standards and the OECD/DAC evaluation principles and guidelines.

The approach adopted was oriented towards the production of tangible evidence to support the findings and based on the principle of triangulation meaning a cross-verification of hypotheses or observations from more than two sources, using different methods of data collection to enhance the validity and reliability of the findings.

Special attention was given to gender issues throughout the evaluation.

Since a mid-term evaluation (MTE) was conducted in September 2019, the terminal evaluation attempted to build on its findings and recommendations and paid a particular attention to the early sign of transformational changes occurred thanks to the project and the sustainability of the results achieved.

The TE was guided by an evaluation matrix (see Annex 1), structured around the OECD DAC evaluation criteria (relevance, coherence, effectiveness, efficiency, sustainability, and impact) and additional criteria such as gender mainstreaming, design, performances of partners, M&E, RBM, Evaluation questions, data sources and collection tools and methods for data analysis, that was designed to guide the evaluation process. The evaluation matrix was used to organize available evidence by key evaluation questions, to attribute a performance rating to each criterion and to draw evidence-based conclusions and recommendations. Gender considerations was mainstreamed in this evaluation using gender-specific questions to assess the extent to which the project was gender sensitive.

The TE assessed the effectiveness of the project by analyzing the progress made in achieving the intended outputs and the extent to which these outputs contributed to the intended outcomes and the global objective, as defined in the project document. To better understand the project’s performance and the sustainability of results, the Evaluator then examined specific factors that have influenced the project, positively or negatively. The ability of the project team to implement project’s activities, to adapt to the changing context and respond to national and local development needs and priorities was also examined.

The TE collected, analyzed, and triangulated qualitative and quantitative data from primary and secondary sources to ensure the validity of the findings, conclusions and recommendations.

Data collection and analysis

The TE drew on the following methods and sources:

- **A desk review** of all relevant and available project-related documents among others, the project documents, the annual workplans, the annual progress reports and project implementation reviews, the mid-term evaluation report, the PSC meeting reports, project deliverables by outcome and media articles on the project accessible via the internet. The list of documents consulted is presented in Annex 3.

- **Key informant interviews** with over 40 stakeholders of whom 8 women, using semi-structured face-to-face or remote interviews and focus group interviews. Key informants included UNIDO Staff, project team, government officials at national and local levels, civil society organizations representatives and beneficiaries at community level. The list of persons consulted is presented in Annex 2.
- **Field visits and direct observations** in the two targeted municipalities of Tivaouane and Ziguinchor by the Evaluator, from the 7th to the 16th of March 2023. Field visits allowed the Evaluator to see the infrastructures established and the equipment for waste management provided by the project to both municipalities and health structures and to interview local authorities and community members.
- An oral presentation of preliminary findings was made at the end of the data collection phase to the UNIDO office in Dakar and to the project team to validate the initial findings and to gather any additional information if needed.

Data analysis was both qualitative and quantitative. The qualitative analysis was based on a common practice consisting in the construction of preliminary hypotheses from the information gathered during the documentary review and the preliminary interviews with the UNIDO project managers and the project national coordinator (PNC) of the project as well as from the reconstructed theory of change. These preliminary hypotheses were verified/tested with the information received during the on-site/focus group interviews conducted and field observations, according to the principle of triangulation, before becoming the findings/conclusions of the terminal evaluation.

As regards the quantitative analysis, it consisted in estimating the technical execution rate which measures the project's performance in achieving the expected outputs and in calculating the efficiency index which is the ratio of the technical execution rate to the financial execution. The performance rate was calculated by summing the percentages of achievement of the products according to the activities and then dividing the total obtained by the total number of products. The project efficiency index was calculated by dividing the percentage of technical execution by the percentage of financial execution. A ratio equal to one is synonymous with optimal efficiency.

Rating systems

The project's performance was assessed against the evaluation criteria as listed in the evaluation matrix, according to a six-point rating system used by many development agencies including UNIDO as follows:

Score		Definition	Category
6	Highly satisfactory	Level of achievement presents no shortcomings (90-100% achievement rate of planned expectations and targets)	Satisfactory
5	Satisfactory	Level of achievement presents minor shortcomings (70-89% achievement rate of planned expectations and targets)	
4	Moderately satisfactory	Level of achievement presents moderate shortcomings (50-69% achievement rate of planned expectations and targets)	
3	Moderately unsatisfactory	Level of achievement presents some significant shortcomings (30- 49% achievement rate of planned expectations and targets)	Unsatisfactory
2	Unsatisfactory	Level of achievement presents major shortcomings (10- 29% achievement rate of planned expectations and targets)	
1	Highly unsatisfactory	Level of achievement presents severe shortcomings (0-9% achievement rate of planned expectations and targets)	

A four-point rating scale was used to evaluate the sustainability of the project benefits:

4	Likely (L)	There is little or no risks to sustainability
3	Moderately Likely (ML)	There are moderate risks to sustainability
2	Moderately Unlikely (MU)	There are significant risks to sustainability
1	Unlikely (U)	There are severe risks to sustainability
	Unable to Assess (UA)	Unable to assess the expected incidence and magnitude of risks to sustainability

Reporting

The draft evaluation report was submitted to UNIDO HQ for review and identification of any factual errors on the 31st of March 2023.

A debriefing was carried out through videoconference with UNIDO HQ on 19 April 2023. It offered an additional opportunity to discuss the results and recommendations included in this report.

The report was then finalized on 22 May 2023, based on the consolidated comments send by UNIDO IE0.

1.6. Limitations to the terminal evaluation

The terminal evaluation encountered only a few limitations which did not present a major problem. Indeed, not all the stakeholders envisaged for the interviews were available during the mission in Senegal, such as the Director of the DEEC and the Mayor of Tivaouane. Nevertheless, the Evaluator was able to collect information through other sources, from their collaborators. The last planned meetings could not take place face to face due to the political demonstration organized in Dakar on March 16, 2023, which prevented travel in the city. These meetings therefore took place virtually using WhatsApp and Teams tools.

2. Project's contribution to development results

2.1. Project's achieved results and overall effectiveness

As of December 31, 2022, the PMU reported that the overall project completion rate was around 96% and broken down by product as follows:

Outcomes	Outputs	Achievement rates
Outcome 1: Legal framework and institutional capacities for sound management of hazardous and other wastes strengthened, enacted, and sustained	Output 1.1: Existing laws and regulations on the sound management of hazardous and other wastes assessed and the gaps and needs identified	100%
	Output 1.2: Legal frameworks and institutional capacities to support the environmentally sound management of hazardous and other wastes strengthened	100%
	Output 1.3: Technical guideline/toolkit on BAT/BEP (in a gender sensitive way) on how to conduct sound waste management in the country developed	100%
	Output 1.4: National government and municipality officers trained with gender considerations to develop sound waste management complying with the regulation and enforcement requirement.	100%
Outcome 2: Stakeholders ready to be engaged in properly disposing, sorting and recycling hazardous and other wastes	Output 2.1 National government officers trained on how to establish sound waste management	100%
	Output 2.2 Municipal government officers trained on how to conduct sound management are provided	100%
	Output 2.3 Gender-sensitive awareness raising events held and relevant materials on sound waste management activities distributed for the public	100%
	Output 2.4 General public trained on reduce, reuse, and recycle (3R) and good waste separation practice	99%
	Output 2.5 Business operations in private sectors working on sound waste management improved	100%
Outcome 3: Sound management operations of hazardous and other wastes improved	Output 3.1 Hazardous Waste Management Action Plans reviewed and formulated at municipality levels	100%
	Output 3.2 Equipment acquired and properly used to collect hazardous and other wastes within the municipalities	100%
	Output 3.3 Waste interim storage and sorting facilities established and used by	86%

	the stakeholders of the selected municipalities	
	Output 3.4 Recycling facilities established and used within the municipalities	100%
	Output 3.5 The management of final disposal facilities reinforced for hazardous and other wastes in the municipalities	100%
	Output 3.6 Waste management operations by the companies at the municipal levels improved	100%
	Output 3.7: Open burning controlled to reduce uPOP emissions	100%
Outcome 4: Project progress properly monitored and evaluated	Output 4.1 Project results monitored and reported including the gender dimension	99%
	Output 4.2 Project evaluated meeting the GEF's evaluation criteria	50%
TOTAL		96%

Source: PMU

At the end of the project on March 31, 2023, the overall achievement rate should reach 99% because most of the planned activities will be completed. Only a strong uncertainty remains concerning the timely completion of the Ziguinchor CRC, which would therefore affect the achievement rate of Output 3.3.

Main outputs achieved:

Outcome 1: Legal framework and institutional capacities for sound management of hazardous and other wastes strengthened, put in place, and sustained.
Objective of the activities conducted was to improve the existing legal framework that was incomplete and scattered. This was completed by 2019:
A report on existing gaps in the national legal and institutional frameworks regarding hazardous waste management was prepared and shared with all stakeholders involved in the sector, at the national level and locally, in Ziguinchor and Tivaouane, with the aim of considering their concerns. Based on the diagnosis made, a draft bill was prepared in November 2018, setting the general framework of the management of hazardous waste in Senegal and providing a classification of the different types of waste. The bill was technically validated during a national workshop organized in Dakar, on March 25, 2019.
An operational guideline on legal aspects and technical guidelines for private operators and government officials on how to conduct sound waste management using BAT/BEP, were produced in 2018. Trainings were organized by the project on the content of the draft bill and the guidelines. A total of 69 government and municipal officials of whom 18 women were trained in Dakar and in the two target cities, over 2018-2019.
The National Action Plan for the Management of Hazardous Wastes elaborated in November 1999 was revised and updated. More specific guidance was introduced to allow for the implementation of an effective ESM system of hazardous waste and the wastes generated by the electrical and electronical equipment were added as a new category to consider.

Outcome 2: Stakeholders ready to be engaged in properly disposing, sorting and recycling hazardous and other wastes.

The strategy followed by the project consisted in building the capacities of all relevant stakeholders at central and local levels, through training and awareness-raising sessions on several waste related issues of which dangerous waste targeted in particular and on various aspects relating to the Environmental Safety Management (ESM) of waste:

24 civil servants including 9 women were trained in Dakar, in January 2018. The topics were diverse and focused on technical and operational issues related to the ESM of municipal and hazardous waste. Emphasis was placed on the importance and the way of setting up a good coordination between many structures belonging to different ministries, on BAT/BEP in the waste sector, on the advantages and the way of establishing public-private partnerships, on procurement and licensing approaches, as well as financing and legal issues related to other pollutants.

Two training sessions were organized in Tivavouane and Ziguinchor targeting the municipal officers. A total of 38 men and 12 women were trained on ESM of wastes including hazardous wastes in both cities.

Over 2018-2019, a series of training and awareness-raising activities took place in Tivaouane. Targeted women's associations, neighborhood committees, carters' cooperatives and religious leaders were trained on the 3R approach (Reduce, Reuse and Recycle). 75 people were trained on waste ESM techniques and financial management in December 2018. In November 2021, an additional awareness-raising campaign was organized gathering about 62 people. A total of 23 participants including 9 women from the private and informal sectors were trained on techniques for ESM of hazardous waste. More recently, the project also trained an additional group of 29 persons including 7 women from the collector community on the 3R approach and on best practices for dismantling electrical and electronic equipment. A group of 9 persons including 1 woman who forms the Management Committee commissioned by the municipality for managing the EEED platform has been trained on how to use the provided equipment in order to be able to properly operate them.

Training sessions also occurred in Ziguinchor where 28 people were trained in April 2019 on waste ESM techniques and financial management. Participants included 7 women, 5 private sector representatives (1 private dealer and 4 members of Economic Interest Groups). In 2021, 14 local officers from the Cap Skirring Waste sorting center, including 4 women, were trained on how to improve composting techniques. Although the Waste Interim Storage and Sorting facilities (called CRC) is not yet completed, the members of the Economic Interest Group established with the support of the NGO PACTE to operate the facilities have been trained on how to use the equipment provided by the project (36 participants including 12 women).

Three awareness-raising campaigns were conducted, end of 2019 in Tivaouane, during two important religious events which usually bring together many people and in early 2020 in Ziguinchor, during which awareness materials were distributed (tee-shirts, caps, flyers, banners, etc.). The main message of these campaigns aimed at sensitizing the public but also actors involved in the waste collection and transportation on the hazards linked to the widespread practice of open burning of waste. The campaigns were also supported by the most popular national and community radio stations that conveyed many messages to raise people awareness. Two video-reports were also produced. A large forum that gathered 500 people of whom 300 women was organized to inform, sensitize on the best practices relating waste management and the 3R approach as well. Two theater groups of the city were associated to help convey the same messages.

Outcome 3: Sound management operations of hazardous and other wastes improved.

Policy tools at the national and local levels as well as infrastructures, equipment and materials were provided by the project relating waste collection, sorting and treatment:

Two five-year hazardous waste management plans for the period 2019-2023 have been elaborated in a participatory manner and validated in Tivaouane and Ziguinchor in March and September 2019 respectively. However, to date, these plans have not been implemented. It would be important for the new municipal teams in place since the 2022 elections to take ownership of them and update them.

At the national level, the 1999 National Hazardous Waste Management Plan has been updated. This corrected the weaknesses identified in the previous version and made it more complete.

Equipment to collect hazardous and other wastes was acquired by the project and made available to the concerned institutions in the two cities of Tivaouane and Ziguinchor. Two tricycles intended to collect biomedical waste from several nearby production centers (hospital and 18 health structures) were donated to the Tivaouane health district. However, the Evaluator found that they were no longer in service due to the discontinuation by the municipality of the contract for the drivers/collectors. This issue was raised by the project team and should be soon solved at least for one of the two. In Ziguinchor, the two tricycles are located at the regional hospital and are both in operation.

TRICYCLES TO COLLECT BMW IN TIVAOUANE AND ZIGUINCHOR



All the health structures of the two municipalities have been equipped by the project with materials (bins of different colors or special used needles) allowing correct and selective storage of waste, in particular biomedical waste.

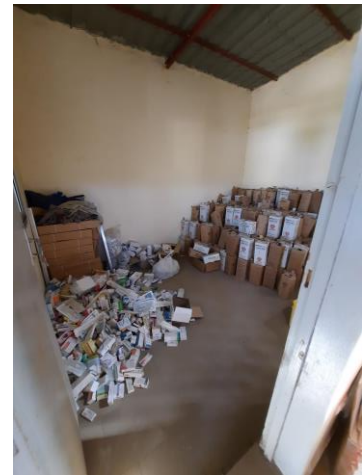
EQUIPMENT PROVIDED TO THE HEALTH STRUCTURES BY THE PROJECT



In 2020, the project established two BMW treatment units, one in each city, and trained 48 persons including 20 women in Ziguinchor and 64 persons including 34 women in Tivaouane on how to manipulate the equipment provided. A manual of procedures was prepared by the project to this end. The treatment units were installed in the premises of the health district in Tivaouane and in the regional hospital of Ziguinchor and equipped with a state-of-the-art technology, namely STERILWAVE 100 brand system, which started to operate in February 2021. With this equipment, the BMW are sterilized, using microwaves at a temperature as high as 100-105° and converted into inert municipal waste, reducing their volume by more than 80% and weight by 25%. This system aims at reducing the environmental impact of the BMW and operating costs while ensuring the safety of the operator. The capacity treated is up to 20kg of waste per cycle. According to the supplier, it complies with the strictest environmental and bacteriological reduction standards and was approved by the French Ministry of Health in 2017.

In Tivaouane, approximately 224 cycles were carried out between February and November 2021, for a total of 1,959 kg of biomedical waste treated. The remaining decontaminated waste was then transported to the landfill by SONAGED services. Unfortunately, the system was taken out of service in February 2023 due to improper handling. The device is in the process of working again thanks to the efforts made by the project team with the supplier to obtain the necessary spare part. The problem should be solved by mid-March 2023. In the meantime, unfortunately, biomedical waste has again accumulated in the premises of the district while the old stocks had been able to be completely absorbed. The evaluation mission however noted that this waste was stored within the treatment unit and that the surroundings of the building remained clean.

THE BMW TREATMENT UNIT IN TIVAOUANE (MARCH 2023)



A similar biomedical waste treatment unit was installed in Ziguinchor in 2020. The operator and the head of the Hygiene and Quality department complained that the system was undersized to treat all biomedical waste from the 25 surrounding health structures. As a result, they were forced to continue using the old incinerator nearby. The Evaluator noticed that the monitoring of the quantities processed was not done regularly. In addition, it is very likely that the problems encountered are related to the organization of the internal functioning of the unit.

THE BMW TREATMENT UNIT IN ZIGUINCHOR (MARCH 2023)



The Tivaouane Electric and Electronic Waste Dismantling and Recovery Platform is functional, and the equipment is in place. However, this is not yet working for administrative reasons. Indeed, the signing of the agreement between DEEC, SONAGED and the municipality of Tivaouane relating to the hosting of the platform within the premises of the CRC, managed and owned by SONAGED, and the promulgation of the Municipal officially entrusting the operation of the platform to the created management committee are still pending.

EEE DISMANTLING AND RECOVERY PLATFORM IN TIVAOUANE (MARCH 2023)



In Ziguinchor, the CRC, whose construction started in October 2022, is still not completed. A caretaker is on the site and a technician looks after the equipment acquired by the project. The level of technical execution was estimated at 74% as of March 23, 2023. There is a high risk that the facilities will not be completed before the project closure. However, assembly of the equipment is expected to be completed before end of March 2023. Operating staff of the Economic Interest Group created to manage the facilities will be trained before end of March 2023. On time completion of the construction of the CRC remains a major issue. Premises of the plastic pre-treatment platform included in the CRC are almost ready. The platform still needs to be supplied with water and electricity. SODIAPLAST, the private company selected will then be able to use the platform according to the agreement signed with the municipality.

CRC IN ZIGUINCHOR (13 MARCH 2023)



PLASTIC WASTE RECYCLING PREMISES



The project has supported three private companies (DMS, SODIAPLAST and TRANSTECH industries) in the development of their environmental diagnosis in collaboration with the Upgrading Office (BMN). This one has been at the same time capacitated in POPs emission reduction issues. TRANSTECH Industries was chosen to carry out its eco-technological upgrade based on an action sheet, drawn up with the support of the project and which is currently being implemented.

Overall, the project has been effective in achieving most expected outputs. This was evidenced by the level of satisfaction expressed by all stakeholders met during this terminal evaluation.

Project's effectiveness in terms of achievement of outputs is rated **Highly Satisfactory**.

2.2. Progress towards impact

It is still too early to measure the impact of the project, which is linked to the promulgation and enforcement of the law on dangerous waste, the total abandonment of poor waste disposal practices (such as open-air burning) and the optimal functioning of the equipment put in place by PRODEMUD.

However, early signs of transformational changes were reported by interviewees or observed by the Evaluator:

2.2.1 Behavioral change

At the national level, although, at the date of the final evaluation (March 2023), the law on hazardous waste was still not promulgated, the officials met, expressed their strong confidence that this will be done quickly and highlighted the strong commitment of all stakeholders who are now well aware, up to the highest level, to the priority of solving the solid waste issue in Senegal, by introducing a sound environmental management.

Two options are currently being considered regarding the law on hazardous waste management, the one supported by the DEEC consisting of mainstreaming its content in the Environmental Code, being under review since 2018, or the option of enacting an Orientation Law on Waste management that will include both the law regarding domestic waste management prepared by the project PGDSU⁴ and the one on hazardous waste management from the PRODEMUD. This latter is supported by the Prime minister. Technical review is about to be completed for a submission of the document to the Parliament.

The discussions held with representatives of the community during the focus group organized in Tivaouane made it possible to collect the following testimonies: all confirmed that now they are aware of the dangers related to certain types of wastes they used to manipulate without cautious and/or to certain bad practices such as open burning of waste. The representative of the carters said that his colleagues and himself no longer collect waste considered hazardous even if this led to a drop in their income. The representative of the women association of waste collectors and one of its members said that they no longer burn electrical cables to recover copper and other expensive metals which they resell to earn a living. They also deplored not having any alternatives to this activity and working in precarious conditions without protective equipment. The President of a women association said that the population tended to respect more the collection times and take out their rubbish directly to the voluntary collection points put in place. As a result, the neighborhoods became cleaner, and the number of neighborhoods disputes has even decreased. Admittedly, this change in behavior was not entirely due to the project because the municipality has made efforts at the same time in providing trash cans and organizing a more rational collection system. Nevertheless, the project has greatly contributed to raising awareness on health and environmental related impacts of hazardous waste and on how to better identify them.

⁴ The Sustainable Urban Solid Waste Management Project (PGDSU) with a budget of 17.5 billion FCFA financed by the Islamic Development Bank (IDB), started in 2013 for the benefit of 4 local authorities of Cadak-Car, Touba Mosque, Tivaouane and Kaolack and which constituted the first phase of the PNGD.

At the local level, the dynamic shown by the municipal teams at project's start seems to have slowed down. Indeed, the 2022 local elections have brought new municipal teams to business and renewed most of the municipal staff. In Ziguinchor, the Head of the Partnerships, Decentralized Cooperation and Territorial Economic Development unit, who is strongly committed to waste management and could be considered as "a champion", has been fortunately retained. He is assiduously pushing for continuation of the efforts already made. In Tivaouane, there is still a mistrust of the new team vis-à-vis the works accomplished during the rule of the former Mayor, which makes the respect of the commitments taken very uncertain and the benefits achieved to date could be at threat.

During her field visit, the Evaluator noticed that premises of the health district in Tivaouane and of the Hospitals involved in the project in both Tivaouane and Ziguinchor were rather clean as well as the downtowns of the two pilot cities. However, some waste sorting issues still remain within the Hospital of Ziguinchor where the colored bins are not all properly used and with certain health structures which do not adequately sort waste before bringing them to the treatment unit.

Last but not least, another change brought about by the project was to be successful in bringing together different institutions around the same table to discuss a common project. The participatory and inclusive approach adopted by the project has been welcomed by all and seems to be continuing through the local committees that were dynamized again during project's implementation.

2.2.2. Broader adoption

The activities carried out by PRODEMUD in the two selected municipalities have laid the foundations for an environmentally sound waste management allowing a reduction of uPOPS. The project should be replicable in other municipalities. This requires first that the results obtained be consolidated and that the model set-up on a pilot basis in these two cities prove to be viable and effective.

The infrastructure has been built but not yet fully operational. Stakeholders have been trained and sensitized. However, the number of people trained is limited and there is no critical mass to ensure that an effective capacity is available, partly due to the high turnover among national and municipal staff. Public awareness must continue to generate lasting changes in terms of practices and behaviors. Everyone knows that these changes take time. The approach chosen to use Economic Interest Groups as platform operators must demonstrate that it works, that it generates sufficient income to ensure the maintenance and upkeep of equipment, that it can also create jobs and professionalize people from the informal sector. PROMOGED, the new government initiative that was launched after the completion of the PNGD is keen to take over and to capitalize on the achievements of the PRODEMUD in accordance with its mandate.

2.2.3 Education of emissions of uPOPs from hazardous and municipal waste in the two pilot municipalities

The infrastructures set up in the two municipalities by PRODEMUD aim to avoid any disposal of waste, in particular hazardous waste, by open burning or incineration, which should make it possible to reduce uPOPs emissions.

The quantity of reduced emissions has been estimated at 12.6771773 gTEQ (i.e., approximately 13 gTEQ) over 10 years, which corresponds to the operating time (average

lifetime generally taken as a reference) of the installed equipment (microwaves, EE waste dismantling and recovery equipment, CRC equipment, etc.).

The methodology adopted by the project team is as follows:

- Potential sources of Dioxin and Furan emissions from waste were identified in PRODEMUD intervention sites.
- Activity rates and emissions factors were established with the managers in charge of the institutions where these sources are located.
- Data was collected and analyzed.
- Quantity of reduced emissions of uPOPs calculated with the 2013 Toolkit spreadsheet.

This result is however conditioned by an optimal and sustainable use of the installed equipment.

Progress to impact is rated **Satisfactory**.

3. Project's quality and performance

3.1. Design

The problem that the project sought to address in the two selected cities was clearly identified in the project document. In Tivaouane, there was a need to improve hazardous waste management in particular medical wastes and electric and electronic wastes because the government programme (PNGD) was only focusing on non-hazardous wastes. In Ziguinchor, there was a need to develop both hazardous and non-hazardous waste sound management because the city was not supported by the PNGD⁵ and did not have a plan to build infrastructures in the coming years. At the national level, there was a constraint for the implementation of the existing national hazardous waste management plan and the involvement of all stakeholders working in the waste sector (national, municipal, and private sectors). Constraints included the gap in legislations that would need to be filled, shortage of qualified technical personnel for the management and analysis of POPs and associated waste, very poor national technical infrastructure, weak knowledge, and very low awareness on danger relating POPs.

The project document includes a clear project objective with conceptually sound outcomes, outputs and activities that are properly articulated in appropriate detail. However, neither a theory of change (TOC) nor a logical framework (LF) have been established at project's design. This was a constraint for the project team who did not have a clear roadmap to implement the project. Indeed, and quoting Ann-Murray Brown, a Monitoring, Evaluation and Learning Expert, the TOC gives the 'big picture' and "summarizes work at a *strategic level*, while a logical framework illustrates at *project (implementation) level* understanding of the change process". In other words, the Logical Framework is like a microscopic lens that zooms in on a specific pathway within the TOC. The Theory of Change lays out "the expected story before the changes happen", which will then provide the basis for gathering evidence during the monitoring and evaluation phases. The logical framework underlines the intervention strategy of the project and how results will be measured.

At the start of the project, the PMU had to make some adjustments and arbitrations to compensate for the lack of details/clarifications in the project document, for example, on the types of infrastructure to be put in place in the two municipalities and the categories of waste to be processed, while remaining within the budgetary limits of the project. Working sessions were organized with the Ministry of Finance (Department of Audit and Support to NEX projects) to review the excessive number of indicators, reformulate others in the logical framework and address the issue of missing baseline and target values. In addition, the document did not include a method for calculating POPs emissions. 2 hypotheses were considered: 1) using the total quantity of waste burned from all sectors or 2) using only the quantity of plastic, biomedical, electrical, and electronic waste sent to landfill. These discussions took time but had the merit of involving all stakeholders and putting them on the same level of information and adapting the project's intervention according to the evolution of the local context and needs of each municipality and ensuring a technically feasible design based on BAT/BEP.

Target beneficiaries were overall clearly identified and involved in project's activities except maybe the Ministry of Health and Social Action (MHSA) which, although member of the PSC, could have benefited more from project's intervention to increase its ownership as a major actor in the management of biomedical waste and for the sustainability of the project's benefits.

Project's design is rated **Moderately Satisfactory**.

3.2. Relevance

The project is strongly aligned with national and local priorities regarding waste management which is a major concern of both the Senegalese government and local authorities. It supports the national programme "Zero waste", a top priority of President Macky Sall's second term, aimed at "guaranteeing a healthy living environment for all Senegalese", a constitutional right, by promoting an alternative management of waste based on the reduction, re-use and destruction of components and materials harmful to health and the environment.

The project directly addresses the following SDG targets:

- SDG target 3.9: "by 2030 substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water, and soil pollution and contamination».
- SDG target 11.6: "by 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality, municipal and other waste management".
- SDG target 12.2: "by 2030 achieve sustainable management and efficient use of natural resources ».
- SDG target 12.3: « by 2030 halve per capita global food waste at the retail and consumer level and reduce food losses along production and supply chains including post-harvest losses".
- SDG target 12.4: "By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment ».
- SDG target 12.5: "by 2030, substantially reduce waste generation through prevention, reduction, recycling, and reuse ».

It also contributes to SDG target 9.4: “by 2030 upgrade infrastructure and retrofit industries to make them sustainable, with increased resource use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, all countries taking action in accordance with their respective capabilities », which the UNIDO core mandate and to SDG target 17.7: “promote sustainable technologies to developing countries”.

The project as designed is in line with the GEF5’s focal area of CHEM-1 to phase out POPs and reduce POPs releases (Outcome 1.3: POPs releases to the environment reduced; Output 1.3.1 Action plans addressing un-intentionally produced POPs under development and implementation as well as sound chemicals management in general).

Finally, the project aligns with UNIDO’s focus and its three thematic areas which are "Safeguarding the Environment", "Creating Shared Prosperity" and "Promoting Economic Competitiveness". Indeed, being mainly technical, the project introduces BAT/BEP in the waste sector and thus supports the Government of Senegal in respecting its commitments to Article 5 of the Stockholm Convention on POPs. It also lays the foundations for an environment conducive to a transition of wastes related activities, from the informal sector to the formal sector, with an increased participation of women and young people in productive and/or innovative activities.

Project’s relevance is rated **Highly Satisfactory**.

3.3. Efficiency

Delays: several implementation delays were noted, due to initial issues in project arrangements between UNIDO and the Government of Senegal that delayed the start of the project’s implementation by one year, the lengthy process for recruiting the project team that last until the end of 2017⁶, impact of the COVID-19 pandemic in 2020 that constrained travel and field activities as well as the cumbersome process to make funds available for the project team that sometimes took several weeks and delay implementation of some project’s activities according to the annual work plan. This has also caused some complications with suppliers and service providers who wanted legitimately to be paid. The project underwent through three extensions at no additional cost to allow the completion of activities. The end of the project is scheduled for March 31, 2023, instead of December 31, 2020.

Cost-sharing: Financial resources from the GEF and UNIDO were provided as planned. However, the co-financing pledged by the government has not been fully paid (236 687 766 FCFA or 473,376⁷ US\$ must still be paid by the national counterpart). This situation was likely to have impacted the project’s implementation. Staff and national experts’ salaries initially borne by the national counterpart had to be charged to the GEF budget necessarily to the detriment of other activities, particularly in terms of awareness and training. The separation from part of the support staff and the reduction in the level of effort of the local

⁶ The national and the two local coordinators were recruited in June 2016, the administrative and financial assistant in August 2016, the national expert in finance and the national expert in business management in December 2017.

⁷ 1 US\$ = 500 FCFA

coordinators increased the workload of the National Coordinator and reduced close monitoring, which was critical for the timely achievement of activities and the continuous dialogue with the newly elected municipal teams.

Mobilization of cash co-financing as of 31 December 2022:

	Budget ⁸ pledged	Budget provided	Expenditures	Balance	Actually mobilized (%)
Government of Senegal	746 500 000	533 600 000	509 812 234	236 687 766	71.5
PNGD	3 387 825 000	1 366 200 000	1 366 200 000	2 021 625 000	40.3
Municipality of Ziguinchor	1 554 862 500	166 925 000	166 925 000	1 387 937 500	10.7
Municipality of Tivaouane	45 974 000	7 190 700	7 190 700	38 783 300	15.6

Source: PMU

All the above amounts should be interpreted with caution. Indeed, only the Government of Senegal made a cash contribution to the project account. The amounts of the other stakeholders are in fact investments made by them in relation to the project, but which did not pass through the project and should be rather considered as parallel financing. The fact remains that the commitments of the municipalities have not been respected and reveal the difficulty they have in mobilizing financing.

Mobilization of in-kind contributions as of 31 December 2022: Source: PMU

	Budget ⁹ pledged	Budget provided	Expenditures	Balance	Actually mobilized (%)
Government of Senegal	1 977 500 000	1 977 500 000	1 977 500 000	0	100
Municipality of Ziguinchor	777 431 500	166 789 150	166 789 150	610 642 350	21.4

Concerning in-kind contributions, the government of Senegal has fulfilled 100% of its commitments while those of the Municipality of Ziguinchor were only fulfilled at 21.4%.

Overall financial situation as of 31 December 2022:

	Budget ¹⁰ pledged	Budget provided	Expenditures	Fin. rate	Execution
GEF/PRODEMUD	1 104 865	1 082 052	1 037 493	96%	
GEF/UNIDO	895 135	895 135	895 135	100%	
Sub-Total GEF	2 000 000	1 977 187	1 932 628	98%	
Government	1 493 000	1 067 200	1 019 624	96%	
TOTAL	3 493 000	3 044 387	2 952 252	97%	

Source: PMU

⁸ Amounts in FCFA, in line with the project document signed by UNIDO Dakar and by the Ministry of Economy, Finance and Planning on 12 January 2016

⁹ Amounts in FCFA, in line with the project document signed by UNIDO Dakar and by the Ministry of Economy, Finance and Planning on 12 January 2016

¹⁰ Amounts in US\$, in line with the project document signed by UNIDO Dakar and by the Ministry of Economy, Finance and Planning on 12 January 2016; 1US\$ = 500 FCFA

Project efficiency can be expressed as a ratio using the following formula: Physical execution rate (estimated above at 96%; refer to § 2.1) divided by the financial execution rate (estimated at 97%). An Efficiency index above 1 means that the project has achieved more results than expected for the expenses made.

Efficiency Index for PRODEMUD is equal to 0.99 which is a very satisfactory level.

Despite the delays and the missing cost-sharing, the project was able to achieve the expected outputs within the budget limits, thanks to the synergies made with other on-going initiatives such as the PNGD.

Project's Efficiency is rated **Satisfactory**.

3.4. Sustainability

In assessing sustainability of the PRODEMUD, the Evaluator asked, "how likely will the Project outcomes be sustained beyond Project termination?" Sustainability of project's outcomes was evaluated in the dimensions of financial resources, socio-political risks, institutional framework and governance, and environmental factors as follows:

Outcomes	Assessment of sustainability	Level of sustainability
<p><i>Outcome 1</i> Legal framework and institutional capacities for sound management of hazardous and other wastes strengthened, enacted, and sustained</p>	<p>Financial resources: no risk Socio-political risks: political will to develop ESM of waste, materialized by Senegal's ratification of numerous waste-related conventions. Anchoring of the process of promulgation of the law on hazardous waste at the level of the Prime Ministry.</p> <p>Institutional framework and governance: national capacities built and available.</p> <p>Environmental factor: no risk</p> <p style="text-align: right;">Overall rating:</p>	<p>Likely Likely</p> <p>Likely</p> <p>Likely</p> <p>Likely</p>
<p><i>Outcome 2</i> Stakeholders ready to be engaged in properly disposing, sorting and recycling hazardous and other wastes</p>	<p>Financial resources: PROMOGED ready to take over and ensure continuous awareness and training activities. Socio-political risks: Population highly sensitized in the two municipalities. Interest shown by all national and local stakeholders in waste management. Institutional framework and governance: national and local capacities built. Risk linked to high turn-over and lack of critical mass of people trained. Dialogue still needed with the newly elected mayors. Environmental factor: no risk</p> <p style="text-align: right;">Overall rating:</p>	<p>Likely</p> <p>Likely</p> <p>Moderately Likely</p> <p>Likely</p> <p>Moderately likely</p>

<p><i>Outcome 3</i> Sound management operations of hazardous and other wastes improved</p>	<p>Financial resources: financial mechanism not yet tested to operate the infrastructures put in place and to ensure their operational sustainability. Low financial capacity of the municipalities demonstrated by the fact that they have not been able to put the co-financing promised at the time of the project's design. Private-public partnerships (with SODIAPLAST for the plastic recycling platform in Ziguinchor) not yet tested and insufficiently developed.</p> <p>Socio-political risks: Economic Interest Groups involved in the operation of the infrastructure built tend to include representatives of the informal sector. PROMOGED supports the socio-economic development of the cities for instance in providing.</p> <p>Institutional framework and governance: Training is still required for the staff working in health structures due to a high turn-over; Dialogue and advocacy still needed to develop ownership of the local hazardous waste management plans prepared by PRODEMUD with the previous municipal teams. Institutional arrangements not yet established and pending.</p> <p>Environmental factor: PROMOGED is building infrastructure to eradicate wild dumps.</p> <p style="text-align: right;">Overall rating:</p>	<p>Moderately Likely</p> <p>Moderately likely</p> <p>Moderately Likely</p> <p>Moderately likely</p> <p>Moderately Likely</p>
--	---	---

Sustainability is rated **Moderately Likely**.

3.5. Gender mainstreaming

Men are in the majority in the project team: only one female expert in business management was involved in the implementation of the project. Similarly, only two women were part of the PSC: the national director of the project and the representative of the PNGD.

During project implementation, the PMU systematically made efforts to involve women working in the waste and health sectors, in all relevant project activities. Awareness materials targeted women, especially pregnant women as well as children, those out of school and working in landfills, on hazardous waste and the harmful effects of waste burning. Gender-disaggregated data on participation to the training events organized was regularly produced in progress reports. Review of the documents produced by the project shows that gender issues were considered, in particular the various diagnoses carried out

were based on the different roles assigned to men and women in society and proposed solutions adapted to the socio-cultural context.

However, as the project is rather technically oriented, the project document did not include a contextual section reflecting a gender analysis in the context of the issue addressed. No activity was designed to address the socio-economic problems of the most vulnerable groups, especially women and youth, in terms of economic empowerment or social reintegration. The terms “Gender consideration”, “Gender dimension” “in a gender sensitive way” were often mentioned in the project document without details or explanations on what was really expected and how they could be materialized.

As a result, the project has a limited contribution to gender equality and women empowerment.

Gender mainstreaming is rated **Moderately Satisfactory**.

4. Performance of partners

4.1. UNIDO

The project had 3 managers during its implementation. The departure of the first manager at the start of the project, who had been associated with the design of the project, caused some difficulties to the team, which would have liked to have benefited from more guidance and clarification at that time, on the strategy to be implemented and on how to address project’s design weaknesses regarding the logical framework and the indicators. Moreover, the administrative and financial assistant had to face difficulties in the project financial management and reporting due to the juxtaposition of procedures, those of UNIDO, GEF and the government. He would have liked to have received more coaching from UNIDO on this issue.

However, there was a continuous and almost daily monitoring provided by the UNIDO HQ coordinator since October 2018 and by an international consultant recruited over several years during project implementation. In addition, field missions were conducted at least twice a year to maintain a close monitoring of the project and to ensure its completion with three years of extension without additional budget.

Moreover, the UNIDO Office in Dakar, despite its limited resources (human and financial), has been very supportive. The representative was always available when needed and engaged with the project coordinator in the political dialogue with the national counterparts.

UNIDO HQ was also in charge of managing some project activities. More than US\$ 996 000 was spent by HQ during the project lifespan.

Despite the support provided by UNIDO headquarters, which made several amendments to the NEA contract in order to grant more flexibility, the local project team had to face several constraints in managing its budget, which was paid quarterly due to the contractual modality chosen for this project. Indeed, it was a contract for the provision of services, with fixed installments, on the basis of deliverables provided.

Despite the support provided by UNIDO HQ in the form of several amendments of the NEA contract to grant more flexibility, the local project team had to face several constraints in managing its budget, pending the effective availability of the quarterly

installments. This was due in particular to the contractual modality chosen, which was a service provision contract with fixed installments, paid subject to approval of the deliverables sent.

UNIDO's overall performance is rated **Satisfactory**.

4.2. National counterparts

The national counterpart has regularly played its role by participating in the PSC meetings, issuing recommendations, and monitoring the progress made. The main problem was the failure to provide all the promised co-financing, which had repercussions on certain project activities which could not be carried out as planned (training, awareness-raising) and the reduction of support staff and the level of effort of local coordinators in the field which reduced their ability to ensure timely completion of ongoing activities.

National counterparts' performance is rated **Moderately Satisfactory**.

5. Factors facilitating or limiting the achievements of results

5.1. Monitoring & evaluation

A budgeted M&E plan is included in the CEO Endorsement document. For an overall estimated budget of 106 000 US\$ from the GEF and 472 000 US\$ as co-financing by the national counterpart, it includes the following activities to be conducted under the responsibility of the National Project Coordinator:

- Prepare annual project reports (monitoring reports in the UNIDO's format and annual monitoring and project implementation report in the GEF formats)
- Hold annual Project steering Committees meetings.
- Carry out mid-term and terminal external evaluations.
- Complete the terminal report.
- Measure impact indicators on a bi-annual basis

In addition, the project document signed by the Ministry of Economy, Finance and Planning and UNIDO's office in Dakar also includes the obligation to carry out a financial audit of the project and a payment schedule for the budget installments, transferred by UNIDO HQ and managed by the PMU that are subject to the submission of listed deliverables.

However, practical organization and logistics of the M&E activities including schedule and responsibilities for data collection were not specified. As already mentioned in the mid-term report, no M&E expert was foreseen to roll out the M&E plan during project implementation and this was assumed by the project team who would have liked to benefit from a training on this subject.

In terms of reporting during project's implementation, annual reports were timely produced presenting the state of technical and financial execution of all the project activities and the analysis of the results obtained compared to those expected. Project implementation reports according to GEF requirements were also available covering the period from June 1st, 2020, to June 30, 2022.

Reports of the follow-up missions carried-out by the PMU in the two pilot cities were also produced.

The Project Steering Committee met each year under the chairmanship of the Direction of Environment and Hazardous Facilities (DEEC) of the Ministry of Environment and Sustainable Development (MEDD) to examine the report on the state of execution of the project for the past year and validate the work plan for the coming year. It is also during these meetings that recommendations are made by its members and followed up at the next one. The first PSC meeting which was held in December 2016 amended the initial logical framework of the project, at the level of activities and indicators, for the sake of clarification and simplification. The number of indicators was reduced and adapted to the activities planned to be implemented and which some of them were reformulated.

While M&E Design is rated **Moderately Satisfactory**, M&E implementation is rated **Satisfactory**.

5.2. Results-Based Management

In terms of planning, the start of the project was delayed by 18 months due to the time taken for the preparation of a specific project document in French which was signed in January 2016 by the UNIDO office in Dakar and the Ministry of Finance. This document was required by the Government of Senegal, according to its national procedures, in order to allow for the planning and the release of the co-financing committed. The recruitment of the National Project Coordinator which only took place in June 2016 as well as that of the other members of the project team is another reason for this delay.

The annual work plans approved by the PSC were the roadmap for the project team to implement planned activities and the PSC was closely monitoring project implementation. Working sessions were organized with the Ministry of Finance (Department of Audit and Support for NEX Projects) to review the performance indicators (their number and their formulation) and add baseline as well as target values. This was approved by the PSC. Performance indicators were regularly completed on an annual basis and included in the progress reports. Outcome and impact indicators were also monitored by the National Coordinator. A monitoring table completed with the end values was made available to the Evaluator.

Results-based management is rated **Satisfactory**.

5.3. Other factors

Facilitating factors

- The commitment, availability and expertise of the project team were unanimously praised and recognized as having facilitated the achievement of results.
- The participatory and inclusive approach that prevailed throughout the implementation of the project were systematically highlighted and fully appreciated by all stakeholders.
- The follow-up and the outreach work of the two local project coordinators, even if they were not full-time, proved to be crucial for the project and the national coordinator based in Dakar.

- The involvement of all stakeholders, both at central and local levels, in a participatory and inclusive approach around a common project, which were associated with the implementation of all phases of the project and validated all the results produced.
- The innovative nature of the project which addressed for the first time in Senegal the problem of hazardous waste, both legally and technically and to a certain extent, social and economic, which was an absolute priority for the country.
- The political will that supported the project throughout its implementation and the synergies found with ongoing national initiatives (PNGD then PROMOGED).

Limiting factors

- The payment of the local budget managed by the National Coordinator in the form of installments subject to approval of the financial reports was not optimal for the implementation of the project because the processing of funds requests by UNIDO Headquarters was time-consuming and constrained implementation of some project activities according to the AWP and/or sometimes has caused complications with suppliers and service providers who wanted legitimately to be paid. Furthermore, some last activities could not be carried out due to lack of receipt of the last tranche of the budget, the release of which is based on receipt of the final audit report, which has not yet been carried out.
- The COVID-19 pandemic and the related strict containment measures implemented in Senegal have impacted the construction work of the 2 BMW treatment units in Ziguinchor and Tivaouane which were delayed by several weeks as well as the awareness campaigns planned for the first half of 2020 which had to be rescheduled, and the monitoring of field activities by the PNC and the two LC who were not allowed to travel until June 2020.
- The non-fulfilment of government co-financing (estimated at more than 200 million of FCFA) was a major constraint because it forced the NPC to make arbitrations that resulted in the reduction of the support team and the intervention of the experts assigned to the field in the two cities, resulting in less close monitoring that was critical, and an increased workload and travel for the NPC.
- The national procedures for selecting service providers based on the lowest bid, which resulted in the choice of an inefficient contractor for the construction of the Ziguinchor CRC which forced the PNC to carry out time-consuming negotiations to advance the work.
- The institutional instability due to the turn-over in the public institutions, in particular the one following the 2022 municipal elections that brought new teams at the head of the municipalities that had to be sensitized and convinced again about the project.

5.3. Overarching assessment and rating table

#	Evaluation criteria	Rating
A	Progress to impact	S
B	Project Design	MS
	Overall design	S
	Logframe	MU
C	Project Performance	S

	Relevance	HS
	Effectiveness	HS
	Efficiency	S
	Sustainability	ML
D	Cross-cutting performance criteria	MS
	Gender Mainstreaming	MS
	M&E	MS
	RBM	S
E	Performance of partners	MS
	UNIDO	MS
	National counterparts	MS
F	Overall Assessment	S

6. Conclusions, recommendations and lessons learned

6.1. Conclusions

- C1: The project was relevant because it was fully aligned with the national priorities and the local needs relating waste management; it was coherent in being part of the waste management system in place while providing an added and innovative value in terms of technical expertise in the field of ESM of hazardous and other waste and establishing waste sorting and recycling infrastructures.
- C2: the project design suffered from a lack of a clear implementation strategy and monitoring tools (logical framework, indicators, baselines and targets), which did not facilitate the project implementation at its inception.
- C3: main achievements are the following: 1)the project was successful in increasing citizens' awareness on dangerous waste and their impacts on health and the environment and on some improper practices such as waste open burning; 2) the project was successful in raising awareness on good practices and equipping health structures with systems allowing an environmentally sound management of biomedical waste; 3)The project was also successful in establishing sorting and recycling facilities in the two pilot municipalities.
- C4: the non-availability of all national counterpart co-funding has impacted the implementation of certain awareness-raising and monitoring activities.
- C5: The project has laid the foundations for an effective ESM of hazardous waste both at the legal and technical levels, but the benefits acquired are at risk if there is no

hand-over institutionally and financially even if PROMOGED intends to capitalize on the results of the project in the short term.

- C6: on gender related issues, the project has ensured the participation of women in the activities carried out and took care to collect statistics disaggregated by sex, but the activities aimed at equity and the empowerment of women and other vulnerable groups have been insufficient.

6.2. Recommendations

- R1: Training of trainers should be favored to be able to train a critical mass of people in order to ensure sustainability and compensate for staff turnover.
- R2: Infrastructure construction work should be the responsibility of the national counterpart or another donor better able to supervise this type of work; the PRODEMUD project should only have intervened once this work had been completed through technical assistance and advocacy, the acquisition of materials/equipment and sensitization/training.
- R3: Include gender analysis and budget activities in response to identified needs/priorities in future projects given the importance of the informal sector (vulnerable groups) in the waste sector in developing countries.
- R4: DEEC should finalize and sign the Convention with SONAGED and the Municipality of Tivaouane regarding the housing of the platform for the dismantling and recovery of EEE, within the premises of the CRC.
- R5: UNIDO should ensure to have a common understanding and agreement on which procedures to apply to avoid juxtaposition and conflict between national and UNIDO procedures.

6.3. Lessons learned

1. In a context of decentralization where local authorities have considerable autonomy from the central government but limited human and financial resources, the establishment of local support in the form of a local coordinator has proved essential to ensure advocacy, implementation and monitoring of planned activities.
2. Systematically building the capacities of project teams on its administrative, financial, and reporting procedures at project's inception helps to avoid delays and misunderstanding.

6.4. Good practices

The project adopted a participatory and inclusive approach that allowed multi-sectoral actors who were not used to working together to collaborate.

Annex 1: Evaluation Matrix

CRITERIA	#	KEY QUESTIONS	DATA SOURCES	DATA COLLECTION TOOLS	METHODS FOR DATA ANALYSIS
PROGRESS TO IMPACT	1	To what extent are information, lessons learned or specific results of the PRODEMUD incorporated into stakeholder mandates and initiatives such as laws, policies, regulations and projects?	Stakeholders PMU	Desk review Interviews	Qualitative analysis
	2	To what extent are the specific results of PRODEMUD reproduced or adopted? (replication)			
	3	To what extent are the PRODEMUD's initiatives and results implemented at larger geographical scale?			
	4	What difference has the PRODEMUD made to the beneficiaries? To men? To women?	Stakeholders PMU Beneficiaries	Interviews Observations	Qualitative analysis Responses from different stakeholders will be compared and contrasted. Information obtained during the interviews and field observations will be cross-referenced with the project's documentation (data triangulation).

	5	<p>What are the transformational changes attributable to PRODEMUD? To what extent?</p> <p>Safeguarding environment: Biophysical changes in reduction of threats emanating from action of humans and changes in the status of the environment</p> <p>Economic performance: Changes in the functioning and management of the resources, finances, income, and expenditure of, for example, a community, business or enterprise, contributed to by the intervention</p> <p>Social inclusiveness: Changes in the provision of certain rights to all individuals and groups in society, such as employment, education, and training.</p>	Stakeholders Beneficiaries	Interviews Observations	<p>Qualitative analysis</p> <p>Responses from different stakeholders will be compared and contrasted. Information obtained during the interviews and field observations will be cross-referenced with the project's documentation (data triangulation).</p>
DESIGN	6	Is the problem to be addressed by PRODEMUD clearly identified, with clear target beneficiaries?	Project document PMU Stakeholders	Desk review Interviews	<p>Qualitative analysis</p>
	7	Was the project design adequate to address the problem at hand?			
	8	Is the design technically feasible and based on best practices?			
	9	<p>Risks management: Are critical risks (related to financial, sociopolitical, institutional, environmental and implementation aspects) identified with specific risk ratings? Are their mitigation measures identified? Where possible, are the mitigation measures included in project activities/outputs and monitored under the M&E plan?</p>	Project document	Desk review	

	10	Expected results: Is the expected result-chain (impact, outcomes and outputs) clear and logical? Does impact describe a desired long-term change or benefit to a society or community (not as a mean or process), do outcomes describe change in target group's behavior/performance or system/institutional performance, do outputs describe deliverables that project will produce to achieve outcomes? Are the expected results realistic, measurable and not a reformulation or summary of lower-level results? Do outputs plus assumptions lead to outcomes, do outcomes plus assumptions lead to impact? Can all outputs be delivered by the project, are outcomes outside UNIDO's control but within its influence?	Project document Theory of change	Desk review	
		Indicators: Do indicators describe and specify expected results (impact, outcomes and outputs) in terms of quantity, quality and time? Do indicators change at each level of results and independent from indicators at higher and lower levels? Do indicators not restate expected results and not cause them? Are indicators necessary and sufficient and do they provide enough triangulation (cross-checking)? Are indicators sex-disaggregated, if applicable? Are indicators SMART?	Project document	Desk review	
	12	To what extent is the project design (in terms of funding, institutional arrangement, implementation arrangements...) as foreseen in the project document still valid and relevant?	Stakeholders	Interviews	
RELEVANCE	13	To what extent is the project aligned with the development priorities of Senegal? Which SDG indicators is the project contributing towards?	Project document Government related plans	Desk review Interviews	Qualitative analysis Responses from different stakeholders will be compared and contrasted. Information obtained during
	14	Is the project consistent with UNIDO's mandate (Inclusive and Sustainable Industrial Development)?			

	15	Is the project in line with GEF's priorities and policies?	UNIDO mandate GEF documents		the field interviews and field observations will be cross-referenced with the project's documentation (data triangulation).
	16	To what extent were lessons learned from other relevant projects considered in the design?			
EFFECTIVENESS	17	What are the main results (mainly outputs and outcomes) of the project? What have been the quantifiable results of the project against the original/revised targets??	Project document Project indicators Progress reports/PIRs PMU	Desk review Interviews	Qualitative and quantitative analyses Qualitative analysis Responses from different stakeholders will be compared and contrasted. Information obtained during the interviews and field observations will be cross-referenced with the project's documentation (data triangulation).
	18	What are the reasons for the achievement/non-achievement of the project objectives?	PMU Stakeholders Beneficiaries	Interviews/Focus groups	
	19	In which areas does PRODEMUD have the greatest achievements? Why and what have been the supporting factors? How can the project build on or expand these achievements?	PMU Progress reports Stakeholders Beneficiaries	Desk review Interviews Focus groups	
	20	In which areas does the project have the fewest achievements? What have been the constraining factors and why? How can or could they be overcome?	PMU Progress reports Stakeholders Beneficiaries	Desk review Interviews	
	21	What is the quality of the results? How do the stakeholders perceive them? What is the feedback of the beneficiaries and the stakeholders on the project effectiveness?	Stakeholders Beneficiaries	Interviews/ Focus groups	
	22	To what extent have different stakeholders been involved in project implementation?	Project reports PMU Stakeholders	desk review Interviews	

	23	Were the right target groups reached?	PMU Stakeholders	Interviews	
EFFICIENCY	24	How economically are the project resources/inputs (concerning funding, expertise, time...) being used to produce results	PMU Financial reports Progress reports	Desk review Interviews	Qualitative and quantitative analyses (efficiency index)
	25	To what extent have the UNIDO project implementation strategy and execution been efficient and cost-effective?			
	26	What measures have been taken during planning and implementation to ensure that resources are efficiently used? Were the project expenditures in line with budgets?			
	27	How timely was the project in producing outputs and outcomes? Comment on the delay or acceleration of the project's implementation period.			
	28	Have the inputs from the donor, UNIDO and Government/counterpart been provided as planned, and were they adequate to meet the requirements?			
SUSTAINABILITY	29	Will the project results and benefits be sustained after the end of donor funding?	Stakeholders	Interviews	Qualitative analysis Responses from different stakeholders will be compared and contrasted. Information obtained during the interviews and field observations will be cross-referenced with the project's documentation (data triangulation).
	30	Does the project have an exit strategy?	PMU Report	Interviews Desk review	
	31	To what extent have the outputs and results been institutionalized?	Stakeholders gov documents	Interviews Desk review	
	32	To what extent will financial and economic resources be available to sustain the benefits achieved by the project?	Stakeholders PMU	Interviews	
	33	Are there any social or political risks that may jeopardize the sustainability of project outcomes?	Stakeholders PMU	Interviews	

	34	What is the risk that the level of stakeholder ownership (including ownership by governments and other key stakeholders) will be insufficient to allow for the project outcomes/benefits to be sustained?	Stakeholders PMU	Interviews	
	35	Do the various key stakeholders see that it is in their interest that project benefits continue to flow?	Stakeholders Beneficiaries	Interviews/Focus groups	
	36	Is there sufficient public/stakeholder awareness in support of the project's long-term objective	Stakeholders Beneficiaries	Interviews/Focus groups	
	37	To what extent did UNIDO actions pose an environmental threat to the sustainability of project outputs, possibly affecting project beneficiaries (men and women) in a negative way?	Progress reports PMU Beneficiaries stakeholders	Desk review Interviews Focus groups	
GENDER	38	Did the project design adequately consider the gender dimensions in its interventions? Was the gender marker assigned correctly at entry?	Project document	Desk review	Qualitative analysis Responses from different stakeholders will be compared and contrasted. Information obtained during the field interviews and field observations will be cross-referenced with the project's documentation (data triangulation).
	39	Was a gender analysis included in a baseline study or needs assessment (if any)? Were there gender-related project indicators	PMU Progress reports	Desk review Interviews	
	40	Are women/gender-focused groups, associations or gender units in partner organizations consulted/ included in the	PMU Beneficiaries Progress reports	Desk review Interviews	
	41	How gender-balanced was the composition of the project management team, the Steering Committee, experts and consultants and the beneficiaries?	PMU	Interviews	
	42	Do the results affect women and men differently? If so, why and how? How are the results likely to affect gender relations (e.g., division of labour, decision-making authority)?	Progress reports PMU Beneficiaries stakeholders	Desk review Interviews Focus groups	

	43	To what extent were socioeconomic benefits delivered by the project at the national and local levels, including consideration of gender dimensions?	Stakeholders PMU Beneficiaries	Interviews/Focus groups Site visits	
M&E AT DESIGN	44	Was the M&E plan included in the project document? Was it practical and sufficient at the point of project approval?	Project document PMU	Desk review Interviews	Qualitative analysis
	45	Did it include baseline data and specify clear targets and appropriate indicators to track environmental, gender, and socio-economic results	Project document PMU	Desk review Interviews	
	46	Did it include a proper M&E methodological approach; specify practical organization and logistics of the M&E activities including schedule and responsibilities for data collection?	Project document PMU	Desk review Interviews	
	47	Does the M&E plan specify what, who and how frequent monitoring, review, evaluations and data collection will take place? Is the M&E plan consistent with the logframe (especially indicators and sources of verification)?	Project document PMU	Desk review Interviews	
	48	Does it allocate adequate budget for M&E activities?	Project document PMU	Desk review Interviews	
M&E AT IMPLEMENTATION	49	How was the information from M&E system used during the project implementation? Was an M&E system in place and did it facilitate timely tracking of progress toward project results by collecting information on selected indicators continually throughout the project implementation period? Did project team and manager make decisions and corrective actions based on analysis from M&E system and based on results achieved?	PMU Stakeholders PSC reports Progress reports	Desk review Interviews	Qualitative analysis Responses from different stakeholders will be compared and contrasted. Information obtained during the interviews and field observations will be cross-referenced with the project's documentation (data triangulation).
	50	Are annual/progress project reports complete, accurate and timely?			

	51	Are monitoring and self-evaluation carried out effectively, based on indicators for outputs, outcomes and impact in the logframe? Do performance monitoring and reviews take place regularly?			
	52	Were resources for M&E sufficient?			
	53	How well have risks outlined the project document and in the logframe been monitored and managed? How often have risks been reviewed and updated? Has a risk management mechanism been put in place?			
RBM	54	Are there any annual work plans? Are work-planning processes results-based? Has the logframe been used to determine the annual work plan (including key activities and milestone)?	PMU AWPs	Interviews Desk review	Qualitative analysis Responses from different stakeholders will be compared and contrasted. Information obtained during the field interviews and field observations will be cross-referenced with the project's documentation (data triangulation).
	55	Review the monitoring tools currently being used: Do they provide the necessary information? Do they involve key partners? Are they aligned or mainstreamed with national systems? Do they use existing information? Are they efficient? Are they cost-effective? Are additional tools required? How could they be made more participatory and inclusive?	PMU Stakeholders	Interviews	
	56	Do project team and manager make decisions and corrective actions based on analysis from M&E system and based on results achieved? Is information on project performance and results achievement being presented to the Project Steering Committee to make decisions and corrective actions? Do the Project team and managers and PSC regularly ask for performance and results information?	PMU Stakeholders PSC members	Interviews PSC reports	
	57	Assess how adaptive management changes have been reported by the project management and shared with the PSC.	PMU PSC members	Interviews	

	58	Assess how results and lessons derived from the adaptive management process have been documented, shared with key partners and internalized by partners.	Progress reports Stakeholders PMU	Desk review Interviews	
UNIDO	59	Timely recruitment of project staff	Stakeholders PMU PSC members	Interviews	Qualitative analysis Responses from different stakeholders will be compared and contrasted. Information obtained during the interviews and field observations will be cross-referenced with the project's documentation (data triangulation).
	60	To what extent the project has a proper and operational governance system (e.g PSC with clear roles and responsibilities)?			
	61	Mobilization of adequate technical expertise			
	62	Follow-up to address implementation bottlenecks			
	63	Project modifications following changes in context or after the MTE			
	64	Role of UNIDO country presence supporting the project			
	65	Engagement in policy dialogue to ensure up-scaling of innovations			
	66	Review overall effectiveness of project management as outlined in the Project Document. Have changes been made and are they effective? Are responsibilities and reporting lines clear? Is decision-making transparent and undertaken in a timely manner? Recommend areas for improvement.			
67	Review whether the national management and overall coordination mechanisms have been efficient and effective? Did each partner have assigned roles and responsibilities from the beginning? Did each partner fulfil its role and responsibilities (e.g., providing strategic support, monitoring and reviewing performance, allocating funds, providing technical support, following up agreed/ corrective actions)?				

	68	The UNIDO HQ-based management, coordination, monitoring, quality control and technical inputs have been efficient, timely and effective (e.g., problems identified timely and accurately; quality support provided timely and effectively; right staffing levels, continuity, skill mix and frequency of field visits)?			
NATIONAL COUNTERPARTS	69	Ownership of the project	PMU Stakeholders Beneficiaries Progress reports	Desk review Interviews	Qualitative analysis Responses from different stakeholders will be compared and contrasted. Information obtained during the field interviews and field observations will be cross-referenced with the project's documentation (data triangulation).
	70	Provide financial contribution as planned (cash or in-kind)			
	71	Support to the project, based on actions and policies			
	72	Internal government coordination			
	73	Exit strategy, planned together with UNIDO, or arrangements for continued funding of certain activities			
	74	Facilitation of the participation of Non-Governmental Organizations (NGOs), civil society and the private sector where appropriate			
	75	Engagement with UNIDO in policy dialogue to promote the up-scaling or replication of innovations			
DONOR	76	Timely disbursement of project funds	Progress reports/PIRs PMU	Desk review Interviews	Qualitative analysis
	77	Feedback to progress reports, including Mid-Term Evaluation, if applicable			

Annex 2: Interview protocol

Guide des entretiens semi-directifs (en présentiel ou distanciel)

(à adapter en fonction des interlocuteurs)

Nom et prénom de la personne	Titre, Département	Sexe
Nom de l'institution		Date de l'entretien
Email/ téléphone		Enregistrement disponible

Il s'agit de mener une analyse constructive et une évaluation des performances du projet afin d'en rendre compte aux bailleurs, aux partenaires et au pays bénéficiaire. Les enseignements tirés et les recommandations serviront en tant qu'apprentissages organisationnels à la programmation future.

A cette fin, je souhaiterais vous poser un certain nombre de questions pour recueillir vos avis, témoignages et recommandations qui nous seront précieux dans le cadre de l'analyse générale, avec d'autres informations et données par l'équipe.

Cet entretien devrait durer de 45 à 60 minutes.

Consentement libre et éclairé : Votre participation est entièrement volontaire et tout, ce qui signifie que je suis seule à être au courant de vos réponses. Votre nom ne sera également pas associé à vos réponses. Vous êtes libre de refuser de répondre à toute question ou d'arrêter l'entretien à tout moment.

En cas d'entretien en distanciel : Si vous êtes d'accord, j'aimerais enregistrer notre conversation. L'enregistrement sera supprimé une fois l'évaluation terminée.

Avez-vous des questions avant de commencer?

Pertinence et conception du projet

1. Y-a-t-il un « véritable » document de projet signé par l'ONUDI et le gouvernement du Sénégal? Si non, pourquoi?
2. Est-ce que le projet fait suite à un autre ou vient en compléter d'autres?
3. Le projet et sa stratégie ont-ils été modifiés en cours de mise en œuvre, suite à des changements circonstanciels inattendus ? Si oui, comment et pour quelles raisons ?
4. Pensez-vous que la stratégie du projet a été efficace, que les moyens octroyés et les activités prévues ont permis d'atteindre les effets attendus et que ces derniers ont/vont contribuer à l'objectif global? Sinon, quels seraient les changements à apporter?
4. Comment vous êtes-vous assuré que le projet répondait aux besoins des populations dont les femmes?
5. Comment vous êtes-vous assuré d'intégrer adéquatement les considérations de genre dans le projet ? sous quelles formes?
6. Quels ont été les effets de la pandémie du COVID 19 sur votre plan de travail ? Quelles ont été les réponses apportées?

Efficacité et Progrès vers l'impact

1. Quelles sont selon vous, les principaux domaines de réussite du projet? Ceux où il a moins bien réussi? Quelles sont les raisons dans l'un et l'autre cas?
2. A-t-il promu des innovations? Quelle est la VA du projet?
3. Quels sont les risques auxquels le projet a dû faire face? Comment ont-ils été gérés?
4. Avez-vous constaté des changements en termes de comportements, pratiques qui auraient été induits par le projet?
5. Est-ce que la transformation de l'UCG en SONAGED est un signe d'importance donnée par le gouvernement Sénégalais à la gestion des déchets? Pensez-vous que le projet y a été pour quelque chose?
6. Le projet a-t-il eu ou pourrait-il avoir des effets différents sur les femmes que sur les hommes ? Quels ont-été ou seraient ces effets? (Négatif, neutre, ciblé, sensible, transformatif) sur les femmes/filles ? Sur les populations vulnérables?
7. Quels sont les progrès vers l'impact? En termes d'application de la GER des déchets par les municipalités? Donc de réduction visée des émissions de uPOPS ? En termes d'organisation du secteur de la collecte et du tri

(organisation du secteur informel en associations, développement de petites entreprises privées de collecte, recyclage...et donc création d'emplois)

Cohérence interne et partenariats

1. Quels sont les principaux partenariats sur lesquels le projet a pu compter et quelles ont été leur valeur ajoutée, faiblesses?
 - a. Avec autres agences régionales / nationales
 - b. Autres PTF
 - c. Organisations de la société civile
 - d. Secteur privé

Efficience et aspects organisationnels

- | |
|--|
| 1. Quels sont les points forts et les points à améliorer au niveau de la gestion (financière, acquisitions de biens et services), coordination et communication? |
| 2. Quid des retards dans la mise à disposition des fonds FEM? De l'expertise internationale? |
| 3. Pensez-vous que le projet a eu les ressources humaines et les capacités techniques nécessaires pour atteindre les résultats auxquels il aspirait? La structure organisationnelle du projet était-elle adéquate? |
| 4. L'engagement des partenaires de mise en œuvre était-il optimal? ONUDI Siège, DEEC, UCG, municipalités? |
| 5. Les mécanismes de suivi mis en place ont-ils été adéquats? Ont-ils permis d'informer la prise de décision? |
| 6. Avez-vous renseigné les indicateurs du projet d'une manière régulière? Quid des indicateurs d'impact? Notamment l'indicateur mesurant la réduction des émissions des POP non intentionnellement produits? |
| 7. Quelles ont été les raisons des retards pris par le projet ? Quelles ont été les mesures d'atténuation prises? |
| 8. Quid des recommandations de l'évaluation à mi-parcours? Ont-elles été prises en compte? Extension de la durée du projet, accélération des déboursements et recrutements? Discussion avec le gouvernement de la stratégie de mise à l'échelle du projet? Mobilisation du co-financement? |

Durabilité

- | |
|--|
| 9. Comment estimez-vous le potentiel de durabilité du projet après sa clôture? Au niveau institutionnel, régional et national, et individuel, quels compétences, comportements ou pratiques perdureraient? Pourquoi? |
| 10. Y-a-t-il une stratégie de sortie mise en place? |

11. Quelles mesures ont-été prises pour assurer l'appropriation des résultats/processus par les partenaires nationaux et locaux? Pour assurer leur financement à moyen ou long terme? Pour assurer la réplication des expériences positives?

Genre

1. Comment la prise en compte du genre s'est matérialisée? Au niveau des activités du projet? Formations? Supports de sensibilisation?

2. Comment la prise en compte du genre a-t-elle été suivie, promue par le siège?

Annex 3: List of interviewees

Organization	Name	Function	Contact
VIENNA			
UNIDO HQ	Ms. Lamia BENABBAS	Industrial Development Manager/ PRODEMUD Manager	L. BENABBAS@unido.org
	Ms. Clara FERNANDEZ	UNIDO HQ Coordinator	C. FERNANDEZ@unido.org
DAKAR			
PMU	Mr. Lhyzas TCHIMBOUNGOU	Project national coordinator	lhyzas@gmail.com 00221775749481
	Mr. Cambell FALL	Admin & Finances Assistant	cambelfall@yahoo.fr 00221775101189
	Mr. Moussa NDIAYE	Expert finance	moussandiay@yahoo.fr 00221776399629
	Ms. Boussoura TALLA GUEYE	Expert business management	boussoura.gueye@gmail.com 00221773978664
UNIDO Office	Mr. Malick SY	PCP national coordinator	M.SY@unido.org malicks_sy@yahoo.fr 00221776893403
DEEC	Mr. Cheikh FOFANA	Deputy Director	
	Ms. Aita Sarr SECK	PND (Former national project director) (2017-2021)	aitasec@yahoo.fr 00221775114759
SONAGED	Mr. Ndiaye GUEYE	Director of partnerships	ndiaye.gueye@sonaged.gouv.sn 00221776420245
PROMOGED	Mr. Ibrahima DIAGNE	Director	ibsse2@gmail.com famadieye@gmail.com 00221775290303
Ministry of finance and budget	Mr. Arona DIA Mr. Seyni DIOP Mr. Pape Matar NDIAYE	Chief Financial and Accounting Audit Division	diarona@yahoo.fr 00221776350615
	M. Magueye NGOM	Program Manager/Budget Programming department	miguingom@yahoo.fr 00221772655247
Ministry of Economy, Planning and Cooperation Department in charge of M&E, Performances, Programmes and Projects	Mr. Saliou DIOP Ms. Rougui FALL FAYE Ms. Ndeo Marie FAYE	Program Manager/Project and Program performance monitoring and evaluation department	rougui.fall@economie.gouv.sn 00221775659700

TIVAOUANE			
Municipality	Mr. Abdoulaye MBOUP Mr. Omar Traore	Spokesman of the Municipality Member of the Local Technical Committee	ctdtiv@gmail.com 00221776512022
PRODEMUD	M. Moustapha DIAGNE	Formel local project coordinator in Tivaouane	diagnetapha@gmail.com 00221763096656
Abdoul Aziz Hospital	Mr. Amadou Pape SAGNA Dr Abdoulaye SAKHO	Hygienic manager	amadousagna@gmail.com 00221771405060
Health center Local technical services	Mr. Ismaïla DIAGNE	Manager biomedical waste unit	ismailadiagne1@yahoo.fr 00221775135629
PROMOGED	Mr. Baba Ibrahima DIP	Local Representative	
Cooperative of scrap metal workers (beneficiary)	Mr. Papa SAGNA	Coordinator	00221781762693
Neighborhood Committees (beneficiary)	Mr. Issa NDIAYE	General secretary	00221783828399
Carters' Cooperative (Beneficiary)	Mr. Mansour DIOP	President and Member of the local technical committee	00 221767447026
Women association of waste collectors	Ms. Fary SARR Ms. Amy DIOPF	President Member	
Women association BG	Ms. Astou CONDE	President	
ZIGUINCHOR			
Municipality	Mr. Abdou SANE Mr. Seyni MANE	Advisor to the Mayor and Chairman of the environment committee General Secretary	abdousanegnanthio@gmail.com 00221776595976 Seyni.mane@gmail.com 00221774074372
	Mr. Joseph Sambou FAURE	Head of Cooperation, Partnerships and Economic Development unit, PRODEMUD focal point	josambou.faure@gmail.com 00221781254358
SONAGED	Mr. Madiabel MBAYE	Local Representative	
PROMOGED	Mr. Ibrahima SALL	Local Representative	
PRODEMUD	Mr. Ibrahima KA	Local project coordinator	ibrahima_ka@yahoo.com 00221774761750
Regional hospital	Mr. Ndiambe DIOP Mr. Alhouseyni DIATTA Mr. Abdoulaye DABO	Director Head of Hygiene and Security Operator at the BMWTU	ndiambe@hotmail.fr 00221773221346
NGO PACTE	Mr. Moussa BARRY	General secretary	moussabarry@yahoo.com 00221775214997

Annex 4: list of documents consulted

Documents related to the project:

- “Document request for GEF CEO endorsement”, GEF
- “Contrat UNIDO/ DEEC” ONUDI, Service des achats, avril 2015
- Document de projet signé par le bureau de l’ONUDI à Dakar et le Ministère de l’Economie, des Finances et du Plan, Janvier 2016
- 2017 – 2022 Annual Work Plans
- 2017- 2022 Annual progress reports
- 2021-2022 GEF Project Implementation Reviews
- “Mid-Term evaluation report”, Bontiébite BADJARE, September 2019
- 2016-2022 Project Steering Committee Meeting reports
- Mission reports in Tivaouane (11 April 2022; 04 May 2022; 24 May 2022)
- Mission reports in Ziguinchor (February 2021; October 2021; January 2022; April 2022)
- Revised project logical framework approved by the PSC during its 7th meeting in July 2022
- Monitoring table of project indicators (2023)

Documents produced by the project:

- “Analyse des lacunes du cadre juridique de la gestion des déchets dangereux au Sénégal, Rapport final, M. Abdou DIOUF, Avril 2018.
- “Directives techniques visant les opérateurs privés et les fonctionnaires sur la façon de mettre en œuvre et d’exploiter la gestion écologiquement rationnelle des déchets dangereux et autres déchets au Sénégal en faisant usage des meilleures techniques disponibles et des meilleurs pratiques environnementales (MTD/MPE) en vue de réduire les émissions des polluants organiques persistants non intentionnels”, M. Abdou DIOUF, juillet 2018.
- “Directives pour une mise en œuvre opérationnelle efficace du cadre juridique et institutionnel de la gestion écologiquement rationnelle des déchets dangereux et solides municipaux au Sénégal ”, M. Abdou DIOUF, Août 2018.
- « Analyse du cadre institutionnel actuel de gestion des déchets dangereux au Sénégal », Rapport provisoire, M. Abdou DIOUF, Septembre 2018.
- “Avant-projet de loi portant organisation de la gestion des déchets dangereux au Sénégal”, M. Abdou DIOUF, Novembre 2018.
- Communiqué du bureau de mise à niveau sur « l’atelier de Formation sur les Polluants Organiques Persistants (POP), les Meilleures Techniques Disponibles (MTD), les Meilleures Pratiques Environnementales (MPE) et la Mise à Niveau Industrielle des Entreprises”, Mars 2019.
- « Stratégie de communication pour la gestion des déchets solides municipaux et dangereux dans les municipalités de Tivaouane et Ziguinchor », PRODEMUD, Mai 2019.
- « Plan d’Action Quinquennal de Gestion des déchets dangereux de la Commune de Tivaouane (2019-2023) », Rapport final, PRODEMUD, juin 2019.
- « Plan d’Action Quinquennal de Gestion des déchets dangereux de la Commune de Ziguinchor (2020 – 2024) », PRODEMUD, Septembre 2019.
- « Etude sur la quantification et le stockage des déchets dangereux dans la commune de Ziguinchor, PRODEMUD, Novembre 2019.

- « Rapport de la Campagne de collecte de données relatives aux déchets municipaux et déchets dangereux collectés, stockés et triés à Tivaouane », PRODEMUD, Novembre 2019.
- « Plan d'Action National de Gestion des déchets dangereux 2020-2024, Papa Samba DIOUF, Décembre 2019.
- “Compte rendu de la sensibilisation sur la Gestion Ecologiquement Rationnelle des déchets solides Dangereux dans la Commune de Tivaouane en période de Mawloud (Gamou) », PRODEMUD, Novembre 2019.
- “Rapport de la Campagne de Sensibilisation sur la Gestion Ecologiquement Rationnelle des déchets solides municipaux et déchets dangereux dans la Commune de Tivaouane », PRODEMUD, Décembre 2019.
- « Compte Rendu de la campagne de sensibilisation sur le brûlage des déchets à Ziguinchor », PRODEMUD, Janvier 2020.
- « Note conceptuelle technique du centre de regroupement et de commercialization des déchets pour la commune de Ziguinchor”, UNIDO, no date.
- Album de bandes dessinées sur les déchets et la gestion économiquement rationnelle », Mai 2022.
- « Estimation des POPPNI (Dioxines et Furanés) après intervention du Projet », PRODEMUD, March 2023.

Media articles :

- « Ziguinchor, un projet pour revaloriser les déchets ménagers », www.fms.sn , 6 juillet 2018 (vidéo).
- « Le Sénégal va bientôt disposer d'un cadre juridique « global et cohérent » pour une gestion des déchets dangereux”, MAP Ecology, 14 novembre 2018.
- « Gestion des déchets à Ziguinchor : le maire applaudit l'apport du PRODEMUD et s'engage », www.gms.sn, 23 juillet 2020 (vidéo).
- « Ziguinchor, gestion des déchets biomédicaux, PRODEMUD et la mairie arment les agents de santé », Le Quotidien, 25 juillet 2020.
- « La mairie de Tivaouane et le PRODEMUD pour une bonne gestion des déchets biomédicaux », TV Info vidéo, https://www.youtube.com/watch?v=F0teLW_IV0o
- « Tivaouane : Mamadou Sy Mbengue inaugure l'Unité de traitement écologiquement rationnelle des déchets biomédicaux », DirectActu, 27 décembre 2020 <https://directactu.net/2020/12/27/photos-video-tivaouane-mamadou-sy-mbengue-inaugure-lunite-de-traitement-ecologiquement-rationnelle-des-dechets-biomedicaux/>

Annex 5: Terms of Reference



UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

TERMS OF REFERENCE FOR PERSONNEL UNDER INDIVIDUAL SERVICE AGREEMENT (ISA)

Title:	International Evaluation Consultant, Team Leader
Main Duty Station and Location:	Home-based in Challes-les-Eaux, France
Mission/s to:	To be authorized separately, if required
Start of Contract (EOD):	28 January 2023
End of Contract (COB):	31 March 2023
Number of Working Days:	40 working days (WAE)
COVID-19 response:	The activities are mostly desk-based. The incumbent will however be expected to adhere to all rules and regulations regarding the COVID-19 pandemic in the event of travel.

ORGANIZATIONAL CONTEXT

The United Nations Industrial Development Organization (UNIDO) is the specialized agency of the United Nations that promotes industrial development for poverty reduction, inclusive globalization and environmental sustainability. The mission of UNIDO, as described in the Lima Declaration adopted at the fifteenth session of the UNIDO General Conference in 2013 as well as the Abu Dhabi Declaration adopted at the eighteenth session of UNIDO General Conference in 2019, is to promote and accelerate inclusive and sustainable industrial development (ISID) in Member States. The relevance of ISID as an integrated approach to all three pillars of sustainable development is recognized by the 2030 Agenda for Sustainable Development and the related Sustainable Development Goals (SDGs), which will frame United Nations and country efforts towards sustainable development. UNIDO's mandate is fully recognized in SDG-9, which calls to "Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation". The relevance of ISID, however, applies in greater or lesser extent to all SDGs. Accordingly, the Organization's programmatic focus is structured in four strategic priorities: Creating shared prosperity; Advancing economic competitiveness; Safeguarding the environment; and Strengthening knowledge and institutions.

Each of these programmatic fields of activity contains a number of individual programmes, which are implemented in a holistic manner to achieve effective outcomes and impacts through UNIDO's four enabling functions: (i) technical cooperation; (ii) analytical and research functions and policy advisory services; (iii) normative functions and standards and quality-related activities; and (iv) convening and

partnerships for knowledge transfer, networking and industrial cooperation. Such core functions are carried out in Departments/Offices in its Headquarters, Regional Offices and Hubs and Country Offices.

The Directorate of Technical Cooperation and Sustainable Industrial Development (TCS), headed by a Managing Director, oversees the Organization's development of capacities for industrial development as well as industrial policy advice, statistics and research activities and the Organization's normative contribution to Member States and global development community in achieving the SDGs. The Directorate also ensures the application of strategies and interventions for sustainable industrial development related to Environment, Energy, SMEs, Competitiveness and Job creation, as well as Digitalization and Artificial Intelligence. Through coordination in-house and with Member States and industry stakeholders, it ensures that the services provided in these areas contribute toward effective and appropriate technical, business and policy solutions and are focused on results and on realizing any potential for scaling up and positioning UNIDO as a leading platform for industrial development in developing countries and global fora.

The Division of Circular Economy and Environmental Protection (TCS/CEP) contributes to greener and more circular industries and products by minimizing both resource use along value chains and the emission of pollutants to the environment. The Division promotes just transitions to circular economies, reduced release of pollutants into the environment and other green industrial and economic approaches to help Member States to grow economically while simultaneously addressing the three planetary crises of climate change, biodiversity loss and pollution. It does so by supporting resource efficiency increases in the manufacturing and use of products along value chains and during the life cycle of the product; by reducing or eliminating the emission of non-fuel-related greenhouse gas emissions; and by assisting in achieving the objectives of and compliance with multilateral environmental agreements. In doing so, its activities further improve competitiveness, as well as the development of and access to markets, particularly for SMEs. This contributes to climate-neutral, resilient, pollution-free industrial development, supporting co-existence that is in harmony with nature.

The Division acts as the focal point in UNIDO for various multilateral environmental agreements and multilateral co-operation in the field of the environment: the Montreal Protocol on Substances that Deplete the Ozone Layer; the Stockholm Convention on Persistent Organic Pollutants; and the Minamata Convention on Mercury; as well as other relevant international initiatives and conventions such as the Strategic Approach to International Chemicals Management (SAICM), and multilateral co-operation in initiatives like the Partnership on Action for Green Economy (PAGE) and the Green Growth Knowledge Platform (GGKP) and the Green Industry Platform (GIP). The Division coordinates its service delivery with the services offered by other technical divisions, and other relevant organizational entities of UNIDO.

This position is located under the Responsible Materials and Chemicals Management Unit (TCS/CEP/RMC), which is responsible for supporting Member States to implement the chemicals and wastes obligations and requirements under the Basel, Minamata, Rotterdam, and Stockholm Conventions and other emerging relevant agreements, in particular where it relates to larger and formalized industries and sectors, and to leverage its experience to address industrial pollution mitigation in general as well as other emerging compliance mechanisms. With novel approaches to materials and chemicals management and to innovation, with training and education, and with implementing circular economy approaches in particular related to the extension of product life by maintenance, the Unit further leverages its experience to facilitate responsible materials sourcing and to support smaller enterprises and entrepreneurs in greening their businesses.

In conjunction with the UNIDO Independent Evaluation Unit (EIO/IEU), responsible for the independent evaluation function of UNIDO. It supports learning, continuous improvement and accountability, and provides factual information about result and practices that feed into the programmatic and strategic decision-making processes. Independent evaluations provide evidence-based information that is credible, reliable and useful, enabling the timely incorporation of findings,

recommendations and lessons learned into the decision-making processes at organization-wide, programme and project level. EIO/IEU is guided by the UNIDO Evaluation Policy, which is aligned to the norms and standards for evaluation in the UN system.

PROJECT CONTEXT

100114 - Environmentally sound management of municipal and hazardous solid waste to reduce emission of unintentional POPs - Implementation Phase

The Direction of Environment and of Classified Establishment (DEEC) of the Ministry of Environment and Sustainable Development (MEDD) is responsible for the sound management of industrial hazardous waste and contaminated sites in Senegal. The category of industrial waste – which has become a top strategic priority of the Republic of Senegal – generally includes non-hazardous waste, medical waste, electronic waste, and hazardous wastes. The PNGD, "Programme National de Gestion des Déchets", is a national initiative of the government funded by the Islamic Bank of Development to promote the sound waste management in the country.

Senegalese municipalities have major difficulties to manage solid municipal waste. In the best cases, there is only a primary waste collection done by NGOs or small local companies; the waste is either left in a transfer site which becomes a dump site or dumped in an open and uncontrolled landfill, where waste is incinerated in an open-burning condition.

The project focuses on the waste management business sector development in the two cities of Tivaouane and Ziguinchor, selected due to their small-scale dump sites. A competitive selection process was undertaken to select pilot municipalities. The submitted proposals were evaluated by criteria such as investment and performance of the past 5 years, investment plans for the coming 5 years, sustainability of the project intervention and co-financing opportunities.

The PNGD aims at assisting the municipality government to improve the waste management by addressing the social need for keeping good quality of life and generating employment opportunities. The UNIDO/GEF project provides technical contribution to ensure that PNGD's intervention is complying with the best available technique and best environmental practice (BAT/BEP) to reduce the emission of uPOPs. Among the main problem the project seeks to address we find: i) a need to improve the municipalities' hazardous waste management including medical wastes, electric and electronic wastes, lead and mercury containing wastes; ii) a need to develop both hazardous and non-hazardous waste sound management in partnership with co-financing partners.

This seeks to obtain improvements in the waste management operations of main stakeholders, especially existing private and informal sectors to revamp their business and operations for sound waste management in Senegal. The project contributes to strengthening of the local capacities to properly absorb the knowhow and develop business in a competitive manner so as to offer waste management services sustainably and reduce POPs emissions. The project activities conducted in the two selected municipalities will serve as examples to be replicated in other municipalities at both national and regional levels.

The overall objective of the project is to reduce releases of POPs from hazardous and municipal waste by strengthening the technical and institutional capacities of a group of private sectors able to sustain and replicate BAT/BEP demonstrated under project as part of the implementation of the National Implementation Plan (NIP) under the Stockholm Convention.

Expected Outcomes:

Outcome 1: Legal framework and institutional capacities for sound management of hazardous and other wastes strengthened, put in place, and sustained.

Output 1.1 Existing laws and regulations on the sound management of hazardous and other wastes assessed and the gaps and needs identified.

Output 1.2 Legal frameworks and institutional capacities to support the environmentally sound management of hazardous and other wastes strengthened.

Output 1.3. Technical guideline/toolkit on BAT/BEP (in a gender sensitive way) on how to conduct sound waste management in the country developed.

Output 1.4 National government and municipality officers trained with gender considerations to develop sound waste management complying with the regulation and enforcement requirement.

Outcome 2: Stakeholders ready to be engaged in properly disposing, sorting and recycling hazardous and other wastes.

Output 2.1 National government officers trained on how to establish sound waste management.

Output 2.2 Municipal government officers trained on how to conduct sound management are provided.

Output 2.3 Gender-sensitive awareness raising events held and relevant materials on sound waste management activities distributed for the general public.

Output 2.4 General public trained on reduce, reuse and recycle (3R) and good waste separation practice

Output 2.5 Business operations in private sectors working on sound waste management improved
Outcome 3: Sound management operations of hazardous and other wastes improved 1

Output 3.1 Hazardous Waste Management Action Plans reviewed and formulated at municipality levels.

Output 3.2 Facilities established and used to properly collect hazardous and other wastes within the municipalities.

Output 3.3 Waste interim storage and sorting facilities established and used by the stakeholders of the selected municipalities.

Output 3.4 Recycling facilities established and used within the municipalities.

Output 3.5 The management of final disposal facilities reinforced for hazardous and other wastes in the municipalities

Output 3.6 Waste management operations by the companies at the municipal levels improved.

Output 3.7 Open burning controlled to reduce uPOP emissions.

FUNCTIONAL RESPONSIBILITIES

The International Evaluation Consultant, Team Leader is expected to carry out the following duties for the independent terminal evaluation of the project:

MAIN DUTIES	Concrete/ measurable Outputs to be achieved	Expected duration	Location
<p>1. Review project documentation and relevant country background information (national policies and strategies, UN strategies and general economic data).</p> <p>Define technical issues and questions to be addressed by the national technical evaluator prior to the field visit*.</p> <p>Determine key data to collect in the field and adjust the key data collection instrument if needed.</p> <p>In coordination with the project manager, the project management team and the national technical evaluator, determine the suitable sites to be visited and stakeholders to be interviewed.</p>	<p>Adjusted table of evaluation questions, depending on country specific context.</p> <p>Draft list of stakeholders to interview during the field missions.</p> <p>Identify issues and questions to be addressed by the local technical expert.</p>	5 days	Home- based
<p>2. Prepare an inception report which streamlines the specific questions to address the key issues in the TOR, specific methods that will be used and data to collect in the field visits, confirm the evaluation methodology, draft theory of change, and tentative agenda for field work.</p> <p>Provide guidance to the national evaluator to prepare initial draft of output analysis and review technical inputs prepared by national evaluator, prior to field mission.</p>	<p>Draft theory of change and Evaluation framework to submit to the Evaluation Manager for clearance.</p> <p>Guidance to the national evaluator to prepare output analysis and technical reports.</p>	4 days	Home- based
<p>3. Briefing with the UNIDO Independent Evaluation Unit, project managers and other key</p>	<p>Detailed evaluation schedule with tentative mission agenda (incl. list of</p>	1 day	Through skype

stakeholders at UNIDO HQ (included is preparation of presentation).	stakeholders to interview and site visits); mission planning; Division of evaluation tasks with the National Consultant.		
4. Conduct field mission to in Senegal*.	Conduct meetings with relevant project stakeholders, beneficiaries, the GEF Operational Focal Point (OFP), etc. for the collection of data and clarifications; Agreement with the National Consultant on the structure and content of the evaluation report and the distribution of writing tasks; Evaluation presentation of the evaluation's preliminary findings, conclusions and recommendations to stakeholders in the country, including the GEF OFP, at the end of the mission.	12 days	Senegal (specific project site TBD and to be authorized separately, if required)
5. Present overall findings and recommendations to the stakeholders at UNIDO HQ*.	After field mission(s): Presentation slides, feedback from stakeholders obtained and discussed.	1 day	Vienna, Austria (to be authorized separately, if required)
6. Prepare the evaluation report, with inputs from the National Consultant, according to the TOR; Coordinate the inputs from the National Consultant and combine with her/his own inputs into the draft evaluation report. Share the evaluation report with UNIDO HQ and national stakeholders for feedback and comments.	Draft evaluation report.	15 days	Home- based

7. Revise the draft project evaluation report based on comments from UNIDO Independent Evaluation Unit and stakeholders and edit the language and form of the final version according to UNIDO standards.	Final evaluation report.	2 days	Home- based
	TOTAL	40 days	

* The exact mission dates will be decided in agreement with the Consultant, UNIDO HQ, and the country counterparts. If deemed necessary, travel arrangements will be authorized separately.

MINIMUM ORGANIZATIONAL REQUIREMENTS

Education: Advanced university degree in environment, energy, engineering, development studies or related areas, is required.

Technical and Functional Experience:

A minimum of fifteen (15) years practical experience in the evaluation of development projects and programmes, is required.

Good working knowledge in environmental management is required.

Knowledge about GEF operational programs and strategies and about relevant GEF policies such as those on project life cycle, M&E, incremental costs, and fiduciary standards is required.

Experience in the evaluation of GEF projects and knowledge of UNIDO activities an asset is required.

Knowledge about multilateral technical cooperation and the UN, international development priorities and frameworks is required.

Working experience in developing countries is required.

Languages: Fluency in written and spoken English is required. Fluency and/or working knowledge of another official UN language, particularly French is required.

Absence of conflict of interest:

According to UNIDO rules, the consultant must not have been involved in the design and/or implementation, supervision and coordination of and/or have benefited from the programme/project (or theme) under evaluation. The consultant will be requested to sign a declaration that none of the above situations exists and that the consultants will not seek assignments with the manager/s in charge of the project before the completion of her/his contract with UNIDO.

REQUIRED COMPETENCIES

Core values:

WE LIVE AND ACT WITH INTEGRITY: work honestly, openly and impartially.

WE SHOW PROFESSIONALISM: work hard and competently in a committed and responsible manner.

WE RESPECT DIVERSITY: work together effectively, respectfully and inclusively, regardless of our differences in culture and perspective.

Key competencies:

WE FOCUS ON PEOPLE: cooperate to fully reach our potential –and this is true for our colleagues as well as our clients. Emotional intelligence and receptiveness are vital parts of our UNIDO identity.

WE FOCUS ON RESULTS AND RESPONSIBILITIES: focus on planning, organizing and managing our work effectively and efficiently. We are responsible and accountable for achieving our results and meeting our performance standards. This accountability does not end with our colleagues and supervisors, but we also owe it to those we serve and who have trusted us to contribute to a better, safer and healthier world.

WE COMMUNICATE AND EARN TRUST: communicate effectively with one another and build an environment of trust where we can all excel in our work.

WE THINK OUTSIDE THE BOX AND INNOVATE: To stay relevant, we continuously improve, support innovation, share our knowledge and skills, and learn from one another.