



## Project Implementation Report

(1 July 2022 – 30 June 2023)

<b>Project Title:</b>	Environmentally sound management of municipal and hazardous waste to reduce emissions of unintentional POPs
<b>GEF ID:</b>	4888
<b>UNIDO ID:</b>	100114
<b>GEF Replenishment Cycle:</b>	GEF-5
<b>Country(ies):</b>	Senegal
<b>Region:</b>	AFR - Africa
<b>GEF Focal Area:</b>	Persistent Organic Pollutants (POPs)
<b>Integrated Approach Pilot (IAP) Programs<sup>1</sup>:</b>	N/A
<b>Stand-alone / Child Project:</b>	Stand-alone
<b>Implementing Department/Division:</b>	ENV / IPM
<b>Co-Implementing Agency:</b>	NA
<b>Executing Agency(ies):</b>	Ministry of the Environment and Sustainable Development (MEDD) - Directorate of Environment and Hazardous Facilities (DEEC)
<b>Project Type:</b>	Full-Sized Project (FSP)
<b>Project Duration:</b>	60 Months
<b>Extension(s):</b>	3
<b>GEF Project Financing:</b>	2,000,000 USD
<b>Agency Fee:</b>	190,000 USD
<b>Co-financing Amount:</b>	17,030,186 USD
<b>Date of CEO Endorsement/Approval:</b>	10/14/2014
<b>UNIDO Approval Date:</b>	10/30/2014

<sup>1</sup> Only for GEF-6 projects, if applicable

<b>Actual Implementation Start:</b>	1/20/2015
<b>Cumulative disbursement as of 30 June 2023:</b>	1,996,057.20
<b>Mid-term Review (MTR) Date:</b>	8/26/2019
<b>Original Project Completion Date:</b>	1/19/2020
<b>Project Completion Date as reported in FY22:</b>	10/19/2022
<b>Current SAP Completion Date:</b>	3/31/2023
<b>Expected Project Completion Date:</b>	3/31/2023
<b>Expected Terminal Evaluation (TE) Date:</b>	5/26/2023
<b>Expected Financial Closure Date:</b>	12/31/2023
<b>UNIDO Project Manager<sup>2</sup>:</b>	First name: BENABBAS Last name: Lamia

## I. Brief description of project and status overview

<b>Project Objective</b>	
<p>This Project aims to reduce POPs releases from hazardous and municipal wastes by strengthening technical and institutional capacities of a group of private sectors, which can sustain and replicate the best available technique and best environmental practice (BAT/BEP) demonstrated in the project. Waste management has become a top strategic priority of the Republic of Senegal. PNGD, (<i>Programme National de Gestion des Déchets</i>) is a national initiative of the government funded by the</p> <p>Islamic Bank of Development to promote the sound waste management in Senegal. This UNIDO/GEF project will focus on an improvement 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 will contribute 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.</p> <p>This is a GEF-5 project so please see the POPs tracking tool attached. Adapted to GEF-6 Core Indicators, please see the following table:</p>	
Project Core Indicators	Expected at Endorsement/Approval Stage
Core Indicator 10: Reduction, avoidance of emissions of POPs to air	13 gTEQ

<sup>2</sup> Person responsible for report content

	from point and non-point sources		
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Baseline
<p>Senegalese municipalities have major difficulties to cope with the waste. In the best cases, there is only a primary waste collection done by an NGO or small local companies. The waste is either left in a transfer site which becomes a dumpsite or dumped in an open and uncontrolled landfill, where waste is incinerated in an open-burning condition. Waste characterization conducted by PNGD is a major step in the implementation of an efficient waste management system. This constitutes a reliable baseline that could then be used to establish further contracts and specifications for the collection, sorting, reuse, recycling and final disposal of wastes and for impact assessment studies. In total, 21 municipalities will benefit from this initiative. To ensure the ownership of the project at the municipality level among the pre-selected three cities of Kaolack, Tivaouane, and Ziguinchor, a competitive based selection process was applied. The submitted proposals were evaluated by criteria such as the investment and performance of the past 5 years and plans for the next 5 years, sustainability of the project intervention, and cofinancing opportunities. Targeted results: This project aims to reduce by 50% the currently estimated uPOPs emissions from open burning (0.6 gTEQ/year in Tivaouane and 25 gTEQ/year in Ziguinchor in worst scenario). 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 driving force of the replication would be mainly by private sectors, which are chartered by the national government and municipalities.</p> <p>The reduction of unintentional POPs (uPOPs) will be achieved by better preventing plastics and metallic wastes from being mixed with the municipal and organic wastes that are subject to spontaneous combustion and consequently causes higher emissions of uPOPs. The spontaneous combustion will be also better controlled by improving uncontrolled dump sites</p> <p>through separation, segregation, recycling of municipal and hazardous waste as well as more frequent top soil coverage and other measures to prevent uncontrolled fire.</p>

Please refer to the explanatory note at the end of the document and select corresponding ratings for the current reporting period, i.e. FY23. Please also provide a short justification for the selected ratings for FY23.

In view of the GEF Secretariat's intent to start following the ability of projects to adopt the concept of adaptive management<sup>3</sup>, Agencies are expected to closely monitor changes that occur from year to year and demonstrate that they are not simply implementing plans but modifying them in response to developments and circumstances or understanding. In order to facilitate with this assessment, please introduce the ratings as reported in the previous reporting cycle, i.e. FY22, in the last column.

Overall Ratings <sup>4</sup>	FY23	FY22
Global Environmental Objectives (GEOs) / Development Objectives (DOs) Rating	<i>Moderately Satisfactory (MS)</i>	<i>Moderately Satisfactory (MS)</i>
In terminal evaluation of the project finalized in 2023, sustainability of the project was rated moderately likely.		
Implementation Progress (IP) Rating	<i>Satisfactory (S)</i>	<i>Moderately Satisfactory (MS)</i>
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		

<sup>3</sup> Adaptive management in the context of an intentional approach to decision-making and adjustments in response to new available information, evidence gathered from monitoring, evaluation or research, and experience acquired from implementation, to ensure that the goals of the activity are being reached efficiently

<sup>4</sup> Please refer to the explanatory note at the end of the document and assure that the indicated ratings correspond to the narrative of the report

Efficiency is rated Satisfactory in the terminal evaluation report, while project effectiveness was rated highly satisfactory.		
Overall Risk Rating	Moderate Risk (M)	Moderate Risk (M)
At the time of terminal evaluation, the overall achievement rate reached 96%. Terminal evaluation report indicates that « at the end of the project on March 31, 2023, the overall achievement rate should reach 99% because most of planned activities will be completed ». Sustainability of the project was rated « moderately likely ». In the last municipal elections of Senegal, new teams were elected in both pilot cities Tivaouane and Ziguinchor, after 5 years of continuous work and collaboration with the previous teams and mayors. Lack of continuity in project activities and financial commitments made towards sustaining achieved results could negatively impact the outcome of the project.		

## II. Targeted results and progress to-date

Please describe the progress made in achieving the outputs against key performance indicator's targets in the project's **M&E Plan/Log-Frame at the time of CEO Endorsement/Approval**. Please expand the table as needed.

*Please fill in the below table or make a reference to any supporting documents that may be submitted as annexes to this report.*

Project Strategy	KPIs/Indicators	Baseline	Target level	Progress to-date (FY 2023)
<b>Component 1:</b> Legal framework and institutional capacities				
<b>Outcome 1:</b> Legal framework and institutional capacities for sound management of hazardous and other wastes strengthened, put in place, and sustained				
<b>Output 1.1:</b> Existing laws and regulations on the sound management of hazardous and other wastes assessed and the gaps and needs identified	- Copies of relevant texts and laws and regulations exist relating to the environmentally sound management of municipal and hazardous waste (2)	Lack of relevance of the regulations in force governing the management of municipal solid waste and hazardous waste.	- 1	- Gaps / inadequacies are identified and analysed for each category of actors in hazardous waste management in Senegal and at all levels. For non-hazardous waste, a study had been carried out by the national waste management program (PNG)  - Following a study on the legal and institutional gaps in the management of hazardous waste, a proposal for texts to improve the legal and institutional framework was made in 2018  <b>Target reached</b>
	- Number of text proposals from the evaluation (at least 1)	Existence of a gap between the current framework governing hazardous wastes and the mandate conferred by the Stockholm Convention	- 1	
<b>Output 1.2:</b> Legal frameworks and institutional capacities to support the environmentally sound management of hazardous and other wastes strengthened	- Number of legal frameworks newly approved and enacted  - Number of new guidelines and tools adopted for potential waste management operators	Legal gap in the environmentally sound management of hazardous wastes, in particular hazardous wastes potentially containing POPs as well as processes for treating hazardous	- 1  - 1	A bill on hazardous and solid municipal waste was endorsed by all stakeholders at national level on March 25, 2019. The document has been submitted to the regulatory authority  <b>Target reached</b>

		wastes with POPs emissions		
<b>Output 1.3:</b> Technical guideline/toolkit on BAT/BEP (in a gender sensitive way) on how to conduct sound waste management in the country developed	- Number of technical directives and / or adapted toolbox	Lack of national technical guidelines for the management of municipal solid waste and hazardous waste	- 1	Technical Guidelines for Private Operators and government representatives on the environmentally sound management of hazardous wastes and solid municipal waste in Senegal using best available techniques and best environmental practices (BAT / BEP) to reduce emissions of unintentional persistent organic pollutants were developed in July 2018 and are being disseminated.  <b>Target reached</b>
<b>Output 1.4:</b> National government and municipality officers trained with gender considerations to develop sound waste management complying with the regulation and enforcement requirement	- Number of trainings  - Number of participants/trainees (male/female)	Poor consideration of the gender dimension in the environmentally sound management of hazardous wastes and other wastes	- 3  - 80/20	- A 3-day training workshop was organized in Tivaouane in December 2018. 21 people benefited from this training with a participation rate of 24%, women  - A 2-day training workshop was organized in Ziguinchor in April 2019, with the participation of 29 people including 9 women composed of civil servants and Municipal Agents (31% women participation rate)  - A 1-day training workshop was organized in Dakar in June 2019 with the participation of 9 people including 2 women (i.e. a participation rate of 22%) composed of civil servants and state agents  <b>Target reached</b>
<b>Component 2: Stakeholder engagement in waste management</b>				
<b>Outcome 2: Stakeholders ready to be engaged in properly disposing, sorting and recycling hazardous and other wastes</b>				
<b>Output 2.1:</b> National government officers trained on how to establish sound waste management	- Number of training  - Number of participants/trainees (male/female)	Lack of awareness and effective coordination on issues related to waste management between ministries and municipalities	- 2  - 32/8	One training session completed in Dakar in January 2018 with the following objectives: 1) to raise awareness and improve the knowledge of government officials on how to effectively coordinate actions between ministries and municipalities; 2) develop private entrepreneurship; and 3) Enforce regulations on the sound management of waste, taking into account the gender dimension at the national level The training saw the participation of 24 people with a participation rate of 29% of women  <b>Target reached</b>
<b>Output 2.2:</b> Municipal government officers trained on how to conduct sound waste management	- Number of training  - Number of participants/trainees (male/female)	Municipal officers are not sufficiently trained in how to ensure environmentally sound	- 2  - 32/8	Training completed in 2017 Two training sessions were held first in Ziguinchor (12 and 13 December 2017, 25 people benefited from this training including 5 women and 20 men)

		management of waste		and then in Tivaouane (27 and 28 December 2017, 25 people benefited from this training including 7 women and 18 men), with the aim of strengthening the skills of civil servants and municipal officials on how to ensure the environmentally sound management of waste  <b>Target reached</b>
<b>Output 2.3:</b> Gender-sensitive awareness raising events held and relevant materials on sound waste management activities distributed for the general public	<ul style="list-style-type: none"> <li>- Number of awareness campaigns</li> <li>- Number of materials distributed to the public</li> </ul>	The public is not sufficiently aware of good sorting practices and the gender dimension	<ul style="list-style-type: none"> <li>- 3</li> <li>- ND</li> </ul>	<ul style="list-style-type: none"> <li>- One (01) Communication strategy was developed, shared and validated in August 2019 in Dakar</li> <li>- Three (03) awareness campaigns were carried out including two (02) in Tivaouane and one (1) in Ziguinchor</li> <li>- Six (06) radios including three community radio stations covered the campaign in Tivaouane</li> <li>- Five (05) radio shows organized in Ziguinchor</li> <li>- A video report produced in Tivaouane and Ziguinchor</li> <li>- Dahiras are sensitized on the danger of burning waste</li> <li>- 4 Cooperatives, 3 of which are women, are made aware of the danger of burning waste in Tivaouane</li> <li>- 1000 flyers, 1000 Caps and T-shirts were distributed in Tivaouane and Ziguinchor</li> <li>- District Delegates are made aware of the ESM of waste in Tivaouane</li> <li>- ASCs are made aware of waste management in Tivaouane</li> <li>- Badienoux Goox are sensitized on the ESM of waste in Tivaouane</li> </ul> <b>Target reached</b>
<b>Output 2.4:</b> General public trained on reduce, reuse and recycle (3R) and good waste separation practice	<ul style="list-style-type: none"> <li>- Number of awareness raising events</li> <li>- Percentage of neighbourhood committees formed (100%)</li> <li>- Number of community actors trained (male/female)</li> </ul>	The public is not sensitized / trained on the reduction, reuse and recycling (3R) trilogy as well as on good sorting practices	<ul style="list-style-type: none"> <li>- 2</li> <li>- 100</li> <li>- ND</li> </ul>	<ul style="list-style-type: none"> <li>- In December 2019, an awareness-raising session on 3Rs for the public in the commune of Tivaouane was carried out during the Tivaouane forum through a presentation led by the National Expert in Business Management from PRODEMUD and exchanges with the general public</li> <li>- 400 community actors (women's cooperatives, neighborhood chief representatives, carters' cooperatives and religious guides) are made aware of the 3R trilogy and good sorting practices in Tivaouane</li> </ul>

				<ul style="list-style-type: none"> <li>- In 2021, a “toolbox” (hands-on technical illustrated guide) was developed to support staff from health centres in implementing sound practices for biomedical waste.</li> <li>- In November 2021, an awareness-raising session was held in Tivaouane for health actors on good biomedical waste sorting practices. 62 people were sensitized, including 35 men and 27 women, with 10 image boxes and 20 posters.</li> <li>- In October 2021, an awareness-raising session was held in Ziguinchor for health care workers on good practices for sorting biomedical waste. 20 focal points were sensitized with 10 image boxes and 20 posters distributed.</li> <li>- In 2022, the project developed a comic book on environmentally sound waste management. This album deals with several themes and in particular with waste separation.</li> <li>- In October 2022, the project organized an awareness-raising and training session in Tivaouane on 3Rs and sound management of waste electrical and electronic equipment. As a result, 29 operators (including 7 women) in the WEEE sector were sensitized and trained on the ecological management of WEEE in Tivaouane.</li> </ul> <p style="text-align: right;"><b>Target reached</b></p>
<p><b>Output 2.5:</b> Business operations in private sectors working on sound waste management improved</p>	<ul style="list-style-type: none"> <li>- Number of private concessionaires having improved their rational management of waste</li> </ul>	<p>The informal sector working in waste management in the 2 municipalities is not well enough organized, even less well trained in good ESM practices</p>	<ul style="list-style-type: none"> <li>- 4</li> </ul>	<ul style="list-style-type: none"> <li>- A 3-day training workshop was organized in Tivaouane in December 2018, with the participation of 14 men and 9 women (39% women participation rate). 25 healthiness committees trained in financial management, 75 waste pickers (not organized) and 1 cooperative of 25 carters</li> <li>- 3-day training workshop was organized in Ziguinchor in April 2019,</li> </ul>

				<p>with the participation of 19 men and 8 women (29% women participation rate). 1 concessionaire, 2 discharge staff, 16 economic interest groups (GIE)</p> <ul style="list-style-type: none"> <li>- 9 operators (including 01 women) trained in the use of WEEE platform equipment in October 2022</li> </ul> <p><b>Target reached</b></p>
<b>Component 3: Improvement of sound waste management operations</b>				
Outcome 3: Sound management operations of hazardous and other wastes improved				
<p><b>Output 3.1:</b> Hazardous waste Management Action Plans reviewed and formulated at municipality levels</p>	<ul style="list-style-type: none"> <li>- Number of hazardous waste management plans developed and approved at the municipality level</li> </ul>	<p>Lack of operational management plan for hazardous waste management in the 2 municipalities At the national level, the last hazardous waste management plan dates from 1999</p>	<ul style="list-style-type: none"> <li>- 2</li> </ul>	<ul style="list-style-type: none"> <li>- The project developed 3 technical documents: one (01) update of the National Hazardous Waste Management Action Plan and (02) two five-year plans for hazardous waste management in Tivaouane and Ziguinchor.</li> <li>- In this framework and in a participatory approach, stakeholder consultation workshops were organized in Tivaouane (9-10 October 2018), Ziguinchor (23-24 October 2018) and Dakar (7-8 November 2018).</li> <li>- Field missions were also carried out for data collection and quantification of waste (surveys of stakeholders in the sector).</li> <li>- In March 2019, a workshop was held in Tivaouane to validate the five-year plan for the management of hazardous waste in the municipality of Tivaouane.</li> <li>- In August 2019, a restitution and validation meeting of the five-year hazardous waste management plan was organized in Ziguinchor</li> <li>- In December 2019, a workshop to share and validate the updated national action plan for hazardous waste management was organized in Dakar</li> </ul> <p><b>Target reached</b></p>
<p><b>Output 3.2:</b> Facilities established and used to properly collect hazardous and other</p>	<ul style="list-style-type: none"> <li>- Number of appropriate equipment used</li> </ul>	<p>Lack of adequate equipment for the proper collection of hazardous and</p>	<ul style="list-style-type: none"> <li>- ND</li> </ul>	<ul style="list-style-type: none"> <li>- Medical waste collection and transportation equipment was delivered to Tivaouane in Q3 2020</li> </ul>



wastes within the municipalities		other wastes within municipalities		<p>(883 needle collectors, 222 municipal black garbs and 12 four-wheeled garbs, 221 two-wheeled yellow bin for biomedical waste and 2 tricycles)</p> <ul style="list-style-type: none"> <li>- In Ziguinchor, the same material was received in Q3 2020 (599 needle collectors, 150 municipal waste bins and 9 4-wheeled garbage bins, 150 two-wheeled yellow bin for biomedical waste and 2 tricycles)</li> <li>- This equipment was officially received during the inauguration ceremonies of biomedical waste treatment units respectively on 24 August 2021 in Ziguinchor and on December 24 2020 in Tivaouane.</li> </ul> <p><b>Target reached</b></p>
<b>Output 3.3:</b> Waste interim storage and sorting facilities established and used by the stakeholders of the selected municipalities	<ul style="list-style-type: none"> <li>- Number of storage and sorting facilities in place</li> </ul>	Lack of adequate equipment for the temporary storage and sorting of hazardous waste and other waste within municipalities	<ul style="list-style-type: none"> <li>- ND</li> </ul>	<ul style="list-style-type: none"> <li>- In 2020, a feasibility study for the establishment of a platform for dismantling and recovery of WEEE was conducted in Tivaouane. The platform was established in Q4 2022</li> <li>- In 2020, a technical and management plan for the construction of a waste collection center (CRC) in Ziguinchor was developed, shared and validated by the Municipality. The waste collection centre will be operational at the end of Q3 2023. The center will ensure the sound collection, sorting and preparation for recycling of solid municipal waste in Ziguinchor.</li> <li>- A protocol was developed for the implementation of environmental and social management system within the framework of the construction of the waste collection and marketing center in Ziguinchor</li> <li>- In Tivaoune, in view to establish a WEEE platform, a number of activities were carried out by the project in 2021 and Q1 2022: 1) A field study was carried out in order to analyse the</li> </ul>

				<p>value chain, 2) A strategy for the implementation of the WEEE platform was developed and shared with municipality of Tivaouane, approval received on 23 June 2021, 3) Finalization of the strategy according to feedback received during consultation meeting with stakeholders, including WEEE dismantlers</p> <ul style="list-style-type: none"> <li>- Also, in March 2022, the project and the municipality of Tivaouane received equipment procured for sound WEEE management, which was installed into a platform in Q4 2022</li> <li>- In Ziguinchor, as part of the establishment of a waste collection and marketing center (CRC), several activities were carried out and documents developed during the last quarter of 2021: Technical and environmental feasibility studies, environmental clauses, safety prescriptions, environmental and social prescriptions, site notebook, bonus measures sheets and negative impact mitigation measures sheet.</li> <li>- The construction of the CRC started in 2022 and full commissioning of the pilot infrastructure, including equipment for municipal waste recycling should be finalized in July 2023.</li> <li>- In October 2022, the project established a fully equipped WEEE dismantling and recovery platform including A 40-foot container, a cable crusher, a solar energy system, a compactor (balers), two (2) dismantling tables, a cable stripper and a dismantling tool kit.</li> </ul>
<p><b>Output 3.4:</b> Recycling facilities established and used within the municipalities</p>	<ul style="list-style-type: none"> <li>- Number of hazardous waste recycling facilities set up</li> <li>- Number of functional hazardous waste recycling facilities</li> <li>- Percentage of recycled waste</li> </ul>	<p>Lack of recycling facilities for hazardous waste within municipalities</p>	<ul style="list-style-type: none"> <li>- ND</li> </ul>	<ul style="list-style-type: none"> <li>- The Center for waste collection in Ziguinchor will include a platform for pre-treatment of plastic waste managed by a selected private operator (Sodioplast). This is an example of effective PPP implemented for waste management within this project.</li> </ul>

				<ul style="list-style-type: none"> <li>- The Center is under construction and will be delivered in Q3 2023. This is grounded in the fact that these remaining activities were triggered before the completion date, which is scheduled for 3/31/2023, and the TE has been completed and is readily available. Obligations are all met apart from liquidation of some final obligations towards financial closure.</li> </ul>
<p><b>Output 3.5:</b> The management of final disposal facilities reinforced for hazardous and other wastes in the municipalities</p>	<ul style="list-style-type: none"> <li>- Ultimate Hazardous Waste Disposal Rate</li> </ul>	<p>Lack of final disposal facilities for hazardous waste within municipalities</p>	<ul style="list-style-type: none"> <li>- ND</li> </ul>	<ul style="list-style-type: none"> <li>- In Ziguinchor, the Project established and inaugurated, on 24 september 2020, a biomedical waste treatment unit in the regional hospital. The unit is equipped with the sterilwave 100 technology. It was inaugurated on 24 August 2020 by high-level national stakeholders. This unit is operational and has a processing capacity of 60 kg / day of biomedical waste</li> <li>- In Tivaouane, the Project established and inaugurated, on 24 december 2020, a biomedical waste treatment unit in the regional hospital. The unit is equipped with the sterilwave 100 technology. It was inaugurated on 24 December 2020 by high-level national stakeholders. This unit has been operational since January 2021 and has a treatment capacity of 60 kg / day of biomedical waste.</li> <li>- A plan is under development for the implementation of BAT/BEP and the upgrading of the final disposal facility of Mamatoro in Ziguinchor</li> </ul> <p>In Ziguinchor Cap Skirring, the project transferred technology and provided training on processing of biodegradable waste to reduce open burning. Equipment was delivered in December 2020 and hands-on training organized In March 2021. The training was</p>

				<p>conducted exclusively in Wolof with a total participation of 15 people (including 5 women, 33% female participation rate).</p> <ul style="list-style-type: none"> <li>- To ensure the after-sales service of the biomedical waste treatment equipment (sterilwave 100) installed in Tivaouane and Ziguinchor, a mission of Bertin technologies was carried out on the 2 sites in March 2022. During this mission, defective parts were replaced and the technical capacities of the staff were further strengthened. At the same time, a remote access modem was installed in each machine for remote monitoring and maintenance.</li> </ul> <p><b>Target reached</b></p>
<p><b>Output 3.6:</b> Waste management operations by the companies at the municipal levels improved</p>	<ul style="list-style-type: none"> <li>- Number of companies having adopted best practices</li> <li>- Number of standard procedure documents developed specifically for disposal sites in cities (2)</li> </ul>	<p>Private and informal actors involved in waste management within municipalities do not have sufficient capacity in the separation, collection, sorting, storage and disposal of waste</p>	<ul style="list-style-type: none"> <li>- ND</li> <li>- ND</li> </ul>	<ul style="list-style-type: none"> <li>- Implementation of BAT/BEP at a plastic recycler (TRANSTECH INDUSTRIES) was finalized in 2020</li> <li>- Guidelines for the management of biomedical waste approved in Q3 2020 in Ziguinchor (August 2020) with a total of 21 people (including 12 women) and Q4 in Tivaouane (October 2020) with a total of participants 30 people (including 15 women).</li> <li>- In August 2021, the project team and the service provider HOUDATECH conducted a follow-up mission to TRANSTECH INDUSTRIE to assess together the level of BAT/BEP upgrading. Results: <ul style="list-style-type: none"> <li>- Reduction of the cooking time from 1h to 30mn</li> <li>- The new burner offers a better combustion, which reduces the emissions of POPNI</li> <li>- 50% reduction in gas consumption</li> </ul> </li> </ul> <p><b>Target reached</b></p>
<p><b>Output 3.7:</b> Open burning controlled to reduce uPOP emissions</p>	<ul style="list-style-type: none"> <li>- Total quantity of uPOPs emitted due to the burning of open-air waste before and after the project (reduction</li> </ul>	<p>UPOPs emissions resulting from poor waste management practices, including open burning of waste</p>	<ul style="list-style-type: none"> <li>- 13gTEQ avoided</li> </ul>	<p>The project has developed a clear calculation file of the environmental benefits achieved by the project: POPNI reduction</p>

	<ul style="list-style-type: none"> <li>- target of 13 g-TEQ / year)</li> <li>- Tivaouane: 0,3 – 0,6 g-TEQ/an</li> <li>- Ziguinchor; 12 – 25 g-TEQ/an pour le brûlage à l'air libre et 1, 6 – 3, 2 g-TEQ/an pour l'incinération</li> </ul>	at landfills / illegal dumps		
<b>Component 4 : Monitoring and Evaluation</b>				
<b>Outcome 4: Project progress properly monitored and evaluated</b>				
<b>Output 4.1:</b> Project results monitored and reported including gender dimension	<ul style="list-style-type: none"> <li>- Rate of physical execution</li> <li>- Financial budget execution rate</li> </ul>		<ul style="list-style-type: none"> <li>- 100%</li> <li>- 100%</li> </ul>	<ul style="list-style-type: none"> <li>- 85%</li> </ul>
<b>Output 4.2:</b> Project evaluated meeting the GEF's evaluation criteria	<ul style="list-style-type: none"> <li>- Mid-term evaluation according to GEF standards</li> <li>- An evaluation is carried out at the end of the project according to GEF standards</li> </ul>		<ul style="list-style-type: none"> <li>- 1</li> <li>- 1</li> </ul>	<ul style="list-style-type: none"> <li>- An international consultant carried out the mid-term evaluation of the project. Evaluation mission in Senegal took place from August 17 to 25, 2019.</li> <li>- Terminal independent evaluation completed in Q1 2023</li> </ul>

### III. Project Risk Management

1. Please indicate the overall project-level risks and the related risk management measures: (i) as identified in the CEO Endorsement document, and (ii) progress to-date. Please expand the table as needed.

*Describe in tabular form the risks observed and priority mitigation activities undertaken during the reporting period in line with the project document. Note that risks, risk level and mitigations measures should be consistent with the ones identified in the CEO Endorsement/Approval document. Please also consider the project's ability to adopt the adaptive management approach in remediating any of the risks that had been sub-optimally rated (H, S) in the previous reporting cycle.*

	i) Risks at CEO stage	(i) Risk level FY 22	(i) Risk level FY 23	(i) Mitigation measures	(ii) Progress to-date	New defined risk4
1	Lack of interests to replicate the project approaches and strategies in other cities of the country	Low risk (L) <b>Error! Bookmark not defined.</b>	Low risk (L)	The civil society "Association des Maires du Senegal" will be involved to incorporate local customs and replicate the project's approach through the Association's network. The private sector whose capacity and business development skills will be strengthened by this project is expected to be a driving force of its replication. The legal framework will be update for private sector to be able to easily replicate the same business model to other regions in the country	<p>The project identified a private partner to operate a pre-recycling center for plastic waste in Ziguinchor. A tripartite agreement was signed in 2018 with the municipality of Ziguinchor. This agreement implements PPP for waste management in Ziguinchor and paves the way for sustainable operations beyond the scope of the Project</p> <p>The newly developed technical guidelines have been widely shared with representatives from the private sector and from</p>	<input type="checkbox"/>

					<p>the government and the municipalities</p> <p>Broad awareness raising campaigns have been led including on national TV and radio channels and are expected to trigger the interest from stakeholders in other cities of the country</p>	
2	<p>Weak commitment of counterparts in waste management - political leaders at the national and municipal level, the private sector, and the general public to participate and adopt sound waste management practices and techniques</p>	<p>Substantial risk (S) Substantial risk (S)</p>	<p>Substantial risk (S)</p>	<p>Project activities are designed in consultation with the national and municipal governments. The municipalities have been chosen on a competitive basis by reviewing their proposals. An emphasis will need to be put on awareness raising and capacity building of national and municipality officers and private sector operators as well as general public throughout the country</p>	<p>Municipal officials are well involved in training, meetings of technical committees and monitoring of activities at local level and national level.</p> <p>A broad awareness raising campaign was undertaken in 2019 and 2020, and gathered strong support from the general public, private sector and public stakeholders.</p> <p>Regular communication is ongoing with municipalities of Tivaouane and Ziguinchor. UNIDO HQ also visited both cities in Q1 2023 to discuss the sustainability of the project after completion date. However, new mayors have been recently elected in both municipalities, with teams having, in some cases, limited background on the projects' activities.</p>	<input type="checkbox"/>
3	<p>Government and municipality officials are either not willing or not available to participate in training activities and lawmaking/regulatory bodies are not responsive to recommendations</p>	<p>Low risk (L) Low risk (L)</p>	<p>Low risk (L)</p>	<p>Government officials are closely involved in project planning so that they are aware that new regulations need to be practical and financially feasible at the national and municipality levels. Stakeholders, as steering committee members, are informed and involved in the project's needs regarding the new regulations. Government officials will be kept abreast of the progress of the project and training activities for their officers.</p>	<p>The municipal authorities and all the actors involved in waste management have been involved in all activities since the beginning of the project.</p> <p>The project met with the new municipal authorities to exchange and share all relevant information and documents to support the implementation of the remaining activities.</p>	<input type="checkbox"/>
4	<p>Lack of enforcement to implement sound management of municipal and hazardous waste throughout the county</p>	<p>Substantial risk (S) Substantial risk (S)</p>	<p>Substantial risk (S)</p>	<p>The inspectorate team of the Ministry and other enforcing wings of the government will be invited to the training and consulted before initiating related project activities. Tools and guidelines will be prepared for enforcement.</p> <p>Land is not made available by municipalities for the establishment of waste interim storage and recycling facilities</p>	<p>Municipal officials are well involved in training, meetings of technical committees and monitoring of activities at local level.</p> <p>The municipality of Ziguinchor allocated a parcel of land for the construction of a municipal waste collection and treatment center. This center will operate in close collaboration with the selected private operator Sodiaplast, in charge of plastic recycling on-site.</p> <p>The Project developed all technical specifications for the center, including a detailed management plan, and call for</p>	<input checked="" type="checkbox"/>

					<p>bids for construction and equipment are on-going.</p> <p>The project has developed partnership agreements to support municipalities in the sustainable operation of the platforms set up</p> <p>New mayors were elected in Ziguinchor and Tivaouane at the end of 2021. The NEA lost its usual counterparts, who had been following project activities since its start. Partnership foreseen and land allocation for the WEEE platform is impacted by this change. In addition, mayor of Ziguinchor, as the leader of the political opposition in Senegal, is involved in political campaigns at national level, which led to recent unrests in Dakar and Ziguinchor. All efforts are deployed to sustain a strong collaboration with the municipalities and finalize project activities as planned.</p>	
5	Local private companies are not capable of absorbing technical competiveness needed to emerge as a waste management sector	Substantial risk (S) Substantial risk (S)	Low risk (L)	There are some small companies identified which are willing to invest their resources to develop sorting and recycling facilities. Those local companies will be invited to the project's trainings. If necessary, internationally and regionally active private sectors will be invited as the trainer who would be also expected to play advisory role while seeking investment opportunities in the country. UNIDO's technical resources in the area of business development	<p>The Project successfully identified a private recycler willing to invest their resources in the project activities. PPP (Public Private Partnership) signed with identified partner paves the way for sustainable solid waste management and recycling in Ziguinchor.</p> <p>In addition, BAT/BEP were successfully implemented in selected private recyclers, who invested in-kind co-financing to contribute to their eco-technological upgrading.</p> <p>NGO recruited by the municipality of Ziguinchor to operate the Material Recovery Facility is well-involved in the project delivery. Development of an adequate organizational set up and of technical skills is monitored by some representatives of the municipality.</p>	<input type="checkbox"/>
6	Lack of financial flow to sustain the waste management operations established by the project	Substantial risk (S) Substantial risk (S)	Moderate risk (M)	In designing the project's public-private sector partnership modality, a financial mechanism will be an important aspect of the waste management system. Waste management operators will be given a certain level of financial incentives that are proportional to the quality and quantity of the waste management treatment tasks performed by the operators.	<p>The Project developed a management plan for the waste collection center to be established in Ziguinchor. Management of the center will rely on the involvement of private partner, financial public support from the municipality and fee paid by households for waste collection.</p> <p>Furthermore, the Project implemented a number of training activities on administrative and financial</p>	<input type="checkbox"/>

					<p>management for waste operators.</p> <p>NGO recruited by the municipality of Ziguinchor has approved the business plan of the Material Recovery Facility and will demonstrate business opportunities related to recycling. The national programme for management of municipal waste is also active in Ziguinchor, and will support the sound collection and segregation of waste, further increasing the added value of the materials. In Tivaouane, operators currently involved in the dismantling of e-waste confirmed the increased profitability of their activities brought by equipment installed by the project.</p>	
7	<p>The waste may not be adequately separated as planned due to a lack of proper collection points and cooperative actions by households and business offices</p>	<p><b>Substantial risk (S)</b> Substantial risk (S)</p>	<p>Moderate risk (M)</p>	<p>Awareness raising opportunities will be offered to the general public. The collection points will be monitored by personnel responsible for proper use of the waste management facility. Incentives and penalties will be set by the municipalities. The project will ensure the collection vehicles (trucks, tractors, and/or donkeys) put into place should be able to collect wastes in separate categories</p>	<p>The National waste management Program (PNGD) started the construction of collection points in Tivaouane.</p> <p>In Ziguinchor, the waste treatment center will include equipment for waste segregation.</p> <p>The Project conducted a broad awareness raising campaign on 3Rs (reduce, reuse, recycle,) which contributed to behavioural change in selected municipalities.</p> <p>The project also developed a picture box on the ecological management of biomedical waste and a comic book on the ecological management of municipal waste and other waste to encourage sorting.</p> <p>The national programme for management of municipal waste is also active in Ziguinchor, and will support the sound collection and segregation of waste, further increasing the added value of the materials</p>	<input type="checkbox"/>
8	<p>The co-financing contributions may be delayed causing a delay or unsuccessful deliver of the project results</p>	<p><b>Substantial risk (S)</b> Substantial risk (S)</p>	<p>Low risk (L)</p>	<p>Multiple potential external resources have been currently contacted to seek co-financing cash resources by UNIDO as well as the city of Ziguinchor. This project strategy will be finalized depending on which and when those cofinancing funding opportunities will be made available. For the worst case scenario where no funding is available, the project will proceed by leveraging resources provided by national government and private sectors with minimum hardware facility construction</p>	<p>The project is now finalizing one last training before operational closure.. During the execution period, co-financing contributions from the private sector has materialized in a number project activities: - a selected private partner will operate the pre-processing plastic facility in Ziguinchor with its human resources and equipment in line with BAT/BEP.</p>	<input type="checkbox"/>



				funded by the project.	<ul style="list-style-type: none"> <li>- the municipalities of Ziguinchor and Tivaouane are covering the running costs related to the collection of biomedical waste for sound treatment in the newly built biomedical waste treatment units</li> <li>- the selected health facilities are covering the costs of the staff appointed to run the newly built biomedical waste treatment units</li> <li>- the project is currently improving the final disposal site of Cap Skirring, building on the existing processes of the platform in this very touristic area.</li> <li>- The Government of Senegal mobilized co-financing for the implementation of the project for the duration of the project and covered the fees of most team members</li> </ul>	
9	(Climate Change Risk) Flood risks at the waste management facilities as well as final disposal locations	Low risk (L) Low risk (L)	Low risk (L)	The feasibility study prior to the construction of project facilities should consider the historical flood records and changes in the weather in the areas to avoid or mitigate the flood risk	Not observed at this stage.	<input type="checkbox"/>
10	(Climate Change Risks) Increased methane emissions from landfills	Low risk (L) Low risk (L)	Low risk (L)	Reduction in uPOPs emission could be achieved by avoiding spontaneous combustion at the dump sites. However, methane in biogas produced from an organic component at dump sites will increase when combustion is suppressed. Compost facilities are expected to minimize the carbon transformation to methane. The collection of biogas will be also considered as a technical option and the price and benefits will be compared to see if biogas collection would make sense in the two selected cities.	<p>Improvement of the final disposal site of Cap Skirring include increased recovery of organic waste</p> <p>Achieved GEB amount to 13g TEQ of uPOPs reduction.</p>	<input type="checkbox"/>
11	Change in elected representatives at municipal level impacts the continuity of the project activities and financial commitment (co-financing) required to strengthen the sustainability of the project		High risk (H)	<p>Continuous communication on the project development objectives and achieved results will strengthen commitment of municipalities towards a sustainability strategy</p> <p>Involvement of national counterparts is an additional measure to monitor project outcomes including at municipal level</p>	<p>A satisfactory working relationship has been initiated with new municipal teams. Some staff of the municipality have not been replaced following municipal elections and keep following the project with a solid knowledge of previous commitment made.</p> <p>Mayor of Ziguinchor, as the leader of the political opposition in Senegal, is involved in political campaigns at national level, which led to recent unrests in Dakar and Ziguinchor. Several briefing meetings have been organized with newly appointed officials of the municipality to maintain the continuity of the Project and ensure compliance with</p>	<input checked="" type="checkbox"/>

					commitments made towards investment made by the Project.	
12	Political protests cause damages to project investment		Moderate risk (M)	<p>A serie of protests has ocured after political events related opposition leader Ousmane Sonko, also mayor of Ziguinchor. However, these protests have not impacted the project activities or established infrastructure.</p> <p>Awareness raising on the benefits of project activities secures its social acceptance and reduces the risk of damages in the event of protests.</p> <p>Co-financing allocated by municipal counterparts secures project sites and infrastructure.</p>	<p>Staff of the municipality is engaged by the project team in securing newly established infrastructure. The general population has been highly involved in awareness raising activities and should promote sustainable use of newly established infrastructures for solid waste management.</p> <p>Newly elected mayor of Ziguinchor is the leader of political opposition in Senegal. Following its recent conviction by a court of law in Senegal, social unrests occurred in Dakar and Ziguinchor. These protests did not cause damages to the project investment.</p>	<input checked="" type="checkbox"/>

2. If the project received a sub-optimal risk rating (H, S) in the previous reporting period, please state the actions taken since then to mitigate the relevant risks and improve the related risk rating. Please also elaborate on reasons that may have impeded any of the sub-optimal risk ratings from improving in the current reporting cycle; please indicate actions planned for the next reporting cycle to remediate this.

N/A

After five years of collaboration with municipal officials in Ziguinchor and Tivaouane, new mayors have been recently elected in both municipalities, with teams having, in some cases, limited background on the projects' activities Regular communication is ongoing with municipalities of Tivaouane and Ziguinchor and UNIDO HQ also visited both cities in Q1 2023 to discuss the sustainability of the project after completion date. However, the risk of lower commitment towards ensuring the sustainability of the project, scaling up project's results and allocating adequate resources to the operational costs of the investment made is considered moderate to high.

In addition, mayor of Ziguinchor, as the leader of the political opposition in Senegal, is involved in political campaigns at national level, which led to recent unrests in Dakar and Ziguinchor. Several briefing meetings have been organized with newly appointed officials of the municipality to maintain the continuity of the Project and ensure compliance with commitments made towards investment made by the Project. Following Mr. Ousmane Sanko's recent conviction by a court of law in Senegal, social unrests occurred in Ziguinchor, but these protests did not cause damages to the project investment.

3. Please indicate any implication of the **COVID-19** pandemic on the progress of the project.

Due to strict containment measures implemented in Senegal, the COVID-19 pandemic has strongly impacted the activities of the Project:

- The construction work of the 2 biomedical waste treatment units in Ziguinchor and Tivaouane stopped for several weeks and suffered significant delays. However, the construction was finalized and received in March 2020 for Ziguinchor and December 2020 for Tivaouane and the two biomedical units are now operational.
- The awareness campaigns planned for the first half of 2020 could not take place and has been rescheduled when the sanitary situation will allow it
- The steering committee and local technical committee meetings could not take place
- The national coordination team could not travel in the field until June 2020, but national and local coordinators based in Dakar, Ziguinchor and Tivaouane were able to properly monitor the field activities.

With the progressive lifting of sanitary constraints linked to COVID 19, all activities have resumed in the field. UNIDO conducted an international mission in March 2022 and met national project stakeholders.

4. Please clarify if the project is facing delays and is expected to request an **extension**.

NA

5. Please provide the **main findings and recommendations of completed MTR**, and elaborate on any actions taken towards the recommendations included in the report.

Terminal evaluation was completed in May 2023 and the following recommendations were identified:

**At the strategic level:**

**To the Government of Senegal:**

- R1: National institutions involved in the waste sector such as Ministry of Environment and Sustainable Development through DEEC, Ministry of Urban Planning, Housing and Public Hygiene through SONAGED and Ministry of Health and Social Action (MHSA) must take over from PRODEMUD and establish an institutional mechanism to jointly manage dangerous waste, including other relevant actors, such as those from the industrial sector.
- R2: The local authorities together with the national institutions should evaluate if the financial mechanism put in place to generate financial revenue will sustain the infrastructures built and if not, explore other avenues.
- R3: The MEDD together with SONAGED must push for an optimal operation of the CRC and recycling platforms so as to demonstrate that the proposed model tested in the two municipalities is viable and can be extended to other municipalities in Senegal.

**To UNIDO/GEF:**

- R4: 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.
- R5: 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.

**To both:**

- R6: 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.

**At the operational level**

**To the Government of Senegal:**

- R7: 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.
- R8: The municipality of Tivaouane must enact a decree to allow the management committee established to start operating the CRC.
- R9: MEDD and MUPHPH should sit together to ensure that PROMOGED could capitalize PRODEMUD's achievements in terms of awareness-raising targeting the populations and to ensure a quick and sustainable operation of the infrastructures installed.
- R10: MEDD and MHSA should sit together to ensure that the next strategic plan of MHSA includes a training component on ESM of biomedical wastes to be delivered to all health structures. Discussion should consider the establishment of a partnership with the municipalities regarding the maintenance of the equipment installed in the BMW treatment units in Tivaouane and Ziguinchor.

**To UNIDO**

- R11: UNIDO should systematically plan to build the capacities of project teams on its administrative, financial, and reporting procedures at project's inception in order to avoid delays and misunderstanding.
- R12: 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.

#### IV. Environmental and Social Safeguards (ESS)

1. As part of the requirements for **projects from GEF-6 onwards**, and based on the screening as per the UNIDO Environmental and Social Safeguards Policies and Procedures (ESSPP), which category is the project?

Category A project

Category B project

Category C project

(By selecting Category C, I confirm that the E&S risks of the project have not escalated to Category A or B).

*Notes on new risks:*

- *If new risks have been identified during implementation due to changes in, i.e. project design or context, these should also be listed in (ii) below.*
- *If these new/additional risks are related to Operational Safeguards # 2, 3, 5, 6, or 8, please consult with UNIDO GEF Coordination to discuss next steps.*
- *Please refer to the UNIDO [Environmental and Social Safeguards Policies and Procedures \(ESSPP\)](#) on how to report on E&S issues.*

Please expand the table as needed.

	E&S risk	Mitigation measures undertaken during the reporting period	Monitoring methods and procedures used in the reporting period
(i) Risks identified in ESMP at time of CEO Endorsement	NA	NA	NA
(ii) New risks identified during project implementation (if not applicable, please insert 'NA' in each box)	NA	NA	NA

#### V. Stakeholder Engagement

1. Using the previous reporting period as a basis, please provide information on **progress, challenges and outcomes** regarding engagement of stakeholders in the project (based on the Stakeholder Engagement Plan or equivalent document submitted at CEO Endorsement/Approval).

The Government of Senegal is leading national activities through the Directorate of Environment and Hazardous

Facilities (DEEC) of the Ministry of Environment. The leading role of the DEEC was crucial to strengthen the legal and regulatory framework on hazardous waste, to adopt technical guidelines on the environmentally sound management of hazardous waste and to implement capacity-building activities for municipal and government officials.

As chair of the project's national steering committee, DEEC played an important role in supporting the project team in mobilizing government counterpart funds needed for project activities.

The National Waste Management Program (PNGD) is leading the technical activities related to municipal solid waste in Tivaouane and has provided a solid foundation for focusing on environmentally sound management of hazardous waste. The GEF project has created strong synergies with PNGD to establish a municipal solid waste sorting center in Ziguinchor.

The municipalities of Ziguinchor and Tivaouane support the Project and cover the operating costs of medical waste collection for sound treatment in units built and equipped by the Project at the Ziguinchor regional hospital and the Tivaouane health center. The selected health facilities are particularly involved in the Project's intervention and training activities. The Project has developed collaboration protocols formalizing the area of collaboration and responsibility between the municipalities and the health structures, which have been signed by all parties. The project continues to support the environmentally sound management system that has been put in place.

The private sector is mobilized in the Project's activities. A tripartite agreement was signed in 2018 between PRODEMUD, the municipality of Ziguinchor and a private company (SODIAPLAST) for the establishment of a plastic waste pre-treatment platform. Some activities (acquisition of equipment, facilities, training) have been carried out to implement BAT/BEP in two selected private recycling companies. Other activities are underway in both municipalities for final closure the project.

The municipality of Ziguinchor has allocated land to the project for the construction of a waste collection, sorting and recycling facility. The project is also receiving support from DEEC to ensure that environmental and social considerations are taken into account in the construction and operation of the facility. The municipality is also ensuring that an adequate level of monitoring and support is available to start the operations of the waste collection, sorting and recycling facility. The municipality selected a local NGO to operate the center, in collaboration with a team of young people already active in the waste management sector. The municipality, with the support of the project, supports the adequate training of all staff.

The Solid Waste Coordination Unit (UCG), in agreement with the municipality of Tivaouane, has agreed to host the WEEE platform that the project has put in place to support the actors of the sector in BAT/BEP.

**2. Please provide any feedback submitted by national counterparts, GEF OFP, co-financiers, and other partners/stakeholders of the project (e.g. private sector, CSOs, NGOs, etc.).**

"We have 45 health facilities in the town of Ziguinchor and none of them has a standard biomedical waste treatment facility. The project breached this gap by setting up a biomedical waste treatment unit within the regional hospital, which processes waste of other health structures" said Mr. Abdoulaye BALDE, Mayor of the municipality of Ziguinchor, during the official inauguration of the unit in September 2020.

"The biomedical waste management unit is intended to collect all biomedical waste from the department of Tivaouane which used to be transported to Thiès or Louga for treatment," said Mr. Mamadou Diagne Sy Mbengue, Mayor of Tivaouane, on December 24, 2020 at the inauguration of the environmentally sound treatment unit of biomedical waste in Tivaouane.

During the visit of UNIDO HQ team in Ziguinchor in 2023, representatives of the municipality reiterated their commitment to integrating investment made by the Project to the waste management system of the municipality, in close collaboration with other public and private operators involved in other segments of the value chain (collection, pre-collection etc.).

During a visit of UNIDO HQ to Tivaouane in 2023, operators of the WEEE management said that investment made by the Project for the establishment of a WEEE dismantling platform would increase the efficiency of their work, improve their profits and livelihoods and protect their health and the environment.

During that same visit to Senegal, staff of health institutions from both cities, which benefitted from the installation of micro-wave technology to decontaminate medical waste said that nearly all waste was now decontaminated and soundly managed, putting an end to open burning in these institutions.

**3. Please provide any relevant stakeholder consultation documents.**

4888\_Report\_Tivaouane mission\_10\_08\_2022\_VF.pdf  
 4888\_Report\_Tivaouan mission 11\_10\_2022\_VF.pdf  
 4888\_Report\_Tivaouane mission 20\_10\_2022\_VF.pdf  
 4888\_Tivaouane mission 25\_10\_2022\_VF.pdf  
 4888\_Ziguinchor mission du 24\_28042023.pdf  
 4888\_Minutes\_Training on WEEE procedures and best practices.docx  
 4888\_Minutes\_CLOSING COFIL\_Vdef\_27022023.pdf  
 4888\_Minutes N°9\_visit to Ziguinchor sorting center.docx  
 4888\_Minutes N°10\_visit to Ziguinchor sorting center.docx  
 4888\_Minutes N°11\_visit to Ziguinchor sorting center.docx  
 4888\_Minutes N°13\_visit to Ziguinchor sorting center.docx  
 4888\_Minutes N°14\_visit to Ziguinchor sorting center.docx  
 4888\_Minutes N°16\_visit to Ziguinchor sorting center.docx  
 4888\_Minutes N°17\_visit to Ziguinchor sorting center.docx  
 4888\_Training report on Good Practices and manual procedures center tri Ziguinchor 27032023.docx  
 4888\_Report\_Training manual of procedures and good practices WEEE (Tivaouane) - 2022-11-07.docx  
 4888\_Report on training operators in the use of WEEE equipment\_Bazoco.pdf  
 4888\_Agreement for the operation of the grouping and sorting center\_Ziguinchor.pdf  
 4888\_Partnership agreement to set up and operate a plastic waste pretreatment center\_Ziguinchor.pdf  
 4888\_Tripartite agreement biomedical waste treatment unit\_Tivaouane  
 4888\_Tripartite agreement biomedical waste treatment unit\_Ziguinchor

## VI. Gender Mainstreaming

1. Using the previous reporting period as a basis, please report on the **progress achieved on implementing gender-responsive measures and using gender-sensitive indicators**, as documented at CEO Endorsement/Approval (in the project results framework, gender action plan or equivalent),.

The gender dimension is a cross-cutting component of PRODEMUD, which was included in the planning of all project activities. As a result, 853 people (private sector, government employees, agents of the beneficiary communes and the informal sector) have been trained during twenty-five (28) training/sensitization activities conducted since the start of the project. Out of 853 people trained, 139 were women. The participation rate of women is 16%. The Project Management Unit involves a woman in charge of technical and commercial management activities, which are crucial to the Project's objective.

On gender mainstreaming, the following conclusion was made in the terminal evaluation of the project:

- Men are in the majority in the project team: only one-woman 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**

## VII. Knowledge Management

### 1. Using the previous reporting period as a basis, please elaborate on any **knowledge management activities / products**, as documented at CEO Endorsement / Approval.

The Project focuses on improving the regulatory framework related to hazardous and solid municipal waste, raising awareness on 3R and circular economy approach, strengthening waste management operations and implementing BAT/BEP for hazardous waste (medical waste and e-waste) and municipal waste.

On policy and legal work, the Project developed one bill for the sound management of industrial waste in Senegal, which was approved and endorsed by all stakeholders.

As part of technical assistance and capacity-building activities, the Project developed 4 strategies and actionable plans at national level and local level and a set of technical guidelines for the sound management of hazardous waste. Over 150 government officials were trained on these tools, and 853 representatives from waste operators, private recyclers or waste collectors. Expertise and engagement in the project were built during workshops, at municipal and national level. The development of management plans for hazardous waste for two municipalities and the update of a similar plan at national level were key guidelines to ensure the sustainability of the intervention. The same level of expertise was built for the private sector and cooperatives in charge of the collection of such waste. The Project thereby contributed to strengthen the local capacities to develop business and offer waste management services while ensuring reduced POPs emissions.

The Project is implementing BAT/BEP through investments in equipment, infrastructures and capacity-building in Tivaouane and Ziguinchor in 3 main sectors: e-waste, municipal waste, plastic waste and biomedical waste. The project built, established and fully equipped 2 biomedical waste treatment units equipped with the best technology for medical waste decontamination (Sterilwasve 100), thereby drastically reducing uPOPs emissions related to the open burning of such waste. The 2 biomedical waste treatment units were inaugurated by the mayors of the 2 municipalities in the presence of the administrative authorities, the National Project Coordinator, UNIDO Representative, and the Director of Environment and Classified Institutions (GEF Operational Focal Point) respectively on 24 august 2020 for Ziguinchor and on 24 december 2020 for Tivaouane. Sustainability has been ensured by protocols developed by the Project and signed between the municipalities and the health facilities on the management of the biomedical waste management units. Guidelines, manuals and communication material have been developed on sound waste management practices to keep building capacities of all actors involved in the operations.

Regarding plastic recycling, the project developed a PPP (public-private partnership) between the municipality of Ziguinchor and a selected plastic recycler for recycling plastic waste, which was signed in 2018. With the municipality of Ziguinchor allocating land for the construction of a waste collection, sorting, and pre-recycling center, the Project has developed a technical note, management plans, construction plans, and an environmental management plan for the center. Construction will be completed by the end of the Q3 2023. The center will be equipped with the best available technology to ensure proper sorting and pretreatment of Ziguinchor's solid waste (equipment is currently being installed). The selected plastic recycler will operate within the center, contributing its equipment and technical expertise.

In addition, the project has implemented BAT/BEP for a plastic recycler and a waste disposal facility, improving the recycling of plastic and biodegradable waste, respectively.

For WEEE, the project has set up a dismantling and sorting platform equipped with the best available technology. A joint management committee is currently being set up to make it operational. A tripartite agreement (Tivaouane City Council, SONAGED and DEEC) for the sustainable operation of the platform has been drawn up by the project and is in the process of being signed.

## 2. Please list any **relevant knowledge management mechanisms / tools** that the project has generated.

4888\_POPPNI emissions estimates\_final.docx  
4888\_PRODEMUD closing report \_ draft version \_10072023.docx  
4888\_Legal framework waste management Senegal module.pptx  
4888\_material and stock sorting center Ziguinchor module.pptx  
4888\_Personnel management module \_ Ziguinchor sorting center.ppt  
4888\_Some waste management initiatives.pptx  
4888\_The 5Rs rule module.pptx  
4888\_Waste in Senegal and its environmental and health impact module.pptx.pptx  
4888\_Ziguinchor sorting center purchasing module.ppt  
488\_WEEE - Raising\_Training awareness of occupational hazards.pptx  
4888\_Personal Protective Equipment sheet.xlsx  
4888\_Preventive maintenance schedule.xlsx  
4888\_Procedures manual \_WEEE management (Tivaouane) - 2022-11-14.docx  
4888\_Rigid plastics training.pdf  
4888\_The different types of plastic.pdf  
4888\_Training in WEEE dismantling.pptx  
4888\_Training needs and schedule.xlsx  
4888\_Training on ABS plastics.pptx  
4888\_Waste reporting sheet.xlsx  
4888\_WEEE - Personal Protective Equipment training.pptx  
4888\_WEEE - Waste delivery note.pdf  
4888\_Manual of procedures for waste sorting and grouping center\_Ziginchor .pdf  
4888\_National technical guidelines.pdf  
4888\_DBM management procedures manual\_Tivaouane pdf



- 4888\_DBM management procedures manual\_Ziguinchor.pdf
- 4888\_WEEE management procedures manual\_Tivaouane.pdf
- 4888\_Concept note WEEE platform\_Tivaouane.pdf
- 4888\_Technical concept note for the revised waste grouping and sorting center \_ Ziguinchor.pdf
- 4888\_Five-year action plan for hazardous waste management in the Commune of Ziguinchor.pdf
- 4888\_Preliminary draft of hazardous waste bill.pdf
- 4888\_WEEE study report Tivaouane.pdf
- 4888\_Communication strategy for municipal and hazardous waste management.pdf
- 4888\_Five-year action plan for hazardous waste management in the Commune of Tivaouane.pdf
- 4888\_National Hazardous Materials Action Plan.pdf

### VIII. Implementation progress

1. Using the previous reporting period as a basis, please provide information on **progress, challenges and outcomes achieved/observed** with regards to project implementation.

Significant progress was made during the reporting period . The Construction of the Ziguinchor waste treatment and sorting center is nearing completion and will be delivered in Q3 2023.The selected private partner, Sodiaplast, with whom a public-private partnership was concluded several years ago, will provide equipment and expertise for the recycling of plastic waste.

For Tivaouane, the project has installed the WEEE dismantling and recovery platform in Q4 2022. A number of technical activities were then implemented on the best processes and practices.

The terminal evaluation established that as of December 31, 2022, the PMU reported that the overall project completion rate was around 96%. At the end of the project on March 31, 2023, the overall achievement rate should reach 99% because most of the planned activities have been 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. The installation of the CRC in Ziguinchor will be completed in July 2023, and the last training of the project in August 2023.

COVID-19 negatively impacted the delivery of the activities and the project faced difficulties and challenges in finalizing the construction of the material recovery facility in Ziguinchor (CRC). The recent change of mayors in both pilot municipalities has also impacted the implementation the operational completion of the project. New municipal teams, unaware of the previous commitment related cash or in-kind co-financing, required time and involvement to actively contribute again to the project execution and operational closure.

2. Please briefly elaborate on any **minor amendments**<sup>5</sup> to the approved project that may have been introduced during the implementation period or indicate as not applicable (NA).

Please tick each category for which a change has occurred and provide a description of the change in the related textbox. You may attach supporting documentation, as appropriate.

<input type="checkbox"/>	Results Framework	
<input type="checkbox"/>	Components and Cost	

<sup>5</sup> As described in Annex 9 of the *GEF Project and Program Cycle Policy Guidelines*, **minor amendments** are changes to the project design or implementation that do not have significant impact on the project objectives or scope, or an increase of the GEF project financing up to 5%.

<input type="checkbox"/>	Institutional and Implementation Arrangements	
<input type="checkbox"/>	Financial Management	
<input type="checkbox"/>	Implementation Schedule	Project has benefited from 4 extensions
<input type="checkbox"/>	Executing Entity	
<input type="checkbox"/>	Executing Entity Category	
<input type="checkbox"/>	Minor Project Objective Change	
<input type="checkbox"/>	Safeguards	
<input type="checkbox"/>	Risk Analysis	
<input type="checkbox"/>	Increase of GEF Project Financing Up to 5%	
<input type="checkbox"/>	Co-Financing	
<input type="checkbox"/>	Location of Project Activities	
<input type="checkbox"/>	Others	

### 3. Please provide progress related to the **financial implementation** of the project.

- The government of Senegal pledged \$ 1,493,000 for the duration of the project. Today, a few months before the end of the project, we note a disbursement rate of 71% in 2021. The project has not received a budget allocation for 2022 from the government of Senegal.
- As of 30 June 2022, the disbursement of the Project funds reaches 1,996,057.20 USD out of 2 million USD. In 2023, expenditures were made for terminal evaluation of the project (international expertise under WBS 10114-1-53-01), project operations (1,367 USD mostly on local travel), and execution services for monitoring remaining activities and completion of the project ( approx. 10,000 USD under WBS 100114-1-53-01)

## IX. Work Plan and Budget

1. Please provide **an updated project work plan and budget** for the remaining duration of the project, as per last approved project extension. Please expand/modify the table as needed.

*Please fill in the below table or make a reference to a file, in case it is submitted as an annex to the report.*

Outputs by Project Component	Q1 2023	GEF Grant Budget Available (US\$)
<b>Component 1 – Legal framework and institutional capacities</b>		
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		0.00

Output 1.2: Legal frameworks and institutional capacities to support the environmentally sound management of hazardous and other wastes strengthened		0.00
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		0.00
Output 1.4: National government and municipality officers trained with gender considerations to develop sound waste management complying with the regulation and enforcement requirement		0.00
<b>Component 2 – Stakeholder engagement in waste management</b>		
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		0.00
Output 2.2: Municipal government officers trained on how to conduct sound waste management		0.00
Output 2.3: Gender-sensitive awareness raising events held and relevant materials on sound waste management activities distributed for the general public		0.00
Output 2.4: General public trained on reduce, reuse and recycle (3R) and good waste separation practice		0.00
Output 2.5: Business operations in private sectors working on sound waste management improved		0.00
<b>Component 3 – Improvement of sound waste management operations</b>		
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		0.00
Output 3.2: Facilities established and used to properly collect hazardous and other wastes within the municipalities		814.56
Output 3.3: Waste interim storage and sorting facilities established and used by the stakeholders of the selected municipalities		0.00
Output 3.4: Recycling facilities established and used within the municipalities		0.00
Output 3.5: The management of final disposal facilities reinforced for hazardous and other wastes in the municipalities		0.00
Output 3.6: Waste management operations by the companies at the municipal levels improved		0.00
Output 3.7: Open burning controlled to reduce uPOP emissions		0.00
<b>Component 4 –Monitoring and Evaluation</b>		

<b>Outcome 4: Project progress properly monitored and evaluated</b>		
Output 4.1: Project results monitored and reported including gender dimension		
Output 4.2: Project evaluated meeting the GEF's evaluation criteria		-57.91
<b>Component 5 – Project Management</b>		
<b>Outcome 5: operating</b>		
Output 5.1: PMC		3,186.15
Total		3,942.80

## X. Synergies

### 1. Synergies achieved:

The following was achieved in terms of synergies benefitting the implementation of the project:

- Strong collaboration with the national waste program (PNGD), in waste management, good communication in terms of exchange on waste collection statistics.
- Establishment of a selection committee for the orientation, monitoring and evaluation of the operation of the treatment units set up in the 2 communes.
- Sharing of knowledge and expertise with the PNGD in terms of geolocation of illegal dumps.
- Strong collaboration with the Global Green Growth Institute (GGGI) in its strategy for the development of green secondary cities.
- Accompaniment of the DEEC in taking into account the environmental and social dimension for the construction of the waste treatment center in Ziguinchor.
- Strong collaboration/synergies with PROMOGED in the implementation of certain infrastructures in Ziguinchor
- Strong collaboration with SONAGED (*Société nationale des déchets*), formerly the waste coordination and management unit (UCG), in the setting up of the e-waste platform in Tivaouane.
- PPPs or cooperation agreements established for the management of new pilot operation facilities (waste sorting and recovery center in Ziguinchor and WEEE dismantling and recovery platform in Tivaouane)

### 3. Stories to be shared (Optional)

The GEF project has been assisting the government of Senegal in implementing an environmentally sound management (ESM) system for biomedical waste in the municipalities of Ziguinchor and Tivaouane since 2014.

As health services continue to face increased pressure worldwide in the context of the COVID-19 pandemic, it is more important than ever that biomedical waste be managed properly as its quantity increases. According to the World Health Organization, 15% of the waste generated by healthcare activities is considered hazardous materials that may be infectious, toxic, or radioactive.

In order to achieve this reduction in POPs resulting from inadequate biomedical waste management, several activities were carried out as part of the implementation of the green waste management system in the target municipalities:

- Development of national technical guidelines.

- Delivery of equipment for the sorting and collection of biomedical waste
- Supply of transport equipment to ensure safe transport of biomedical waste to treatment facilities
- Installation of two biomedical waste treatment units at the Ziguinchor regional hospital and the Tivaouane health district
- Development of five-year action plans for the two beneficiary municipalities to implement effective biomedical waste management.
- Training of waste collectors, municipal officers and health sector representatives on best practices for sorting, storing, transporting and treating this type of hazardous waste.
- Delivery of equipment for the consolidation and sorting center in Ziguinchor. The construction of this center is being finalized.
- The delivery of equipment for an electronic waste management platform in Tivaouane.

"The Sterilwave 100 equipment delivered to Senegal for on-site waste treatment is based on microwave treatment technology," explains UNIDO project manager Ms. Fatin Ali Mohamed, "it is important that effective technology is available and that appropriate guidelines are in place to help those on the front lines to effectively manage waste in these difficult times."

"I am delighted with this unit which is equipped with modern technology that does not pollute the environment," said the mayor of the commune of Ziguinchor, during the inauguration of the biomedical waste treatment unit.

"Waste management is part of my program" said the new mayor of Ziguinchor. And to add "I will accompany the process of setting up the center for the collection and sorting of waste to improve the living environment of the people of Ziguinchor.

## XI. GEO LOCATION INFORMATION

The Location Name, Latitude and Longitude are required fields insofar as an Agency chooses to enter a project location under the set format. The Geo Name ID is required in instances where the location is not exact, such as in the case of a city, as opposed to the exact site of a physical infrastructure. The Location & Activity Description fields are optional. Project longitude and latitude must follow the Decimal Degrees WGS84 format and Agencies are encouraged to use at least four decimal points for greater accuracy. Users may add as many locations as appropriate.

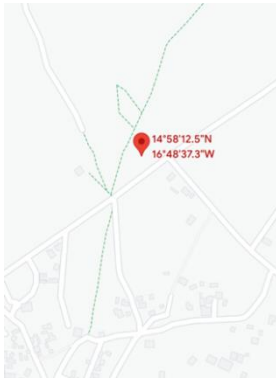
Web mapping applications such as [OpenStreetMap](#) or [GeoNames](#) use this format. Consider using a conversion tool as needed, such as: <https://coordinates-converter.com>

Please see the Geocoding User Guide by clicking [here](#)

Location Name	Latitude	Longitude	Geo Name ID	Location and Activity Description
Waste collection and sorting center/Ziguinchor	12°33'02"N	16°19'37"W	Ziguinchor/2243940	Sorting waste for recycling
Biomedical waste treatment unit Ziguinchor	12°33'28.9"N	16°16'56.58"W	Ziguinchor/2243940	Banalization/treatment of biomedical waste
WEEE platform Tivaouane	14°58'12,5" N	16°48'37,3" W	Tivaouane/2244388	Dismantling and recycling WEEE

Biomedical waste treatment unit Tivaouane	14°57'12.78"N	16°49'10.87"W	Tivaouane/2244388	Banalization/treatment of biomedical waste
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Please provide any further geo-referenced information and map where the project interventions is taking place as appropriate.



*WEEE platform, Tivaouane*

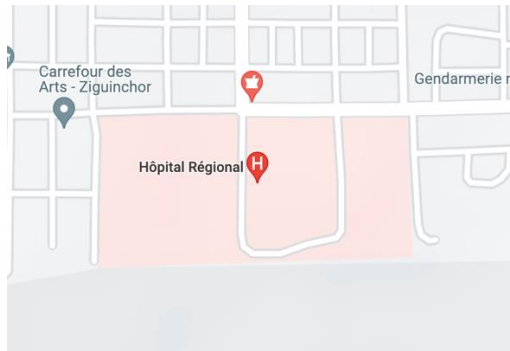


*Treatment unit for biomedical waste, Tivaouane*



*waste treatment center Ziguinchor*

(12.550783569137627, -16.326332453140598).



*Treatment unit for biomedical waste Ziguinchor*

(12.558369372396195, -16.282354525858718)

## EXPLANATORY NOTE

1. **Timing & duration:** Each report covers a twelve-month period, i.e. 1 July 2022 – 30 June 2023.
2. **Responsibility:** The responsibility for preparing the report lies with the project manager in consultation with the Division Chief and Director.
3. **Evaluation:** For the report to be used effectively as a tool for annual self-evaluation, project counterparts need to be fully involved. The (main) counterpart can provide any additional information considered essential, including a simple rating of project progress.
4. **Results-based management:** The annual project/programme progress reports are required by the RBM programme component focal points to obtain information on outcomes observed.

Global Environmental Objectives (GEOs) / Development Objectives (DOs) ratings	
<b>Highly Satisfactory (HS)</b>	Project is expected to achieve or exceed <u>all</u> its major global environmental objectives, and yield substantial global environmental benefits, without major shortcomings. The project can be presented as “good practice”.
<b>Satisfactory (S)</b>	Project is expected to <u>achieve most</u> of its <u>major</u> global environmental objectives, and yields satisfactory global environmental benefits, with only minor shortcomings.
<b>Moderately Satisfactory (MS)</b>	Project is expected to <u>achieve most</u> of its major <u>relevant</u> objectives but with either significant shortcomings or modes overall relevance. Project is expected not to achieve some of its major global environmental objectives or yield some of the expected global environmental benefits.
<b>Moderately Unsatisfactory (MU)</b>	Project is expected to achieve <u>some</u> of its major global environmental objectives with major shortcomings or is expected to <u>achieve only some</u> of its major global environmental objectives.
<b>Unsatisfactory (U)</b>	Project is expected <u>not</u> to achieve <u>most</u> of its major global environmental objectives or to yield any satisfactory global environmental benefits.
<b>Highly Unsatisfactory (HU)</b>	The project has failed to achieve, and is not expected to achieve, <u>any</u> of its major global environmental objectives with no worthwhile benefits.

Implementation Progress (IP)	
<b>Highly Satisfactory (HS)</b>	Implementation of <u>all</u> components is in substantial compliance with the original/formally revised implementation plan for the project. The project can be presented as “good practice”.
<b>Satisfactory (S)</b>	Implementation of <u>most</u> components is in substantial compliance with the original/formally revised plan except for only few that are subject to remedial action.
<b>Moderately Satisfactory (MS)</b>	Implementation of <u>some</u> components is in substantial compliance with the original/formally revised plan with some components requiring remedial action.
<b>Moderately Unsatisfactory (MU)</b>	Implementation of <u>some</u> components is <u>not</u> in substantial compliance with the original/formally revised plan with most components requiring remedial action.
<b>Unsatisfactory (U)</b>	Implementation of <u>most</u> components is <u>not</u> in substantial compliance with the original/formally revised plan.
<b>Highly Unsatisfactory (HU)</b>	Implementation of <u>none</u> of the components is in substantial compliance with the original/formally revised plan.

Risk ratings	
Risk ratings will assess the overall risk of factors internal or external to the project which may affect implementation or prospects for achieving project objectives. Risk of projects should be rated on the following scale:	
<b>High Risk (H)</b>	There is a probability of greater than <b>75%</b> that assumptions may fail to hold or materialize, and/or the project may face high risks.
<b>Substantial Risk (S)</b>	There is a probability of between <b>51%</b> and <b>75%</b> that assumptions may fail to hold or materialize, and/or the project may face substantial risks.
<b>Moderate Risk (M)</b>	There is a probability of between <b>26%</b> and <b>50%</b> that assumptions may fail to hold or materialize, and/or the project may face only moderate risk.
<b>Low Risk (L)</b>	There is a probability of up to <b>25%</b> that assumptions may fail to hold or materialize, and/or the project may face only low risks.