



**External Mid-Term Review**

***Sustainable cities initiative for Senegal: Promoting renewable energy and  
integrated waste management in sustainable industrial parks***

**UNIDO SAP ID 150270**

**GEF Project ID 9123**

**By**

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## LIST OF ACRONYMS AND ABBREVIATIONS

ADM	Agence de développement municipal
APROSI	Agence de promotion des sites industriels
BAT	Best available techniques
BEP	Best environmental practices
BMN	Bureau de mise à niveau
CONGAD	Conseil des ONG d'appui au développement
DEEC	Direction de l'environnement et des établissements classés
DEX	Direct Execution
DGPU	Délégation générale de promotion des pôles urbains de Diamniadio et du Lac Rose
ECOWAS	Economic Community of West African States
FAO	Food and Agriculture Organization
FSP	Full Size Project
GEF	Global Environment Facility
GHG	Greenhouse Gas
GPSC	Global Platform for Sustainable Cities
HQ	Head Quarter
IA	Implementing Agency
ISID	Inclusive and Sustainable Industrial Development Approach
ISO	International Organization for Standardization
LDCs	Least Developed Countries
M&E	Monitoring and Evaluation
NAMA	Nationally Appropriate Mitigation Action
NEX	National Execution
NGO	Non-Governmental Organization
NIP	National Implementation Plan
NPM	National Project Manager
NPM	National Project Manager
OVI	Objectively Verifiable Indicators
PCBs	Polychlorinated biphenyls
PCDD	Polychlorinated dibenzo-p-dioxins
PCDF	Polychlorinated dibenzo-furans
PIR	Project Implementation Review
PMU	Project Management Unit
PNGD	Programme national de gestion des déchets
POPs	Persistent Organic Pollutants
PRODEMUD	Gestion écologiquement rationnelle des déchets solides municipaux et dangereux pour réduire les émissions de POP produit non intentionnellement
PSC	Project Steering Committee

PSE	Plan Sénégal Emergent
RE/EE	Renewable Energy and Energy Efficiency
RECP	Resource Efficiency and Clean Production
SAICM	The Strategic Approach to International Chemicals Management
SC	Stockholm Convention
SMART	Specific, Measurable, Achievable, Relevant, Time-bound
TOC	Technical Orientation Committee
ToR	Terms of Reference
UNFCCC	The United Nations Framework Convention on Climate Change
UNIDO	United Nations Industrial Development Organization
u-POPs	Unintentionally Produced POPs
USF	Urbanistes sans frontières

## EXECUTIVE SUMMARY

### A. Introduction

The full-size project “Sustainable cities initiative for Senegal: Promoting renewable energy and integrated waste management in sustainable industrial parks” funded by the Global Environment Facility (GEF) started implementation since March 2017 by the United Nations Industrial Development Organization (UNIDO). The three institutional partners of the project are: the Directorate of Environment and Listed Establishments (DEEC) which is the GEF Focal Point, the Agency for the Development and Promotion of Industrial Sites (APROSI), and the Office for upgrading of Senegalese companies (BMN). The latter is responsible for the production of certain outputs of component 4 of the project through a subcontract.

The overall objective of the project is to improve capacity to plan and implement sustainable cities practices focusing on sustainable industrial parks.

### B. Evaluation findings and conclusions

The Mid-Term Review included a review of project documents and field visit to interview the National Project Manager (NPM), project partners, and other stakeholders (enterprises) involved in the projects by using a participatory approach. Enterprises visits were also undertaken during the field visit. Based on the information available and the findings of the discussions held, the review made the following conclusions:

Project design: The project was designed clearly to address existing environment and waste issues of industries and cities as well as the planning challenges of eco-industrial zones aproned cities. It aimed to contribute towards achieving the overall objectives of IAP- Sustainable Cities program in terms of improved environmental performance, including global environmental benefits such as reduced GHG emissions, protection of ecosystems, decreased land degradation, and decreased incidence of chemicals and waste pollution. More importantly, the interventions of this project have to catalyze a shift towards the integration of sustainable industrial parks into sustainable cities. The project document includes a M&E plan which specifies clearly what, who and how frequent monitoring, review and evaluations will take place. This plan includes also a budget. The risk management was also analyzed and no critical risks related to financial, social-political, institutional, environmental and implementation aspects were identified with specific risk ratings

Project result framework/logframe: To facilitate project planning, monitoring and evaluation, the project document has provided a results/resources framework. The logical framework of the project facilitates the summary presentation of the intervention logic of the project and the way in which the results will be measured. In the project document, the result-chain (impact, outcomes and outputs) is very clear and logical with targets at mid-term and end of project. All Objectively Verifiable Indicators (OVI) describe and specify expected results (impact, outcomes and outputs) in terms of quantity, quality. Three technical outcomes (Outcome 1, Outcome 3 and Outcome 4) described really change in target group's behavior or institutional performance.

Relevance: The initial objective and expected outcomes are still valid and relevant for the target groups. The relevance of the project was refined during interviews with stakeholders. The direct beneficiaries of the project, namely the industrial companies met consider that the project still relevant for them, especially since it should help them reduce their energy costs and allow them

at the same time to minimize their impact on the environment. None of them noted that the mobilization of the investments necessary for the upgrading in accordance with the conclusions of the preliminary audits, in addition to the financing provided by the project, was problematic. The project has a support of the government of Senegal and is aligned with, and supportive of, the country's main development policies and strategies. At the national level, it is inter alia the alignment of the project with the plan "Plan Senegal Emergent" (PSE), the objectives of the UNFCCC to which Senegal is a party and the national efforts for the sustainable management of cities and the promotion of integrated management of renewable energies and waste at Diamniadio. For UNIDO, the project is still an example of UNIDO's ISID. This project therefore aims to provide UNIDO services to assist in the realization of ISID. The project outcomes are consistent with the operational program strategies of the GEF. They are in particular much in line with GEF's goal in IAP cities.

**Effectiveness:** As specified in the project document, the implementation of this project is expected to have four technical outcomes and one related to the management, monitoring and evaluation. At mid-term the project implementation, none of the outcomes have been achieved. At least, Outcome 2 should be reached at mid-term. Outcome 1, Outcome 2 and Outcome 4 are rated Moderately Unsatisfactory and Outcome 3 is rated Unsatisfactory. So, the overall Effectiveness is rated Moderately Unsatisfactory.

**Efficiency:** Implementation of the project officially started on March; 10<sup>th</sup> 2017 and was planned for a duration of 4 years to end of March 2021. The project wasn't granted an extension since it started. Delays have been noted in terms of timelines for carrying out activities. For example, the implementation of Phase 1 of the sub-contract with the BMN was expected to last 18 months. The first payment of this phase which was made just after the signing of the contract on May 28, 2018 should allowed to identify and conduct energy audit in all companies, but at the mid-term, only four companies were undertaken audit and additional financial resources were requested by BMN in order to continue the remaining assessments. In terms implementation of activities directly carried out by UNIDO, delays were also recorded in the achievement of some outputs. One of reasons, is the change in the project management at UNIDO HQ. These delays have had a significant impact on the effectiveness of the project since at this stage of the project implementation, in term of outcomes achievement, at least outcome 2 should be almost achieved. In accordance with project workplan, out of the 16 activities planned to be carried out before the mid-term, eight and activity 1.1.1 which was planned after MTR were implemented. The analysis of expenditure as of December 31 compared to the forecasts for the first three years shows that overall, more than 85% of the expenditure planned at this stage is already committed while the outcome 2 expected at mid-term has not been achieved.

**Sustainability:** With regard to public sector resources, it is the sovereign role of the BMN who has a financing mechanism, the Upgrading Fund which, beyond the resources of the State of Senegal, benefits from the support of technical and financial partners and APROSI has just obtained support from Exim Bank of China for phase 2 funding of 60 billion FCA (about \$1.2 billion). Otherwise, legal frameworks, policies and governance structures and processes that frame the implementation of this project remain perfectible. However, the likelihood that the risks associated with the functioning of these frameworks will compromise the sustainability of the project outcomes remains low. Concerning the socio-political risks, Senegal is one of the countries of the sub-region which enjoys great stability. Beyond this stability, the project fits perfectly into the ambitious development plan, "Plan Senegal Emergent" (PSE) launched by the President of the

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Republic and which aims to make Senegal an emerging economy by 2035. On the environmental front, it is urgent that APROSI, DEEC and the BMN takes the necessary measures to support the new companies that are setting up around the Diamniadio platform and domain in their upgrade. It is at this price that the environmental risk which would compromise the outcomes of the project could be mitigated

Cross cutting aspects: The project is expected to have the benefits including reduction of GHG emissions (at least 6,738 tCO<sub>2</sub>eq.) and implementing serious climate change mitigation and actions, reduction of energy use and waste produced per unit of output or consumption. Those benefits will contribute to address the problem of climate change and reducing the carbon footprint of cities. This reduction would also protect the health of urban populations, a real social problem susceptible to guarantee the inclusion of project beneficiaries.

	<b>Evaluation criteria</b>	<b>Rating</b>
<b>A</b>	<b>Project design</b>	<b>S</b>
1	• Project design	S
2	• Project result framework/ logframe	MS
<b>B</b>	<b>Project performance and progress results</b>	<b>MS</b>
1	• Relevance	S
2	• Effectiveness and progress towards results	MU
3	• Efficiency	U
4	• Gender mainstreaming	S
5	• Cross-cutting aspects	S
<b>C</b>	<b>Project implementation and management</b>	<b>MS</b>
1	• Project management	MS
2	• Result—based work planning	S
3	• Monitoring and evaluation (M&E)	MS
	✓ M&E design	S
	✓ M&E implementation	MS
4	• Reporting	MU
5	• Financial management and co-financing	MS
	✓ Financial management	S
	✓ Co-financing and project outcomes and sustainability.	MU
6	• Stakeholder engagement and communication	MS
	✓ Stakeholder engagement	S
	✓ Communication.	MU
7	• Sustainability of benefits	ML
	✓ Financial risks	ML
	✓ Institutional framework and governance risks	ML
	✓ Socio-political risks	L
	✓ Environmental risks	ML
<b>D</b>	<b>Performance of partners</b>	<b>MS</b>
1	• UNIDO	MS
	✓ Project team in the field	MU
	✓ UNIDO HQ-based management	MS
2	• National counterparts	MU
3	• Donors	S
<b>E</b>	<b>Overall assessment</b>	<b>MS</b>





## C. Recommendations

To All:	
1	The success of the project is strongly dependent on the working environment, the stakeholders and the quality of the communication between them. All stakeholders involved in the implementation of the project are encouraged to make more efforts to strengthen collaborative work focused on achieving project outcomes, communication and proactivity.
2	To avoid reducing the results of the efforts of UNIDO and its national partners to make the Diamniadio platform and domain a green city, it is imperative during the course of the rest of the duration of the project that special attention be paid to the industries and factories setting on the outskirts of Diamniadio domain. The installation of certain industries not belonging to the Diamniadio domain will be subject only to the conventional conditions of environmental impact studies (often less rigorous than those put in place for the management of the Diamniadio domain) while their emissions could reach the domain. It is imperative that APEX, APROSI, DEEC and the BMN already take the necessary measures to support these industries to be upgraded before their installation. It is at this price that the risk of diffuse pollution which these industries will be the source can be mitigated. It must ensure that these measures are taken into account in the strategy document for the design, implementation and management of sustainable industrial parks and integration into the urban fabric.
To UNIDO:	
1	Update the logical framework of the project : <ul style="list-style-type: none"><li>- define the end-of-project targets for the other three performance indicators 4.3, namely the total amount of recycled waste, the total amount of recovered waste and the total amount of energy produced;</li><li>- bring the end-of-project target of the second indicator of output 4.2 (number of industries undertaking energy audit) to 11 industries instead of 10 since it is among these that, 9 industries will benefit from pilot projects using the technologies of renewable energy and energy efficiency measures and two will implement pilot projects for waste recycling and energy recovery;</li><li>- reformulate the third exit indicator 4.2 because in its current formulation, it is not realistic. A formulation proposal is: <i>Number of companies engaged in the ISO 14001 and 50001 certification process</i> (staff mobilized, defined scope and first external audit carried out).</li></ul>
2	Fifteen months before the end of the project, none of the four technical outcomes of the project have yet been achieved. Outcomes 1, 2 and 3 are likely to be achieved. On the other hand, Outcome 4 has very little chance of being achieved. Yet this is one of the main results of the project, which is expected to create pilot companies that will serve as an example for other companies. In view of the importance of this outcome, it

would be desirable to make arrangements already with the GEF to obtain an extension of the duration of the project's implementation by twelve months.

- 3 Since the project document planned the recruitment of a project administration assistant and consultant/expert if required, UNIDO could strengthen the PMU in order to speed up the implementation of the project and avoid any more delays by recruiting a junior technical expert in place of administrative assistant and an environmental technical coordinator as a consultant. The Junior technical expert would assist the NPM and improve reporting to both project management of UNIDO and coordination locally to show as one. The environmental technical coordinator would support project implementation as adaptive management solution designed to close identified gaps in specifically POPs knowledge and related communications.
- 4 The current approach to project implementation with two UNIDO project managers is perceived by the main project stakeholders (DEEC, APROSI, BMN) as if it were the execution of two separate projects despite the UNIDO explanatory efforts. The realization of a joint monitoring mission of the two Project teams undoubtedly improves understanding of the objectives of the project and mobilizes all the actors around a single action and thus contribute to improve the probability of reaching project outcomes.

To DEEC:

- 1 Get more involved in the implementation of the project and ensure, with the help of other partners and use its sovereign prerogatives, in order to continue monitoring the implementation of project activities.
- 2 Provide of the administrative support necessary for the National Project Manager in the search for an adequate office to better accomplish his tasks.

To BMN:

- 1 Take all necessary measures to make up for the delay already observed in the execution of its contract with UNIDO according to the rules of the art. One of the measures consists in establishing, in addition to the procedures for selecting the companies, the terms of reference and the technical specifications of all the material / equipment to be purchased so that once the contracts will be signed with the companies, the procedure for purchase be shorter. Recruiting consultants to implement and monitor upgrading actions in companies could also be a time-saving option.
- 2 The project document planned to conduct RECP assessments for 10 enterprises under Output 3.1 without proposing the upgrading of these companies. It is highly desirable that these enterprises be taken into account within the framework of a regular BMN implementation program. The resources committed to obtaining these results will thus be capitalized in co-financing of BMN on this project.
- 3 Evaluate its co-financing in kind and in the form of loans to facilitate the final evaluation of the project.

**D. Lesson**

- 1 It still seems a bit early to learn from the implementation of the project. However, it appears from the first experiences of selection of companies to engage in the implementation of pilot projects that, the common assertion which presents industries as a little cautious when it comes to the adoption of BAT/BEP is less obvious than one would think. Meetings to explain the economic and environmental benefits generated by these changes in practices quickly convince them. The selection of companies by call for expressions of interest should therefore be preceded by a real awareness campaign and direct meetings with potential candidate companies. Without this, they will remain suspicious and will always suspect a strategy of identification and repression of polluting industries on the part of the public authorities.

## I. INTRODUCTION

### 1. Mid-term review objectives, methodology and process

#### 1.1 Information on the review

- 1 As planned in the project document, an independent mid-term review has to be conducted during the first and second quarters of the third year of implementation of the project. It would have to assess ongoing progress towards the achievement of project outputs and identify any necessary corrections as needed. It would focus on relevance, coherence, effectiveness and efficiency while highlighting issues that deserve decision and action. It will present lessons learned from the project initial experience in terms of formulation and implementation. The findings of this review should be incorporated as recommendations to improved project implementation.

#### 1.2 Scope and objectives of the review

- 2 The mid-term review aimed to independently assess the project to help UNIDO to improve performance and achieve the expected outcomes as foreseen in the project documents. The MTR has the following objectives:
  - Verify prospects for development impact and sustainability, providing an analysis of the attainment of the main project objective and specific objectives, global environmental objectives, delivery and completion of project outputs / activities, and outcomes / impacts based on indicators. The assessment includes re-examination of the relevance of the objectives and other elements of project design.
  - Enhance project relevance, effectiveness, efficiency and sustainability by proposing a set of recommendations with a view to ongoing and future activities.
  - Draw lessons of wider applicability for the replication of the experience gained in the project.
- 3 The review mainly focus on the achievement of the expected outcomes indicated in the project logical framework, and in particular on the aspects of relevance, effectiveness in delivery, efficiency, impact, sustainability, management as well as cross-cutting issues such as gender mainstreaming.

#### 1.3 Information sources and availability of information

- 4 A combination of methods was used to deliver evidence-based qualitative and quantitative information from various sources: desk studies, individual interviews, focus group meetings and direct observation. In close consultation with the UNIDO project teams and the national project manager, the platform and the domain of Diamniadio and some enterprises (CSIP, AMSATA PLASTIQUE, SEWACARD, MULTI INDUSTRIES GROUP and APS) were visited during the mission. In preparing for interviews and visits of sites, the evaluator reviewed the documentation of the project provided by the UNIDO Project Managers. This included the original project documents, minutes of Technical Orientation Committee (TOC) meeting, UNIDO GEF Annual Monitoring Report for 2018 and 2019, training reports, terms of references, Back to office mission reports as well as technical reports of international and national experts. The full list of documents consulted and persons interviewed during the evaluation are given in the annex 2 and annex 3. The planning of the country visits and the persons to be selected for

interviews were done in close consultation with the two UNIDO Project Managers, the National Project Manager (NPM) and the local counterparts (APROSI and BMN).

#### 1.4 Methodology remarks

- 5 The mid-term review followed UNIDO Evaluation Policy<sup>1</sup>, the UNIDO Guidelines for the Technical Cooperation Programme and Project Cycle<sup>2</sup>, the GEF Guidelines for GEF Agencies in Conducting Terminal Evaluations<sup>3</sup> and the GEF Monitoring and Evaluation Policy<sup>4</sup>.
- 6 This evaluation concerns only the **Component 2** and 5 sub-components implemented by UNIDO. A participatory approach that sought to inform and consult with all key stakeholders of the project was used.
- 7 This was an external review using a participatory approach involving UNIDO staff associated with the project. They were kept informed and consulted regularly throughout the process. The evaluator also consulted directly (conference call) or through e-mail the project coordinator and his counterparts at the local level on any methodological issues with regard to project-related information and logistical arrangements taken to conduct the review.
- 8 The review was carried out from 26 November 2019 to 21 January 2020 by Bontiebite Badjare, international consultant and the country visits took place between 10 to 16 December 2019 as During these visits, the Evaluator, accompanied by the National Project Manager, interviewed the key partners/stakeholders of the project such as the national counterpart (DEEC, APROSI and BMN) staff and the private sectors. The latter's role was limited to introduce the Evaluator and to let him conduct alone, the interviews.

#### 1.5 Limitations of the Review

- 9 It must be said here that all the documentation was made available to the evaluator. This allowed the better document analysis.
- 10 However, it should be noted that it was not possible to meet the Director of DEEC (GEF Focal Point) whom were out of the country during the mission. Otherwise the other field visits and interviews of key stakeholders and partners took place as scheduled (see Annex 3).

#### 1.6 Validity of the findings

- 11 The validity of the findings of this mid-term review stems from the fact that the information collected in the analyzed documentation was cross-checked with the project management team at UNIDO headquarters views, information of the national party (DEEC, BMN, APROSI and national coordination of the project), and beneficiaries (companies involved in RECP). However, the meeting with World Bank (WB) and ADM, two members of the Technical

<sup>1</sup> UNIDO. (2015). Director General's Bulletin: Evaluation Policy (UNIDO/DGB/(M).98/Rev.1)

<sup>2</sup> UNIDO. (2006). Director-General's Administrative Instruction No. 17/Rev.1: Guidelines for the Technical Cooperation Programme and Project Cycle (DGAI.17/Rev.1, 24 August 2006)

<sup>3</sup> GEF. (2017). Guidelines for GEF Agencies in Conducting Terminal Evaluations for Full-sized projects (Evaluation Office, Evaluation Document, 11 April 2017)

<sup>4</sup> GEF. (2010) The GEF Monitoring and Evaluation Policy (Evaluation Office, November 2010)

Orientation Committee which acts as a Project Steering Committee (PSC) and the Focal Point of the Stockholm Convention was not held. It'll be noted that WB and ADM related activities were finished end of 2019. These stakeholders would certainly have contributed to improving the quality of this review findings.

## 2. Project background

### 2.1 Project factsheet

Project title	Sustainable cities initiative for Senegal: Promoting renewable energy and integrated waste management in sustainable industrial parks
SAP ID	150270
GEF Project ID	9123
Region	Western Africa
Country	Senegal
Project donor(s)	GEF
Project implementation start date	10/03/2017
Expected duration	48 months
Expected implementation end date	09/03/2021
GEF Focal Areas and Operational Project	Multi-Focal Areas
Other executing Partners	Ministry of Environment and Sustainable Development; Municipal Development Agency (ADM), Agence d'Aménagement et de Promotion des Sites Industriels (APROSI), Bureau de Mise à Niveau (BMN).
Executing partners	UNIDO
UNIDO RBM code	GC31 (RECP & LowCarbonPrd)
Donor funding	3,211,010
Project GEF CEO endorsement / approval date Project GEF CEO endorsement / approval date	17/06/2016
UNIDO input (in kind, USD)	380,000 Cash and In-Kind
Co-financing at CEO Endorsement, as applicable	BMN In-kind 2,207,000 BMN Loans 4,793,000 APROSI Grants 4,400,000
Total project cost (excluding PPG and agency support costs, in USD, i.e. GEF grant plus co-financing at CEO endorsement) (USD)	14,991,010
Mid-term review date	1/12/2019
Planned terminal evaluation date	January 2021

## 2.2 Brief description of the project

- 12 In accordance with the project document, the project aimed to improve capacity to plan and implement sustainable city management practices focusing on integration of sustainable industrial parks.
- 13 By addressing barriers to sustainable industrialization at systemic, institutional and enterprise levels, the project will contribute towards achieving the overall objectives of IAP- Sustainable Cities program in terms of improved environmental performance, including global environmental benefits such as reduced GHG emissions, protection of ecosystems, decreased land degradation, and decreased incidence of chemicals and waste pollution. More importantly, the interventions of this project will catalyze a shift towards the integration of sustainable industrial parks into sustainable cities.
- 14 The expected outcomes were
- Outcome 1: Strengthening of national capacities on integrated urban planning for sustainable industrial parks and participation on Global Platform for Sustainable Cities (GPSC)
  - Outcome 2: An integrated POPs and hazardous waste management system is designed
  - Outcome 3: An enabling framework is created for implementing sustainable and resilient industrialization
  - Outcome 4: Increased use of renewable energy technologies and low-carbon technologies to reduce carbon intensity of industrialization and urbanization in Dakar and Diamniadio
  - Outcome 5: Project progress properly monitored and evaluated

## 2.3 Project Implementation Arrangements

- 15 Under the SC IAP program, the World Bank, as the lead program agency is responsible for reporting on the program level outcomes. Under this child project, the World Bank country office Senegal is responsible for IAP Component 1 while UNIDO will be responsible for IAP component 2. To ensure close coordination between these two components at implementation level, Senegal SC – IAP Coordination Committee is established and is chaired by the GEF Focal Point. A Project Management Unit (PMU) has been established to oversee implementation of all five UNIDO components. The PMU is being supported by UNIDO through coordination and communications activities that cut across the project.
- 16 Regarding the UNIDO component, the management and implementation set-up has the following set-up:
- 17 **UNIDO:** as the GEF Implementing Agency for IAP Component 2 holds the ultimate responsibility for the implementation of the UNIDO co-implemented, GEF-financed project, by providing overall supervision and oversight. UNIDO is responsible for the delivery of the planned outputs and the achievement of the expected outcomes, monitoring of the project, and reporting on the project performance to the GEF. UNIDO field office in Dakar provides day-to-



day supervision of the project management Unit and provide linkages between the project and national departments and officials.

- 18 **Direction de l'environnement et des établissements classés (DEEC) and GEF Focal Point:** acts as the local executing partner; Directorate of Environment ensures that all the ongoing projects, activities under the "sustainable cities" initiatives are well coordinated in terms of planning and implementation.
- 19 **Bureau de mise à niveau (BMN):** acts as an execution partner and is responsible for the execution of component 4 (output 4.2 and 4.3). It is responsible for RECP and energy and environment upgrading of industries activities and also ensures that the project activities are linked to other ongoing initiatives. In particular, BMN is responsible for the execution of the pilot projects. At the beginning of the project, UNIDO issued a sub-contract to BMN for the implementation of agreed pilot projects. The project Management Unit, UNIDO and DEEC established a working committee to be directly responsible for the final selection of pilot project to be supported and for monitoring and validation of the implementation of the pilot projects.
- 20 **Agence de promotion des sites industriels (APROSI):** acts as a co-execution partner. It is responsible for activities relating to designing and implementing sustainable industry approach for managing Diamniadio industrial park and planning of sustainable industrial zones. APROSI also ensures that the project activities are linked to other ongoing initiatives, especially the development of other planned industrial parks.
- 21 **Project Management Unit (PMU) - IAP Component 2:** is responsible for the day-to-day execution and planning of project activities as in the agreed project work plan. The PMU is composed of a National Project Manager (NPM). Consultants and Experts can be added to the PMU when required. The role of the NPM, as initially planned in the project document, is to coordinate all project activities and reports to UNIDO and the Directorate of Environment. The NPM is recruited directly by UNIDO. A project administration assistant was originally planned by the project document.
- 22 **Project Steering Committee- IAP Component 2:** would be established for periodically reviewing and monitoring project execution progress, provide strategic advice, facilitate coordination between project partners, provide transparency and guidance, and ensure ownership and sustainability of the project outcomes, and is expected to be chaired by the directorate of environment. The responsibilities of the PSC include the following: providing the necessary political support to the project implementation; commenting on project work plans, progress reports and M&E reports; mobilizing cost-sharing and follow-up financing; assuring coordination between this project and other ongoing government activities and programmes; assuring all stakeholders are appropriately involved in the project planning, execution and management; and facilitating linkages with high-level decision-making. Project Steering Committee Membership consists of representations of the following: DEEC, APROSI, ADM, World Bank, BMN, UNIDO, Director of Environment. DEEC and Director of Industry will co-chair the Project Steering Committee- IAP Component 2. The figure 1 below shows a diagram of the planned project co-implementation and execution set-up.

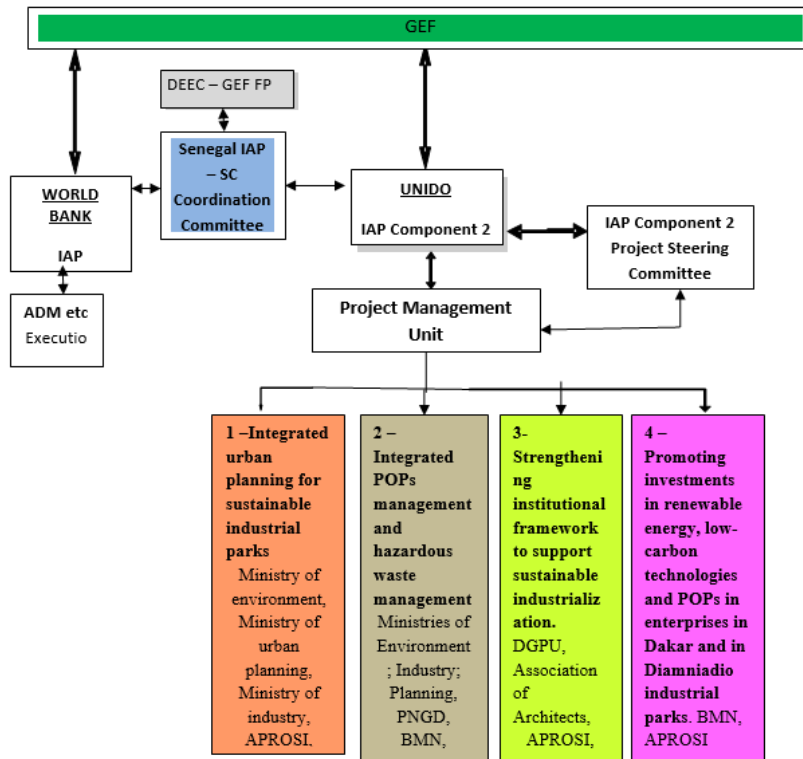


Figure 1. Project co-implementation and execution set-up

## 2.4 Positioning of the UNIDO project

23 The project was formulated while UNIDO was implementing a GEF-funded subregional mercury project aimed at improving human health and the environment in artisanal and small-scale gold mining communities through the reduction of mercury emissions and the promotion of sound management of chemicals (GEF ID: 4569). Senegal also benefited from UNIDO support in the implementation of the programme “Capacity Strengthening and Technical Assistance for the Implementation of the Stockholm Convention (SC) National Implementation Plans (NIPs) in African Least Developed Countries (LDCs) of the ECOWAS Sub-region”. The overall objective of this project was to reduce POPs emissions through strengthening and/or building capacity required in the LDCs of the ECOWAS Sub-region to implement their Stockholm Convention NIPs in a sustainable, effective and comprehensive manner while building upon and contributing to strengthening country’s foundational capacities for sound management of chemicals and waste in general.

24 In addition, UNIDO was implemented a project entitled, “Environmentally sound management of municipal and hazardous solid waste to reduce emission of unintentional POPs”, PRODEMUD, (GEF ID: 4888). This project represents complementary technical assistance to the present project. The objective of the PRODEMUD is 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 within the context of the implementation of the NIP under the Stockholm Convention.

## II. MID-TERM EVALUATION FINDINGS

### 1. Project design assessment

25 Project assessment rated **Satisfactory** because, the project was design clearly to address existing environment and waste issues of industries and cities and to facilitate project planning, monitoring and evaluation, the project document has provided a results / resources framework.

#### 1.1. Project design

26 Upon analysis of the project document, it appears that the project is developed in a context marked by challenges in industrial pollution in Dakar. This is primarily due to the fact that most industries in the country do not have any solid and liquid waste treatment or disposal systems in place. Regarding to energy, on average, most industries in Dakar are more energy intensive, compared to other regions, implying that they consume more energy per unit of production and hence pay more for energy. As regards waste management, Senegalese municipalities have major difficulties to cope with the waste. This general situation on waste also applies to industrial waste. Face to this situation, the project was design clearly to address existing environment and waste issues of industries and cities as well as the planning challenges of eco-industrial zones aproned cities. It aimed to contribute towards achieving the overall objectives of IAP- Sustainable Cities program in terms of improved environmental performance, including global environmental benefits such as reduced GHG emissions, protection of ecosystems, decreased land degradation, and decreased incidence of chemicals and waste pollution. More importantly, the interventions of this project have to catalyze a shift towards the integration of sustainable industrial parks into sustainable cities.

27 As analyzed in the project document, the project has a support of the government of Senegal and is aligned with, and supportive of, the country’s main development policies and strategies. It is implemented in the framework of on-going national efforts on urban sustainable development and promoting integration of renewable energy, waste management and sustainable industries in Diamniadio. The project was also aligned with Senegal’s vision to address climate change, expressed in its Intended Nationally Determined Contribution submitted to UNFCCC in September 2015. Furthermore, from national priorities perspective, Senegal is started and pursuing an ambitious development plan, “Plan Senegal Emergent” (PSE) with the goal turning Senegal into an emerging economy by 2035, with average growth of 7% up to that time. The PSE regards the inclusive and sustainable industrial development as a key approach to achieve Senegal’s structural economic transformation, and has designed an industrial package whose purpose is to transform the country into an important industrial

hub in West Africa. The focus of the project on greening existing industries and upgrading them to meet environmental and energy efficiency standards and creating new green industries on resource efficiency and sustainable production was in accordance with the PSE pillars and priorities will contribute to the achievement of his strategic objectives in industrial sector. By Integration of energy access, power supply through renewable energy at early stages of city and industrial platform plan development in Diarniadio and supporting the implementation of pilot renewable projects, the project was also in line with the country renewable energy policy. Finally, the project aims to pilot integrated POPs and hazardous waste management in Dakar in connection of green industries of the target industrial park and to promote new recycling industries and to support pilot BAP/BET projects on waste recycling, recovery and energy generation to reduce dioxin and furan emissions and hazardous waste. These activities are supportive to the National Plan for the Management of Hazardous Waste and National Implementation Plan (NIP) for the Stockholm Convention developed and submitted in 2005 and updated in 2016.

- 28 A part of met the needs of the target group (APROSI, BMN, Enterprises, etc.) the project is also in line with UNIDO's renewed mandate of promoting Inclusive and Sustainable Industrial Development (ISID). Indeed, UNIDO was, and still promoting ISID in which the following objectives are set (1) every country achieves a higher level of industrialization in their economies, and benefits from the globalization of markets for industrial goods and services; (2) no one is left behind in benefiting from industrial growth, and prosperity is shared among women and men in all countries; (3) Broader economic and social growth is supported within an environmentally sustainable framework; (4) unique knowledge and resources are combined of all relevant development actors to maximize the development impact of ISID. This project aimed at delivering UNIDO's services to help the country achieve ISID.
- 29 In terms of lessons learned, when we look through the document, we do not perceive the lessons learned from the old initiatives on which the project is based. It is therefore a little difficult to decide on the effective capitalization of specific lessons learned in the design of the project. Nevertheless, it is clear that the design of the project is based on BAT/BEP that have already proven themselves elsewhere.
- 30 For the rest, the project document includes a M&E plan which specify clearly what, who and how frequent monitoring, review and evaluations will take place (see paragraph "C. DESCRIBE THE BUDGETED M&E PLAN" of the project document). This plan includes also a budget.
- 31 The risk management was also analyzed and no critical risks related to financial, social-political, institutional, environmental and implementation aspects were identified with specific risk ratings. Only three risks (Low degree of collaboration between different actors and lack of willingness among stakeholders to collaborate/contribute; The co-financing contributions may be delayed causing a delay or unsuccessful delivery of the UNIDO co-implemented, GEF-financed project outcomes; Continued low prices of oil could discourage industries from investing in resource efficiency and alternative energy options) were ranked "Medium". All the rest were ranked "Low". But the mitigation measures were identified for each risk identified.
- 32 In summary, the project was designed clearly to address existing environment and waste issues of industries and cities, GHG emissions, reduce carbon intensity of industrialization as well as

the planning challenges of eco-industrial zones aproned cities. The risk management was also analyzed. So, project **design** is rated **Satisfactory**.

## 1.2 Project result framework/logframe

- 33 **Logical framework:** To facilitate project planning, monitoring and evaluation, the project document has provided a results framework. The logical framework of the project facilitates the summary presentation of the intervention logic of the project and the way in which the results will be measured. In the project document, the result-chain (impact, outcomes and outputs) is very clear and logical with targets at mid-term and end of project.
- 34 **Objectively Verifiable Indicators (OVI):** The all describe and specify expected results (impact, outcomes and outputs) in terms of quantity. In term of quality, the impact's OVI are just a compilation of Outcomes' OVI. The immediate consequence is that, the first three impact indicators of the project (Number of enterprises conducted RECP assessments, number of enterprises certified ISO 50001 and ISO 14001 and number of industries piloting using renewable energy technologies) are outcomes indicators. Otherwise, an analysis of the feasibility over time shows that, one of OVI of Outcome 4 (5 enterprises are ISO 50001 and ISO 14001 certified) at the end of project implementation was not realistic due to the duration of the process needed to be certified. However, all the OVI are sex-disaggregated, if applicable.
- 35 **Outcomes:** The three first outcomes of the project described really changes (behavior or institutional performance) in target group. Outcome 1 describes change of national stakeholders' behavior face to urban planning and sustainable industrial parks challenges, Outcome 3 and Outcome 4 described change in industries performance by using renewable energy technologies and low-carbon technologies to reduce carbon intensity of industrialization and urbanization in Dakar and Diamniadio. Outcome 2 more described deliverables (document) that project have to produce; "A report on integrated POPs and hazardous waste management strategy for greater Dakar enterprises". Otherwise, the expected results are realistic, measurable but some of them are a summary of lower level results.
- 36 **Outputs:** According to outputs all of them describe deliverables which project will produce to achieve outcomes and lead to them of course, if the assumptions made are true. All of them could be delivered by the project except Output 4.2. It seemed difficult to support five enterprises in Dakar and Diamniadio industrial park to be certified ISO 50001 and ISO 14001 in just under four years.
- 37 In view that, **project result framework/logframe** is rated **Moderately Satisfactory**.

## 2. Project performance and progress results

- 38 Overall **Project performance and progress results** is **Moderately Satisfactory**.
- 39 Indeed, the initial objective and expected outcomes are still valid and relevant for the target groups. The relevance of the project was refined during interviews with stakeholders. Ten indicators were planned to measure the achievement of the four technical outcomes of the project at the end of the implementation. Overall, compared to the values of the indicators to

be reached at mid-term of the project implementation, no target of the expected outcome indicators is reached, 25% of those of the output indicators are reached while in terms of execution of activities, 50% of the planned activities have been completed and one unplanned activity. Compared to the end-of-project targets, only 16% of the product indicators are met and 21% of activities carried out. The project was also design adequately considers the gender dimensions in its interventions. Also, during the project preparatory phase, a preliminary gender analysis of the country context and a preliminary gender assessment project were conducted. Finally, the project is expected to implemented serious climate change mitigation by protecting project beneficiaries (urban populations) health.

## 2.1 Relevance

- 40 The analysis of the relevance of the project, three years after its launch, was refined during interviews with stakeholders. Thus, for the direct beneficiaries of the project, namely the industrial companies, all the companies met consider that the project still relevant to them, especially since it should help them reduce their energy costs and allow them at the same time to have an minimize their impact on environment. None of them, met during the MTR mission, raised the necessary investments identified after RECP analysis as an obstacle to their engagement in the process. On the other hand, it should be noted that the BMN has experienced enormous difficulties in co-opting companies which will ultimately benefit from the RECP pilot projects. This situation could be explained, according to the BMN, by the simple reading of the notice of expression of interest, many companies suspect the public authorities of implementing a strategy to prosecute polluting companies. Seen from this angle, one could be led to conclude, wrongly, that the project would be moderately relevant for this target group. The change in the methodological approach to enrolling companies in the process through meetings to explain the objectives of the project made it possible to register in fine, eight companies.
- 41 Compared to the country's development priorities, the comparative advantages of UNIDO and the policies and priorities of the GEF (project donor), the alignments mentioned above on project design are still valid. At the national level, it is inter alia the alignment of the project with the "Plan Sénégal emergent (PES), the objectives of the UNFCCC to which Senegal is a party and the national efforts for the sustainable management of cities and the promotion of integrated management of renewable energies and waste at Diamniadio. On this last point, the relevance of the project is all the stronger since this initiative is currently being implemented. If the area of the entire Diamniadio platform is estimated at 92 hectares, the platform is 53 hectares. At the date of the mid-term review the platform home of fourteen companies including seven industries and seven services companies. In addition, the approach of sustainable and integrated management of energy and waste adopted by APROSI which does not have the necessary expertise further confirms the relevance of said project. For UNIDO, the project is still an example of UNIDO's ISID. This project therefore aims to provide UNIDO services to assist in the realization of ISID. The project outcomes are consistent with the operational program strategies of the GEF. They are in particular much in line with GEF's goal in IAP cities, which is to demonstrate systemic impacts of mitigation options by promoting integrated planning and investments related to urban sustainability that results in environmental, social and economic benefits at the local and global scale. Under

GEF-6, this goal was to be achieved by improving capacity to plan and implement sustainable city management practices focusing on integration of sustainable industrial parks.

- 42 For a project that aims to reduce emissions from industrial sources, focusing its interventions on industries is perfectly justified. In the present case, the initial objective and expected results are still valid and relevant for the target groups. Rating on **Relevance** is **Satisfactory**.

## 2.2. Effectiveness and progress towards results

- 43 **Overall effectiveness and progress towards results** is rated as **Moderately Unsatisfactory**. This rating is based on below analysis. As underlined in point 2 above, the evaluation of the effectiveness and progress towards results was based on the extent to which the outcomes were achieved, the outputs obtained and the level of technical execution of the activities planned according to the chronogram, revised or not. The details are presented in Annex 5 to this report.
- 44 For the mid-term, of the eight indicators planned, no target was reached. In terms of output delivery, of the nineteen expected outputs indicators, twelve had mid-term targets. Of the twelve targets, only three were delivered These are: Number of GPSC events and participants (output 1.4), Green industry approach for managing Diamniadio industrial park report (output 3.3) and Number of industries undertaking energy audits Renewable energy and low-carbon technology options applicable to Diamniadio identified and promoted (output 4.3). According to activities implementation, in accordance with the work plan updated in 2018 by the project team, out of the 43 activities planned, 16 should be carried out before the mid-term, six in progress at the time of the mid-term evaluation. At this stage, eight planned activities (activity 1.4.1, activity 1.4.2, activity 2.1.1, activity 3.3.1, activity 3.3.3, activity 4.2.1, activity 4.2.2 and activity 4.3.2) and one which was planned to be implemented towards the end of the project (activity 1.1.1) has been carried out (see Table 2).
- 45 As you will see in Table 2, only one activity of any Outcome has been achieved and also one output quite achieved. For Outcome 2, 20% of the five planned activities have been implemented but no output has been achieved to date. With regard to Outcome 3 and Outcome 4, only, respectively one and two activities started to be implemented with no output completed.

Table 2: Rating of outputs<sup>5</sup> for the projects

	Output	No of activities	Rating* of activities	Rating* of Output
Outcome 1	Output 1.1	2	1S;1S	S
	Output 1.2	6	6U	U
	Output 1.3	2	1U;1HU	U
	Output 1.4	2	2HS	HS
Outcome 2	Output 2.1	2	1S;1U	MU
	Output 2.2	3	3MU	MU
Outcome 3	Output 3.1	5	5U	U
	Output 3.2	3	3U	U
	Output 3.3	3	2S;1MS	S
Outcome 4	Output 4.1	3	3MU	MU
	Output 4.2	5	2S;2U;1HU	MU
	Output 4.3	2	1S;1U	MU
	Output 4.4	2	2MU	MU
	Output 4.5	3	1MS ;2MU	MU
<b>Total</b>	<b>14</b>	<b>43</b>	<b>2HS+5S+2MS+10MU+19U+2HU = 43</b>	<b>1HS; 2S; 7MU; 4U</b>

\*HS: highly satisfactory; S: satisfactory; MS: moderately satisfactory; MU: moderately unsatisfactory; U: unsatisfactory; HU: highly unsatisfactory

### 2.2.1 Outcome 1: Strengthening of national capacities on integrated urban planning for sustainable industrial parks and participation on Global Platform for Sustainable Cities (GPSC)

46 The mid-term expected target of Outcome 1 (one training workshop with 20 males participants 10 females participants) was not reached. Otherwise, out of the four Outputs planned to delivered under this Outcome, Output 1.1 is rated Moderately Unsatisfactory, Output 1.2 and Output 1.3 are rated Moderately Unsatisfactory and Output 1.4 Highly Satisfactory (see below details for each output). **Outcome 1** is rated at this stage **Moderately Satisfactory**.

#### 47 Output 1.1. A strategy to guide the design, implementation and management of sustainable industrial parks and integration into urban tissue developed

48 For this output, no target of output indicator was planned to be reached at mid-term. By the end of the project, it's expected a strategy document to guide the design, implementation and management of sustainable industrial parks and integration into urban tissue developed. This document should make it possible to integrate resource management (energy, water, waste) and environmental issues in the planning and development of urbanization and industrial zone management processes and thus maximize economic and environmental benefits. According to the implementation of activities, even though it wasn't planned for any activity to be implemented before mid-term, activity 1.1.1 was implemented. So, to date, the terms of

<sup>5</sup> See annex 5 for detailed rating of activities and outputs



reference for the study have been developed and validated. The work will be carried out by an already selected subcontract and the study will cover the period from January to July 2020. In view of those arrangement taken, there is a good chance that this output be delivered by the end of the project. So, **Output 1.1 is rated as Satisfactory.**

**49 Output 1.2. APROSI, ADM, DGPU, architects, cities, private sector, local experts trained the integration of sustainable industrial parks in cities across the country.**

50 It was planned at the mid-term of the project to strengthen the capacities of at least twenty people including at least ten women from the main public services (Ministry of the Environment, Ministry of Town Planning, Ministry of Industry , APROSI, DGPU, ADM), the private sector, national consultants, the order of architects, universities or research institutes, municipalities, etc. during a training workshop. This training was not yet organized. The assessment of training needs and the development of the related training program which are prerequisites for the organization of training have not yet been carried out. It should be noted according to the project document, the training would be provided on the use of internationally recognized tools and guidelines used to plan the integration of sustainable industrial parks in cities across the country to ensure that participants are adequately capacitated to address the planning challenges of future eco-industrial zones with the view to utilize the full potential of city – industry symbiosis: water, energy and material resources; treatment systems; energy and material recovery; waste valorization; use of renewable energy and sustainable material substitutes; material and by-product reuse and recycling However, it should be emphasized that the terms of reference for the implementation of the activities which should contribute to the achievement of this result are nevertheless drawn up and the subcontractor selected. The two training workshops planned before the end of the project should be organized between January and July 2020.

51 In term of activities implementation, it wasn't planned any activity under this output 1.2 before mid-term.

52 However, note that in collaboration with PRODEMUD, the BMN organized a training workshop with Environmental Agency on the implementation Best Available Techniques / Best environmental Practices in view of POPs and GHG reductions was organized by BMN in partnership with PRODEMUD. The objective of the training was (i) to build the capacities of project stakeholders to identify POPs-related aspects in industrial processes when conducting RECP assessments and (ii) to identify synergies between energy efficiency measures and POPs reduction measures when upgrading.

53 Furthermore, a workshop with the bank sector (all twenty-six (26) banks and financial institutions) in the country was held in May 2019 to facilitate mobilization of additional funding during investments planned by feasibility studies.

54 In view of the expected mid-term target of output indicator is not reached, **Output 1.2 is rated as Unsatisfactory.**

**55 Output 1.3. Sustainability performance of Diamniadio industrial park measured and regularly reported.**

56 Out of the two reports expected by mid-term of the project, no report was drawn up and no sustainable performance of the Diamniadio industrial park was either measured. In reality, these measurements and reporting require an adequate and adapted framework. Thus, the project management team planned to define a measurement, reporting and verification system and the measurement of the park's performance according to the GHG inventory standards recognized internationally during the first half of 2020. This work will be produced by an international expert from UNIDO already working on the project, the terms of reference of which have not yet been developed. Any activity was planned before mid-term of project implementation.

57 Taking into account the two reports expected by the mid-term of the project implementation, it is very unlikely that the five reports expected by the end of project be reached. Thus **Output 1.3** is rated as **Unsatisfactory**.

58 **Output 1.4. Project counterparts participate in GPSC activities that include annual meetings, targeted training programs.**

59 Output 1.4 expected to facilitate the participation of project counterparts (DEEC, APROSI, BMN and other relevant stakeholders) in the activities of the GPSC which include annual meetings, targeted training programme. A Senegalese delegation participated in the training on municipal financing in Singapore and experts visit to Malaysia with the World Bank. They attended the GPSC annual meeting in Abidjan in 2018 and also participated to BRIDGE FOR CITIES in Vienna in 2018 and 2019. In 2019, national counterparts participated to the UNIDO-EU-GoS Circular economy conference held in Dakar, the Expert Group Meeting on EVs at UNIDO Headquarters in Vienna and the GPSC Annual Meeting in Sao Paulo. These meetings triggered EUR 500,000 co-financing for solar photovoltaic in the implementing project. Unfortunately, the existing data did not allow us to assess the number of participants and disaggregate the statistics by sex. However, the number of participants could be estimated at around thirty, including a dozen women. The end target of eight events is already reached because national counterparts already participated in 9 events. It should also be noted that a national platform for sustainable cities in Senegal has been developed (<http://eco-industriedurable.com/>).

60 The mid-term target has been reached and taking into account the fact that it is highly likely that at the end-of-project target will also be reached the **Output 1.4** is rated **Highly Satisfactory**.

### 2.2.2 Outcome 2: An integrated POPs and hazardous waste management system is designed

61 By the mid-term of the project implementation, it was expected from Outcome 2 a report on integrated POPs and hazardous waste management strategy for greater Dakar enterprises. The report would help the characterization of waste in quantity and in calorific value facilitating synergies for collective solutions including the exchange of waste between companies within the industrial park. Ultimately, through this outcome, it was expected to create significant environmental benefits beyond reducing POPs including reducing GHGs, saving energy and improving air emissions. So, the only one target of outcome indicator is not reached. In addition, the two planned outputs, (Output 2.1 and Output 2.2) are rated Moderately Satisfactory. **Outcome 2** is so rated **Moderately Satisfactory**.

**62 Output 2.1. An integrated POPs and hazardous waste management strategy developed for enterprises in Dakar and Diamniadio industrial park**

63 The strategy on integrated POPs and hazardous waste management to be developed in a gender-specific manner for companies in Dakar and the Diamniadio industrial park, which shall be ready at mid-term of the project implementation, has not yet been developed. However, the terms of reference are developed. The achievement of the output was integrated into Output 3.1 to be attributed to a single service provider. The bidding is ongoing. Also, on the two activities planned (Activity 2.1.1 and Activity 2.1.2) to be implement only one Activity 2.1.1 is executed. Due to above, **Output 2.1** is rated **Moderately Unsatisfactory**.

**64 Output 2.2. Technical assistance provided to conduct detailed feasibility studies of selected pilot projects.**

65 The production of this output was planned to the end of project. So, no target of indicator was expected to be reach at mi-term. The strategy of project managers is to entrust the work to an international consultant from UNIDO to investigate pre-selected pilot projects (SODEA and SOGAS), identify BAT/BEP, provide a report on the suggested BAT/BEP including economic feasibility and possibility to mobilize resources. But, as it will be found in recommendations, it also possible to BMN implement this activity as a part of its co-financing. However, it would be noted that none of the three activities (Activity 2.2.1, Activity 2.2.1 and Activity 2.2.1) planned to be carried out during this period, in accordance with the updated timetable of 2018 have been implemented. Due to this last elements **Output 2.2** is rated **Moderately Unsatisfactory**.

**2.2.3 Outcome 3: An enabling framework is created for implementing sustainable and resilient industrialization.**

66 From **Outcome 3**, it was expected halfway of the implementation of the project, to conduct RECP of five enterprises and one training workshop involving, at least, thirty participants (20 males and 10 females). Unfortunately, no target was reached. This outcome should create a framework favorable to the implementation of a gender-sensitive sustainable industry approach in the new Diamniadio industrial park and the existing industries in Dakar. Output 3.1 and Output 3.2 are rated Unsatisfactory, Output 3.3 is rated Satisfactory. In view of this statement, **Outcome 3** is rated **Moderately Unsatisfactory**.

67 A tool for assessing and monitoring pollution from industries installed or wishing to set up on the Diamniadio platform was developed and an "handbook of recommendations" has been developed for APROSI. A training workshop on sustainable park management workshop for APROSI was organized. It is therefore a question of promoting technologies and processes in existing companies with the aim of improving the productivity of resources and reducing the intensity of pollution due to GHGs for example. The ten preliminary energy efficiency and clean production assessments expected have not been completed. The same applies to the training of Agence de la Maitrise de L'Energie (AEME) and other relevant stakeholders in supporting the adoption of renewable energy, resource efficient, and chemical and waste management technologies.

68 **Output 3.1, Environmental and resilience mapping of existing industries in greater Dakar, RECP assessments for selected enterprises conducted and technological and process upgrading opportunities promoted**

69

70 Target of two output indicators was planned to be reached at mid-term; One report on environmental mapping of greater Dakar industries and five enterprises supported to conducted RECP assessments. At this stage, the targets are not reached. At this stage, the terms of reference of the technical specifications for the provision of services linked to the realization of an environmental mapping and audit of companies for RECP are developed, bidding launched and technical evaluation ongoing. The activity 3.1.1 which was planned to be implemented after mid-term is nevertheless executed. Despite that, **Output 3.1** is rated as **Unsatisfactory**.

71 **Output 3.2. Technical and institutional capacity of Agence de la Maitrise de L'Energie (AEME) and other relevant stakeholders in supporting the adoption of renewable energy, resource efficiency, and chemical and waste management technologies in industrial sector strengthened**

72 Only one output indicator was planned and one target to be reached at mid-term. One training workshop for 30 people, including 10 women. Unfortunately, the target wasn't reached. This workshop should contribute to strengthening the technical and institutional capacities of the Energy Management Agency (AEME) and other relevant stakeholders to support the adoption of renewable energy, resource efficient and energy management technologies. chemicals and waste in the industrial sector. The technical and institutional capacities of the AEME, APROSI and other relevant stakeholders should be strengthened with a view to provide the best support for companies setting up in the Diamniadio industrial area. For the existing industries, to assessed the potential for energy savings, to identify opportunities for energy efficiency, to develop models of renewable energy systems based on available resources (photovoltaics) and their energy demand profiles, and to implement energy and environmental management systems.

73 Furthermore, none of the three activities (Activity 3.2.1, Activity 3.2.2 and Activity 3.2.3) planned for this period was implemented.

74 Today, only the terms of reference have been drawn up and the subcontractor has been selected. However, it is hoped that activities will start in early 2020 and end in July 2020.

75 With regard to this level of implementation and the fact that the output indicator target was not reached, **Output 3.2** is rated as **Unsatisfactory**.

76 **Output 3.3. APROSI, BMN and other companies assisted in designing and implementing sustainable industry approach for managing Diamniadio industrial park**

<sup>6</sup>**in terms of resource efficiency, chemical and waste management and renewable energy use.**

77 This Output targeted at mid-term a green industry approach for managing Diamniadio industrial park report. However, taking into account the urgent needs expressed by APROSI, a toolbox for industrial environmental assessment in Senegal has been developed with a manual of recommendations and a user guide for companies and APROSI.

78 Regarding the “necessary technical assistance to APROSI, Diamniadio park management company and industries in designing, sizing, assessing the techno-economic feasibility and implementing waste management and renewable energy equipment provided”, a training workshop on sustainable park management workshop for APROSI was organized in October 2019 and another is planned for January 2020. Another workshop on the integration of BAT/BEP for the reduction of POPs and the improvement of industrial waste management in RECP audits has was organized in March 2019 for the benefit of APROSI and BMN.

79 At this stage of project implementation, it is the identification of "locally available renewable energy sources such as bio -waste and solar opportunities", which has not yet been carried out, but it should be emphasized that APROSI plans the installation of a solar power plant on the platform; which is an opportunity for industry and a source of clean energy.

80 Finally, out of the three activities planned to be realized, two of them (Activity 3.3.1 and Activity 3.3.3) was implemented successfully.

81 Taking into account this statement, the **Output 3.3** is rated **Satisfactory**.

#### 2.2.4 Outcome 4: Increased use of renewable energy technologies and low-carbon technologies to reduce carbon intensity of industrialization and urbanization in Dakar and Diamniadio

82 **Outcome 4** is rated **Moderately Unsatisfactory**. This rate is justified by the fact that achieved all the four the mid-term targets (certified 2 enterprises ISO 50001 and ISO 14001, support 3 industries piloting the use of renewable energy technologies and energy efficient measures, support one waste pilot facility, and generated 4244 MV/h of renewable energy) are not reached and it'll be difficult to certified ISO 50001 and 14001, five enterprises according to the remain time for the project implementation. Furthermore, all it's five outputs are rated Moderately Unsatisfactory.

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<sup>6</sup> Understand Diamniadio platform and its domain

**83 Output 4.1. GHG emission inventory / Energy audit conducted for Diamniadio urban pole and an action plan for climate smart and resilient urban development elaborated and developed as NAMA.**

84 Two output indicators were planned to verify the achievement of this output. There was no target assigned to indicators for mid-term. Nevertheless, Activity 4.1.1 which was planned is not realized. On the date of the mid-term evaluation, the terms of reference of GHG and NAMA were developed and the subcontractor selected. The activities would start in early 2020 and end in June 2020. It should be noted that although not provided for in the project document, the terms of reference provide as deliverable in addition to the GHG and NAMA inventory reports, a Global Climate Funds readiness proposal. This document should help Senegal to mobilize new financial resources. **Output 4.1** is rated as **Moderately Unsatisfactory**.

**85 Output 4.2. Enterprises in Dakar and Diamniadio industrial park implement small to medium scale pilot renewable energy and energy efficient applications and RECP measures (at least 1 MW systems) and get ISO 50001 and ISO 14001 certified.**

86 As of the mid-term review, only one of three indicators have been almost achieved. Five industries undertaking energy audits and renewable energy and low-carbon technology options applicable to Diamniadio identified and promoted. Concretely, four out of five industries expected at mid-term of project undertaking energy audits. Formally, no renewable energy and low-carbon technologies suitable for Diamniadio have been yet promoted. It is likely that some options specific to the two companies present in the Diamniadio field (CSIP and Amsata Plastique) having been the subject of a RECP audit are identified. But as the final audit reports were not yet available, it cannot be asserted.

87 To achieve this, the BMN first turned to employers' organizations such as Conseil national du patronat du Sénégal (CNP) the National Council of Employers of Senegal, Confédération nationale des employeurs du Sénégal (CNES) the National Confederation of Employers of Senegal; and the Mouvement des entreprises du Sénégal (MEDS) through a call for expressions of interest. This call was widely distributed to companies known to these organizations on March 11, 2018. Unfortunately, BMN got only the request of two companies, namely EIFFAGE and RENOV industrie. The BMN then consulted the companies registered in the APROSI database. This exercise once again enabled the registration of two new companies: Amsata Plastique and Compagnie sénégalaise industrielle du PVC (CSIP) [the Senegalese Industrial PVC Company]. Faced with the delay in the process, the BMN used its own database to sort out dozens of companies that already have an upgrade plan and whose process for moving to the Diamniadio industrial park is very advanced. Explanation and awareness-raising meetings with managers of the identified companies enabled the registration of four new companies. They are SM Suarl, Numbient, Agrice and Ganaan Fisheries. From this total of eight companies, five were selected on the basis of the size of the company, their motivation and their ability to make the investments necessary for the implementation of RECP, RE/EE and waste recycling. The selected companies were subject to a preliminary audit carried out by the consortium of AMC/EMASOL research firms. The results of the three companies (CSIP, EIFFAGE and SM Suarl) were presented during the mid-term review field mission on December 18, 2019 at the premises of the BMN. As a

prelude to this study, the BMN had to design a business registration form and a business assessment tool called Eco-Map.

88 It is clear that for the remaining contractual duration of the project, it is possible to undertake the energy audit in six additional companies and to identify / promote nine renewable energy options and low-carbon technologies adapted to Diamniadio. At the same time, it seemed to be difficult but not impossible to implement the pilot renewable energy projects in ten companies. This feasibility is nevertheless conditioned by the identification and very quick energy audit of the companies and the acceleration of the purchasing procedures. Regarding the certification of companies to ISO 50001 and 14001 standards by the end of the project, this is impossible for the simple reason that the process should not start until after the companies have been upgraded and that, administrative procedures will not facilitate compliance with the acceleration of the process.

89 Due to above statement, **Output 4.2** is rated **Moderately Unsatisfactory**.

90 **Output 4.3. Enterprises in Dakar and Diamniadio industrial park implement pilot projects on waste recycling, recovery and energy generation to reduce dioxin and furan emissions and hazardous waste.**

91 Four output indicators were formulated in the project logical framework but only one (Number of waste recovery and energy generation facility pilot) had mid-term and project end target value. Total amount of waste recycled, total amount of waste recovered and total amount of energy generation had no target value. So, the of mid-term, one of waste recovery and energy generation facility pilot conducted is not reached. Also, one (Activity 4.3.2) of two activities planned is implemented in March 2019 even though, the thematic of the training was focus on POPs and implementation of BAT/BEP in facilities rather than on servicing and maintenance of equipment.

92 Along the same lines as Output 4.2, the company which should already implement the pilot project on recycling and energy recovery waste should only be known after the energy audit of all eleven companies (9 companies for the renewable energy pilot projects and 2 companies for the waste recycling and energy recovery pilot projects). This being still in progress, the mid-term target of the project of at least one company implementing this type of pilot project has not been reached. Achieving the target of two companies at the end of the project is also compromised but remains attainable if, as in the case of Output 4.2, the RECP identification and audit of the companies to cooperate is done very quickly (Before the end of February 2020) to speed up purchasing procedures. Thus **Output 4.3** is rated as **Moderately Unsatisfactory**.

93 **Output 4.4. Business model designed to mobilize investment in replication and scale-up of sustainable industry approach in sustainable industrial parks.**

94 The target of one output indicator of Output 4.4 (Business model report on management of sustainable park and industrial application of small to medium scale renewable energy based systems) was planned to be reached at end of project. No activity was also planned to be implemented before the mid-term. Nevertheless, due to the delay already experienced and

given that this Output cannot take place in parallel with two previous outputs, it is very unlikely that this result will be achieved by the end of the project. **Output 4.4** is therefore rated as **Moderately Unsatisfactory**.

**95 Output 4.5. Pilot projects monitored, evaluated, and showcased**

96 The two output indicators of Output 4.5 (Number of projects monitored, evaluated and showcased and Number of best practice manual) were not targeted for mid-term and no activity was planned. Although the mi-term review is ongoing, it will be difficult to produce the best practice manual before the end of project due to the delay of implementation. **Output 4.5**. It is rated as **Moderately Unsatisfactory**.

### 2.3. Efficiency

97 Efficiency assesses how economic and other resources and inputs such funds, expertise and time are used to produce results. Implementation of the project officially started in March 2017 and was planned for a duration of four years to end of March 2021. The project as not granted an extension since it started.

98 The strategy for implementing the project consisted to sign a subcontract with the BMN for the implementation Outputs 4.2 and Output 4.3 and the outputs are carried out directly by the project managers from UNIDO headquarters. The mobilization of national expertise is done according to national procedures with the involvement of DEEC, BMN and, if necessary, APROSI. The availability of national expertise at all times is not always guaranteed, as was the case with AMC/AMASOL, which, although selecting to conduct the energy audits, could only start work after the staff holidays. International technical expertise is mobilized by UNIDO when necessary. The quality of the main international expertise mobilized to conduct training on POPs, BAT/BEP and industrial upgrading of companies was unanimously appreciated by the participants met.

99 In terms of timelines for carrying out activities, it should be noted that major delays have been noted. The implementation of the sub-contract with the BMN perfectly illustrates the situation. Phase 1 of the contract is expected to last 18 months. The first payment of this phase which was made just after the signing of the contract on May 28, 2018 and which should make it possible to make the initial assessment of RECP of the companies in order to identify which would be supported within the framework of the pilot projects, only allowed to conduct energy audit only for four companies. Additional financial resources were requested by BMN in order to continue the remaining assessments. Obviously, we could have had better results with the same financial resources.

100 In terms implementation of activities directly carried out by UNIDO, significant delays were also recorded in the achievement of some outputs. One of reasons, is the change in the project management at UNIDO HQ. Indeed, the management is led by two project managers (one for ENE and another one for ENV), but before that, the project had already known successively two other managers. Every change required a time of impregnation and mastery of the file by the new project managers. These delays have had a significant impact on the



effectiveness of the project since at this stage of the project implementation, in term of outcomes achievement, at least outcome 2 should be almost achieved.

101 Regarding the mobilization of financial resources, in light of the data made available to the evaluator, there is nothing to contradict the effective mobilization of GEF and UNIDO funds in accordance with the project document. Those of the national counterparts have also been so for APROSI and weakly for BMN.

102 The exercise of comparing the costs of carrying out the activities within the framework of the project and the costs of carrying out other similar projects was not done. But overall, it should be noted that the execution of the project is carried out in accordance with the procedures from UNIDO. It is therefore very likely that there is no difference from other similar projects implemented by UNIDO.

103 At this stage of project implementation, ie 15 months from the end of the project, in accordance with project workplan, out of the 16 activities planned to be carried out before the mid-term, eight (Activity 1.4.1, Activity 1.4.2, Activity 2.1.1, Activity 2.3.1, Activity 2.3.3, Activity 4.2.1, Activity 4.2.2, Activity 4.3.2) were implemented. Beyond that, activity 1.1.1, the implementation of which was planned for the period after the MTR has nevertheless been executed. The statement of expenditure as of December 31, 2019 is presented in Table 3<sup>7</sup> below. The analysis of expenditure compared to the forecasts for the first three years (table 4) shows that overall, more than 85% of the expenditure planned at this stage is already committed while the outcome 2 expected at mid-term has not been achieved. This difference is more impressive on Outcome 4 with a rate of 108% reflecting a very insufficient efficiency on this Outcome thus impacting the entire project. For the other three technical Outcomes, expenses are between 45% and 55% of forecasts. It is an indicator of a low capacity to absorb financial resources.

**Table 3:** Total expenditures for the project – GEF funds only

Outcome/Output	Expenditure (USD)				
	2017	2018	2019	Total	%
Outcome 1. Strengthening of national capacities on integrated urban planning for sustainable industrial parks and participation on Global Platform for Sustainable Cities (GPSC)	56879,74	38489,21	133941,91	279766,94	12%
Outcome 2: An integrated POPs and hazardous waste management system is designed	3673,72	12330,76	53938,91	83923,41	3%
Outcome 3: An enabling framework is created for implementing sustainable and resilient industrialization	7387,85	3092,91	185940,94	206792,2	9%
Outcome 4: Increased use of renewable energy technologies and low-carbon technologies to reduce carbon intensity of industrialization and urbanization in Dakar and Diambiadio	0	1585213	101448	1689278,89	70%
Outcome 5. Project progress properly monitored and evaluated	26418,58	60158,84	30822,91	138793,95	6%
<b>Total</b>	<b>94359,89</b>	<b>1699284,72</b>	<b>506092,67</b>	<b>2398555,39</b>	<b>100%</b>

Source: UNIDO Project Management database as of February 2, 2020

<sup>7</sup> See details in Annex 4

**Table 4:** Total expenditures for the project – GEF funds only

Outcome/Output	Expenditure of three first year (USD)		
	Prevision (a)	Real (b)	% (b/a)
Outcome 1. Strengthening of national capacities on integrated urban planning for sustainable industrial parks and participation on Global Platform for Sustainable Cities (GPSC)	524237	279766,94	53%
Outcome 2: An integrated POPs and hazardous waste management system is designed	187100	83923,41	45%
Outcome 3: An enabling framework is created for implementing sustainable and resilient industrialization	374741	206792,2	55%
Outcome 4: Increased use of renewable energy technologies and low-carbon technologies to reduce carbon intensity of industrialization and urbanization in Dakar and Diarniadio	1564857	1689278,9	108%
<b>Total</b>	2650935	2259761	85%

Source: Calculations by Evaluator with UNIDO Project Management data and project budget in produc

104 Co-financing ratio (Project co-financing: GEF financing) is considered by the GEF as an indicator of efficiency and effectiveness<sup>8</sup>.

105 The overall amount of co-financing mobilized to date has been difficult to assess because data were not available. With APROSI, the exercise made it possible to capitalize the value of the construction space of the solar power plant of the Diarniadio platform estimated at 2,500,000 USD<sup>9</sup>. As for the BMN, the loans should be mobilized through the credits that banks would grant to companies as part of the implementation process of the RECP. Which is not yet the case since investments have not yet started. However, co-financing in kind could not be estimated. Due at this stage, only 27% of co-financing is mobilized, the rating on **Efficiency is Unsatisfactory**.

#### 2.4. Gender mainstreaming

106 The project design adequately considers the gender dimensions in its interventions. It was planned to consider during the gender mainstreaming of project implementation the (i) collection of sex disaggregated baseline data, (ii) in-depth gender analysis of country, regional and sector context, (iii) mapping of partners, counterparts and stakeholders, identifying gender focal points, women leaderships and/or gender policies and strategies and (iv) implementation of gender activities as defined in the logical in logical framework to foster Gender Equality and the Empowerment of Women (GEEW) that promotes more inclusive and sustainable interventions.

<sup>8</sup> [http://www.thegef.org/sites/default/files/council-meeting-documents/EN\\_GEF.C.54.10.Rev\\_.01\\_Co-Financing\\_Policy.pdf](http://www.thegef.org/sites/default/files/council-meeting-documents/EN_GEF.C.54.10.Rev_.01_Co-Financing_Policy.pdf)

<sup>9</sup> See section 3.5.2 for details

107 Also, during the project preparatory phase, a preliminary gender analysis of the country context and a preliminary gender assessment project were conducted, based on which potential gender dimensions of project outcomes and outputs, as well as potential entry points for GEEW were identified. Some gender-disaggregated indicators and targets have already been included while additional key gender dimensions of the project outcomes and outputs as well as potential gender-relevant indicators are provided in the logical framework. These identified gender dimensions were planned to be verified during a detailed gender analysis which had to be conducted during project inception as part of the capacity assessments of the project and used as a guide during the inception and implementation of the project as well as during M&E. Unfortunately, this exercise was not done.

108 At this stage of project implementation, it may be obvious to assess gender mainstreaming. However, apart from the fact that the report of the only training workshop organized in May 2019 does not disaggregate the participants by sex. However, it should be noted that one of the project officer and main point of contact at BMN, two focal points of companies undertaking energy audit (EIFFAGE and CSIP), half of the project management team met at APROSI during their mission and certain participants attended the workshops are female. In terms of the socio-economic benefit generated by the project at the national level, it is obvious that a less polluted environment benefits equally both sexes even if men being more present in the sector will benefit more economically from a more competitive industry.

109 **Gender mainstreaming** rated **Satisfactory**.

## 2.5 Cross-cutting aspects

110 The project is expected to have the benefits including reduction of GHG emissions (at least 6,738 tCO<sub>2</sub>.eq.) and implementing serious climate change mitigation and actions, reduction of energy use and waste produced per unit of output or consumption. Those benefits will contribute to address the problem of climate change and reducing the carbon footprint of cities. This reduction would also protect the health of urban populations, a real social problem capable of guaranteeing the inclusion of project beneficiaries. Due to this finding, **cross-cutting aspects** is rated **Satisfactory**.

## 3. Project implementation and management

111 The project management was outlined in the Project Document and the responsibilities and reporting lines are very clear. Work plans based on the expected results of the project in accordance with the logical framework. The project document has planned and detailed the monitoring and evaluation plan with a budget and a timetable for implementing activities. But the project document did not provide for the establishment of a formal M&E system during the implementation of the project. During this implementation phase, the periodicity of the progress reports not being specified by the project document, only two progress reports (PIR) for the years 2018 and 2019 and the first progress report from BMN are available. Management is therefore carried out according to UNIDO procedures guaranteeing transparency in management. According to co-financing, the MTR could only estimate a part, evaluated at 27% of expected amount but it's very likely that it's more important. The project is benefiting from very strong involvement of the main stakeholders. The internal

communication of the project seems to have been a great challenge during this phase and for external communication, project experiences were shared with a larger number of stakeholders in the framework of GPSC. The likelihood that financial and economic resources will not be available once the project is completed is low. Institutional framework and governance and socio-political risks are very low. To improve sustainability benefits, new companies that are setting up around the Diamniadio platform and domain have to be upgraded. The **Project implementation and management** is rated **Moderately Satisfactory**.

### 3.1 Project management

112 The project management was outlined in the Project Document and the responsibilities and reporting lines are very clear. No changes were made so far but the management planned is not effective since the project started. It was planned to put in place a Project Management Unit (PMU) which will be responsible for the day-to-day execution and planning of project activities as in the agreed project work plan. This PMU would be headed by the National Project Manager (NPM), and a project administration assistant. The PMU would be based at the offices of Directorate of Environment and consultants and experts would be drafted into the PMU when required. The NPM as well as all the staff on the project is recruited directly by UNIDO. Unfortunately, from the start of the implementation of the project, the PMU was reduced to NPM who does not have an office. According to the Deputy Director of DEEC, the office which was proposed to the NPM did not meet the needs of the latter. This situation does not facilitate the day-to-day monitoring of activities. However, it should be noted that overall, the mechanism of the national project management was good. Each partner having played as much as possible their score.

113 Management, coordination, monitoring, quality control and technical inputs from UNIDO Headquarters were timely and effective. Several activity monitoring and site visit missions were organized by the project managers and / or their consultants. Quality control was also ensured through revisions and validations of technical reports. However, the UNIDO coordination suffered from the series of change of UNIDO project managers. The existence of two project managers within UNIDO for the same project seems to give the impression to some national partners that there are two separate projects. This lack of a global vision of the implementation of the project with certain national partners could compromise the expected impacts of the project.

114 According to above situation, **Project Management** is rated **Moderately Satisfactory**.

### 3.2 Results-based work planning

115 The United Nations Development Group defines results-based management (RBM) as “a management strategy by which all actors, contributing directly or indirectly to achieving a set of results, ensure that their processes, products and services contribute to the achievement of desired results (outputs, outcomes and higher-level goals or impact). The actors in turn use the information and evidence on actual results to inform decision-making on the design, resourcing and delivery of programmes and activities as well as for accountability and

*reporting*<sup>10</sup> The key elements of RMB are (i) Focusing the dialogue on results at all phases of the development process; (ii) Aligning programming, monitoring and evaluation with results; (iii) Keeping measurement and reporting simple; (iv) Managing for, not by results; and (v) Using results information for learning and decision making.

116 Scheduled to start in March 2017, the project did not really launch field activities until the signing of the contract with the BMN, on May 28, 2018, more than a year after the contract started. In addition to administrative procedures, changes in UNIDO project managers are partly responsible for the delay. In addition, more than one and a half year after signing the contract with the BMN, the project is still in the process of selecting the companies to be subject to a RECP pre-diagnosis. This delay is explained on the one hand by internal administrative rearrangements linked inter alia to the coordination of the project within the BMN and the time taken to find the best approach to interest the companies in the initiative.

117 With regard to workplans, these are developed at the beginning of each year and the work planning processes are based on the expected results of the project in accordance with the logical framework. This logical framework, used as a management tool, has not been modified since the start of the project. Analysis of the report by the only meeting of the technical committee which serves as the project steering committee, held on July 24, 2019 shows that this committee worked on the planning of activities. Information on project performance and achievement of results was also presented to the technical committee and decisions and taking corrective actions.

118 Regarding the risks described in the project document and in the logical framework, were they well monitored annually through the project implementation report (PIR). This report is prepared by the UNIDO project managers with the contribution of national partners if necessary. Rating on **Results-Based Management** is **Satisfactory**.

### 3.3 Monitoring and evaluation (M&E)

119 The project document has planned and detailed the monitoring and evaluation plan with a budget and a timetable for implementing activities. But the project document did not provide for the establishment of a formal M&E system during the implementation of the project. The implementation of activities in accordance Objectively Verifiability Indicators. **Monitoring and evaluation (M&E)** are rated **Moderately Satisfactory**.

#### 3.3.1 Monitoring and evaluation design

120 The project document has planned and detailed the monitoring and evaluation plan. This plan, with a total budget of USD 100,000, includes all monitoring and evaluation activities to be implemented under the project including survey to measure progress against baseline for SMMEs and policy makers. A timetable for implementing these activities has also been planned. The monitoring and evaluation plan drawn up consists of a monitoring and control system under the responsibility of a Steering Committee, which assesses progress and

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<sup>10</sup> United Nations Development Group, results-based management Handbook: Harmonizing RBM concept and approaches for improved development results at country level" edited draft October 2011, p 2

obstacles in the technical and financial implementation. This committee chaired by Directorate of environment would be responsible for commenting on project work plans, progress reports and M&E reports; etc. The M&E plan in its design assigned responsibility for project monitoring and evaluation to the Project Management Unit and the UNIDO Office in Senegal and its headquarters in Austria, in accordance with established procedures. However, it should be emphasized that the project document did not provide for the establishment of a formal M&E system during the implementation of the project. Due to above, **Monitoring and evaluation design** is rated **Satisfactory**.

### 3.3.2 Monitoring and evaluation implementation

121 The system designed in the project document and presented above has to some extent been implemented even though a formal monitoring system with appropriate training of the parties responsible for M&E activities to ensure that the data would continue to be collected and used after the closure of the project has not been put in place. At UNIDO headquarters, all the terms of reference and contracts developed are based on the targets provided in the logical framework and the monitoring of their implementation in accordance with the terms of reference. To facilitate follow-ups, sub-contract was provided to BMN with a framework for drafting reports even though this framework was not included in the contract as appendices. However, at national level (BMN and NPM), the monitoring of the project indicators was a real challenge. Indeed, BMN and PMU don't have an indicator monitoring dashboard approved by project stakeholders which would help them in the project monitoring. To facilitate the monitoring and evaluation some project planned a specialist in monitoring and evaluation position in PMU. Not having been planned on this project, the task is performed both the Project managers and their consultants based at UNIDO HQ. In addition, a detailed monitoring plan for tracking and reporting on project time-bound milestones and accomplishments planned to be prepared by UNIDO in collaboration with the PMU and project partners at the beginning of project implementation and then periodically updated is not prepared. **Monitoring and evaluation implementation** is rated **Moderately Satisfactory**.

### 3.4 Reporting

122 Without being exhaustive, the project document indicated reports needed. Progress reports, the mid-term and final evaluation report and thematic evaluations (such as the assessment of capacity needs), as well as publications related to the project including gender dimensions whenever appropriate. During this implementation phase, the periodicity of the progress reports not being specified by the project document, only two progress reports (PIR) for the years 2018 and 2019 and the first progress report from BMN are available. However, these reports are not widely disseminated to all project stakeholders. On the other hand, the reports of studies and training / awareness workshops are systematically drawn up, shared and archived.

123 Regarding adaptive management, although the approach to the selection of companies to participate in the upgrading process is defined by the project document, in view of the difficulties that the BMN experienced in mobilizing companies through this approach, a revision of the approach was carried out which made it possible to quickly co-opt the

companies and start the RECP pre-diagnosis. Still in this results-based management logic, the various stakeholders agreed during the technical committee meeting of July 2019 to organize a Skype call between the national party and the project managers at UNIDO headquarters every two months, update on the progress of the project every three months to DEEC and BMN makes a monthly report of the activities to the National Project Manager. Unfortunately, its provisions did not resolve the problems of delays and poor performance. Given this situation, the **Reporting** is rated **Moderately Unsatisfactory**.

### 3.5 Financial management and co-financing

124 Financial management and co-financing are rated **Moderately Satisfactory**. Because, management is carried out according to UNIDO procedures guaranteeing transparency in management but the co-financing mobilization seems weak even though in-kind co-financing of BMN couldn't been estimated. Only 27% could be assessed by the MTR but probably more have been mobilized.

#### 3.5.1 Financial management

125 The financial management of the project is centralized at the level of UNIDO headquarters. The spending methods are those of DEX (Direct Execution). Management is therefore carried out according to UNIDO procedures guaranteeing transparency in management. Regarding the management of funds allocated to the BMN, the procedures applied are those of the BMN. However, in accordance with the terms of the contract between UNIDO and the BMN, the latter has the obligation to provide a financial report justifying the expenditure of the last funds received before having additional funds. As of the mid-term review, the financial report for the first installment of phase 1 had not yet been provided. The processing of the invoice for the payment of the second tranche introduced by the BMN was therefore suspended pending all the deliverables provided for in the contract. **Financial management** is rated **Satisfactory**.

#### 3.5.2 Co-financing and project outcomes and sustainability.

126 As regards the co-financing of the project, two partners (APROSI and BNM) were committed to mobilizing them both in kind and loans. The observation was that the current representatives of the structures involved had trouble remembering this commitment. These two structures do not recall receiving a copy of the project document. Using people who participated in the design of the project, notably the former project coordinator at the BMN level and the Director General of APROSI, estimated the co-financing of APROSI at least two million and five hundred thousand (\$2,500,000). This amount is estimated on the basis of the space allocated by APROSI for the construction of the solar power plant at the Diamniadio platform. This space estimated at between five and six hectares (50,000 square meters to 60,000 square meters) worth \$50 per square meter. As far as the BMN is concerned, loan co-financing has not yet been mobilized since the upgrade process which should trigger the mobilization of loans by businesses has not yet started. This amount is estimated at this point at \$0 while the co-financing of this office in kind could not be estimated. This situation does not, for the moment, compromise any outcome of the project. However, the Outcome 4 could suffer if the banks were reluctant to support the selected companies in their upgrade process.

That said, **Co-financing and project outcomes and sustainability** is rated **Moderately Unsatisfactory**.

### 3.6 Stakeholder engagement and communication

127 The project is already benefiting from very strong involvement of the main stakeholders, but the internal communication of the project seems to have been a great challenge during this phase. For external communication, project experiences were shared with a larger number of stakeholders in the framework of GPSC. **Stakeholder engagement and communication** are rated **Moderately Satisfactory**

#### 3.6.1 Stakeholder engagement

128 The project is already benefiting from very strong involvement of the main stakeholders, in particular UNIDO, DEEC, the GEF operational Focal Point, APROSI and BMN. To facilitate strong engagement by other stakeholders, the project adopted the strategy of involving representatives of the National Employers Council of Senegal (CNP) and / or the National Confederation of Employers of Senegal (CNES) as well as manufacturers in the training or document validation workshops. Despite this initiative, it was not easy to mobilize companies for the RECP audit.

129 The project also organized an information and awareness workshop on the "Sustainable Cities" program for the banking and financial sector on May 21, 2019 in Dakar. The main recommendations from this workshop were, among other things, to establish a partnership between the Sustainable Cities programme and banks and financial institutions, to set up a "task force" led by the Caisse Nationale de Crédit Agricole du Sénégal to launch and pilot this partnership between the program and banks and financial institutions, formulate a roadmap for effective action for this partnership mainly in the mobilization of financial compensation from companies receiving the investment bonus and finally develop with banks and financial institutions financial products and strategies adapted to industrial and environmental upgrading. These recommendations, which are not yet operationalized, are nevertheless a very good sign of the willingness of all to contribute to the achievement of the objectives of the project. The start of the investment phase for upgrading industries is expected to measure the commitment of banks and financial institutions. So, at this point, **Stakeholder engagement** is rated **Satisfactory**.

#### 3.6.2 Communication

130 The internal communication of the project seems to have been a great challenge during this phase of implementation of the project, as shown by one of the decisions of the meeting of the Technical Orientation Committee on July 24, 2019, which decided to improve the communication between UNIDO and BMN on the progress of project activities. Despite this decision, the situation has not improved much since for the validation of the first BMN progress report submitted since the end of July 2019 is still not validated. The reason being that the two parties did not have the same understanding of the presentation format and the content of the progress report. With regard to internal communication, it should be noted that



the two structures responsible for the co-financing of the project declared that they did not have the project document and were unaware of their commitment to the project.

131 For external communication, efforts are made in this area to share project experiences with a larger number of stakeholders. This was done during training and awareness workshops and especially during meetings within the framework of GPSC. In addition, a web-based, collaborative and multi-stakeholder knowledge management platform to facilitate information exchange and knowledge sharing (<http://eco-industriedurable.com/>) is developed and in the process of being finalized. However, when reading the functionalities and visiting the web platform, the knowledge exchange functions at different levels seemed not evident. For example, (i) between the sustainable city of Diamniadio and various SC- IAP Cities at the programmatic level, (ii) between the sustainable city of Diamniadio and other urban areas in Senegal at national level, and (iii) between the sustainable city of Diamniadio from around the world, including South-South and North-South trade at international level. In terms of the project's contribution to the benefits of sustainable development, as well as to the global environmental benefits, at this stage of project implementation where no results have yet been achieved, it is impossible to take stock. **Communication** is therefore rated as **Moderately Unsatisfactory**.

### 3.7 Sustainability of benefits

132 Sustainability is understood as the likelihood of continued benefits after the project ends. Sustainability is assessed in terms of the risks confronting the project, the higher the risks the lower the likelihood of sustenance of project benefits. The four dimensions or aspects of risks to sustainability as mentioned in the term of reference namely financial, institutional frameworks and governance sociopolitical, and environmental risks are discussed below.

133 Globally the likelihood that financial and economic resources will not be available once the project is completed is low. Institutional framework and governance and socio-political risks are very low. To improve sustainability benefits, new companies that are setting up around the Diamniadio platform and domain have to be upgraded. **Sustainability of benefits** is rated as **Moderately Likely**.

#### 3.7.1 Financial risks

134 The likelihood that financial and economic resources will not be available once the project is completed is very low for several reasons.

135 With regard to public sector resources, it is the sovereign role of the BMN to strengthen the competitiveness of businesses, to diversify the Senegalese industrial fabric and to improve the business environment through the implementation of a Program Upgrade. As a result, it has a financing mechanism, the Upgrading Fund which, beyond the resources of the State of Senegal, benefits from the support of technical and financial partners such as Agence française de développement (AFD), the European Union and the UNIDO. In addition, the other strategic partner of the project is APROSI, which manages the Diamniadio platform. After implementing the first phase between 2014 and 2018 with state funding of CFAF 25 billion, it has just obtained support from Exim Bank of China for phase 2 funding of 60 billion FCA (about \$1.2 billion).

136 With regard to private funds, the upgrade allows companies to reduce their production cost

and the gift of being more competitive. It is therefore unimaginable that a company having benefited from such support renounces these advantages at the end of the project. The logic would be that the company should rather try to multiply the upgrade actions on other factories if it owns any. The risk that the level of ownership and commitment of stakeholders also remains very low because all the key stakeholders (DEEC, BMN, APROSI, Industries and Banks) see it as it is in their interest that the benefits of the project continue.

137 The risk that co-financing contributions (the credits that banks should grant to businesses) are delayed, leading to a delay or failure to achieve results is still a concern. The same is true for the risk associated with falling oil prices that could deter industries from investing in the efficient use of resources and alternative energy options. In both cases, the mitigation actions provided in the project document should continue with a strong emphasis on the mobilization of banks and other financial institutions. Rating on **Financial sustainability** is **Moderately Likely**.

### 3.8.2 Institutional framework and governance risks

138 It is true that the legal frameworks, policies and governance structures and processes that frame the implementation of this project remain perfectible. However, the likelihood that the risks associated with the functioning of these frameworks will compromise the sustainability of the project outcomes remains low. The various training courses for technicians planned as part of the project should provide a critical mass of skills at the national level. The risks identified in the project document, namely the lack of absorption capacity of national counterparts, the low degree of collaboration between the various actors and the lack of willingness among the stakeholders to collaborate / contribute remain low but are still topical. However, after meeting with the various players, it is obvious that the will to collaborate remains very strong. **Institutional framework and governance sustainability** are rated **Moderately Likely**.

### 3.8.3. Socio-political risks

139 Politically and socially, Senegal is one of the countries of the sub-region which enjoys great stability. Beyond this stability, the project fits perfectly into the ambitious development plan, "Plan Senegal Emergent" (PSE) launched by the President of the Republic and which aims to make Senegal an emerging economy by 2035. The Diamniadio platform is one of the fruits of this. **Sociopolitical sustainability** is rated **Likely**.

### 3.8.4 Environmental risks

140 When analyzing the context in which the beneficiary companies of the project operate, the environmental risk seems very negligible at the scale of each company since the actions of the project aim to improve RECP, adoption of RE/EE and / or recycling of waste through BAT/BEP.

141 However, in the overall analysis of the project approach which ultimately aims to develop a green city that will serve as a scale-up model at the national level, it is important to observe that there is a number of actions carried out around the platform and domain of Diamniadio which are likely to compromise the outcomes of the project in the short and medium term. Indeed, while the companies that set up on the Diamniadio platform are subject to a certain number of criteria including non-pollution and those relocating to the Diamniadio domain should benefit from an upgrade. At the same time, industries and factories are setting on the

outskirts of Diamniadio domain. The installation of certain industries not belonging to the Diamniadio domain will be subject only to the conventional conditions of environmental impact studies (often less rigorous than those put in place for the management of the Diamniadio domain) while their emissions could reach the domain. It is imperative that APEX, APROSI, DEEC and the BMN already take the necessary measures to support these industries to be upgraded before their installation. It is at this price that the environmental risk could be mitigated. In view of this significant risk and the fact that the measures to be taken require a certain number of administrative and regulatory provisions, the taking of which can sometimes be difficult, **Environmental Sustainability** is rated **Moderately Unlikely**.

142 It is imperative during the course of the rest of the duration of the project that special attention be paid to the industries and factories setting on the outskirts of Diamniadio domain. The installation of certain industries not belonging to the Diamniadio domain will be subject only to the conventional conditions of environmental impact studies (often less rigorous than those put in place for the management of the Diamniadio domain) while their emissions could reach the domain. It is imperative that APEX, APROSI, DEEC and the BMN already take the necessary measures to support these industries to be upgraded before their installation. It is at this price that the risk of diffuse pollution which these industries will be the source can be mitigated. It must ensure that these measures are taken into account in the strategy document for the design, implementation and management of sustainable industrial parks and integration into the urban fabric.

143 Given the risks identified for financial, institutional, political and environmental, **Sustainability of benefits** is rated **Moderately Unlikely**.

#### 4. Performance of partners

144 The field project team is reduced to the NPM who is not involved in the management of cash flow and procurement. The UNIDO project managers and their consultants had to carry out many missions to Senegal for monitoring. The main stakeholders at national level fully support the project objectives and the funds promised by donor have been paid in full in accordance with its commitments. Performance of partners is rated **Moderately Satisfactory**.

##### 4.1 UNIDO

145 The field project team is reduced to the NPM who is not involved in the management of cash flow and procurement. His proactivity and speed in ensuring the rapid implementation are differently appreciated by the Energy management team, while his performance is considered not meeting the expectations by the Environment management team. The UNIDO project managers and their consultants had to carry out many missions to Senegal for monitoring. The promised funds have been paid in full in accordance with its commitments but the involvement of certain national stakeholders such as DEEC and BMN in the implementation of the project still needs to be improved. **UNIDO** is rated **Moderately Satisfactory**.

##### 4.1.1 Project team in the field

146 As mentioned above, the field project team is reduced to the NPM. He mainly performs project implementation and management functions in terms of monitoring the implementation of activities entrusted to him by project managers based at UNIDO headquarters. At his level, there is no formal and effective M&E system linked to the logical framework and which generates information on the performance and results necessary for decision-making. The

NPM is not involved in the management of cash flow and procurement. His proactivity and speed in ensuring the rapid implementation of the recommendations of experts from support missions to project managers at headquarters are variously appreciated. **Project team in the field** is rated **Moderately Unsatisfactory**.

#### 4.1.2 UNIDO HQ-based management

147 After initial hesitations due to the arrival of new project managers at UNIDO headquarters, permanent contact has been established between UNIDO HQ and the National project manager and other stakeholders (DEEC, APROSI and BMN) based in Senegal. Moreover, in the absence of a formal PMU and formal National Executing Agency, UNIDO HQ manages day-by-day all activities of the project, except Output 4.2 and 4.3 subcontracted to BMN. Problems are therefore regularly reported and solution approaches found. As part of its support, UNIDO HQ provided international assistance whose skills have never been questioned by the project partners. The UNIDO project managers and their consultants carried out many missions in Senegal for monitoring. These missions solved the implementation bottlenecks. **UNIDO HQ-based management** is rated **Moderately Satisfactory**.

#### 4.2 National counterparts

148 According to the discussion with representatives of main stakeholders at national level, notably DEEC, APROSI and BMN, the involvement of certain national stakeholders such as DEEC and BMN in the implementation of the project still needs to be improved. However, APROSI succeeded in mobilization of over 57% of its co-financing. The government through DEEC has invested in the implementation and does not hesitate to take the decisions necessary to guarantee the effectiveness and efficiency of the project. The downside at the national counterpart would be the delay by the BMN in the execution of its contract with UNIDO. But in the opinion of UNIDO, counterpart engagement is not easy. UNIDO is sometimes struggling to get results, feedbacks, documents, and action taken by national counterparts. **National counterparts' performance** is rated **Moderately Unsatisfactory**.

#### 4.3 Donors

149 To regularly review the performance and implementation of the project, the GEF, the donor of the project, requires its partners to prepare an annual progress report (PIR). As part of the implementation of this project, two reports have already been written and submitted for appraisal. The promised funds have been paid in full in accordance with its commitments. As a result, the **Donors performance** is rated as Highly **Satisfactory**.

150 Due to above rating, the **Performance of partners** is rated **Satisfactory**.

## 5. Overarching assessment and rating table

151 The assessment of the project is summarized in the table below.

**Table 4:** Summary of Assessment and Ratings for the project

	<b>Evaluation criteria</b>	<b>Evaluator's summary comments</b>	<b>Rating</b>
<b>A</b>	<b>Project design</b>	The project was design clearly to address existing environment and waste issues of industries and cities and to facilitate project planning, monitoring and evaluation, the project document has provided a results / resources framework.	<b>S</b>
1	• Project design	The project was design clearly to address existing environment and waste issues of industries and cities as well as the planning challenges of eco-industrial zones aproned cities. The project document includes a M&E plan which specify clearly what, who and how frequent monitoring, review and evaluations will take place. This plan includes also a budget. The risk management was also analyzed	S
2	• Project result framework/ logframe	To facilitate project planning, monitoring and evaluation, the project document has provided a results / resources framework. The logical framework of the project facilitates the summary presentation of the intervention logic of the project and the way in which the results will be measured. But if Outcome 1, Outcome 3 and Outcome 4 described change in target's group's, Outcome 2 more described deliverables (document) that project have to produce;	MS
<b>B</b>	<b>Project performance and progress results</b>	The initial objective and expected outcomes are still valid and relevant for the target groups. The relevance of the project was refined during interviews with stakeholders. Unfortunately, a nearly three years of implementation with an initial duration of four years, none of the results have been achieved. Fifteen months from the end of the project, none of the outcomes have been achieved. At least, Outcome 2 should be reached. In accordance with project workplan, out of the 16 activities planned to be carried out before the mid-term, eight were implemented. The project was also design adequately considers the gender dimensions in its interventions. Also, during the project preparatory phase, a preliminary gender analysis of the country context and a preliminary gender assessment project were conducted. Finally, the project is expected to implemented serious climate change mitigation but, addressing social issues to ensure inclusiveness of the project beneficiaries seems insufficiently taken into account.	<b>MU</b>
1	• Relevance	The initial objective and expected outcomes are still valid and relevant for the target groups. The relevance of the project was refined during interviews with stakeholders. The direct beneficiaries of the project, met consider that the project still relevant to them, especially since it should help them reduce their energy costs and allow them at the same time to have an minimize their impact on environment. The project has a support of the government of Senegal and is aligned with, and supportive of, the country's main development policies and strategies. For UNIDO, the project is still an example of UNIDO's ISID. This project therefore aims to provide UNIDO services to assist in the realization of ISID. The project outcomes are consistent with the operational program strategies of the GEF.	S

	<b>Evaluation criteria</b>	<b>Evaluator's summary comments</b>	<b>Rating</b>
2	<ul style="list-style-type: none"> <li>Effectiveness and progress towards results</li> </ul>	As specified in the project document, the implementation of this project is expected to have four technical outcomes and one related to the management, monitoring and evaluation. At mid-term the project implementation, none of the outcomes have been achieved. At least, Outcome 2 should be reached at mid-term. Outcome 1, Outcome 2 and Outcome 4 are rated Moderately Unsatisfactory and Outcome 3 is rated Unsatisfactory. So, the overall Effectiveness is rated Moderately Unsatisfactory.	MU
3	<ul style="list-style-type: none"> <li>Efficiency</li> </ul>	The project wasn't granted an extension since it started. Delays have been noted in terms of timelines for carrying out activities. These delays have had a significant impact on the effectiveness of the project since at this stage of the project implementation, in term of outcomes achievement, at least outcome 2 should be almost achieved. In accordance with project workplan, out of the 16 activities planned to be carried out before the mid-term, eight were implemented. The analysis of expenditure as of December 31 compared to the forecasts for the first three years shows that overall, more than 85% of the expenditure planned at this stage is already committed while the outcome 2 expected at mid-term has not been achieved.	U
4	<ul style="list-style-type: none"> <li>Gender mainstreaming</li> </ul>	The project design adequately considers the gender dimensions in its interventions. Also, during the project preparatory phase, a preliminary gender analysis of the country context and a preliminary gender assessment project were conducted, based on which potential gender dimensions of project outcomes and outputs, as well as potential entry points for Gender Equality and the Empowerment of Women (GEEW) were identified. At this stage of project implementation, it may be obvious to assess gender mainstreaming.	S
5	<ul style="list-style-type: none"> <li>Cross-cutting aspects</li> </ul>	The project is expected to have the benefits including reduction of GHG emissions (at least 6,738 t.CO <sub>2</sub> .eq.) and implementing serious climate change mitigation and actions, reduction of energy use and waste produced per unit of output or consumption. Those benefits will contribute to address the problem of climate change and reducing the carbon footprint of cities. This reduction would also protect the health of urban populations, a real social problem susceptible to guarantee the inclusion of project beneficiaries.	S
C	<b>Project implementation and management</b>	The project management was outlined in the Project Document and the responsibilities and reporting lines are very clear. Work plans based on the expected results of the project in accordance with the logical framework. The project document has planned and detailed the monitoring and evaluation plan with a budget and a timetable for implementing activities. But the project document did not provide for the establishment of a formal M&E system during the implementation of the project. During this implementation phase, the periodicity of the progress reports not being specified by the project document, only two progress reports (PIR) for the years 2018 and 2019 and the first progress report from BMN are available. Management is therefore carried out according to UNIDO procedures guaranteeing transparency in management but only 27% of the co-financing mobilized was estimated but it's very likely that it's more important. The project is already benefiting from very strong involvement of the main stakeholders, the internal communication of the project seems to have been a great challenge during this phase and for external communication, project experiences were share with a larger	MS

	<b>Evaluation criteria</b>	<b>Evaluator's summary comments</b>	<b>Rating</b>
		number of stakeholders in the framework of GPSC. The likelihood that financial and economic resources will not be available once the project is completed is low. Institutional framework and governance and socio-political risks are very low. To improve sustainability benefits, new companies that are setting up around the Diamniadio platform and domain have to be upgrade.	
1	<ul style="list-style-type: none"> <li>Project management</li> </ul>	The project management was outlined in the Project Document and the responsibilities and reporting lines are very clear. No changes were made so far but the management planned is not effective since project started. It was planned to put in place a Project Management Unit PMU. Unfortunately, from the start of the implementation of the project, the PMU is reduced to NPM who does not have an office. Management, coordination, monitoring, quality control and technical inputs from UNIDO HQ were timely and effective. Several activity monitoring and site visit missions were organized by the project managers and / or their assistant. Quality control was also ensured through revisions and validations of technical reports. However, this UNIDO coordination suffered from the series of change of UNIDO project manager.	MS
2	<ul style="list-style-type: none"> <li>Result—based work planning</li> </ul>	The project did not really launch field activities until the signing of the contract with the BMN, on May 28, 2018, more than a year after the contract started. Work plans are developed at the beginning of each year and are based on the expected results of the project in accordance with the logical framework. This logical framework, used as a management tool, has not been modified since the start of the project. Information on project performance and achievement of results was also presented to the technical committee and decisions and taking corrective actions	S
3	<ul style="list-style-type: none"> <li>Monitoring and evaluation (M&amp;E)</li> </ul>	The project document has planned and detailed the monitoring and evaluation plan with a budget and a timetable for implementing activities. But the project document did not provide for the establishment of a formal M&E system during the implementation of the project. The implementation of activities in in accordance OVI.	MS
	<ul style="list-style-type: none"> <li>✓ M&amp;E design</li> </ul>	The project document has planned and detailed the monitoring and evaluation plan. This plan, with a total budget of USD 100,000, includes all monitoring and evaluation activities to be implemented under the project including survey to measure progress against baseline for SMMEs and policy makers. A timetable for implementing these activities has also been planned. But the project document did not provide for the establishment of a formal M&E system during the implementation of the project	S
	<ul style="list-style-type: none"> <li>✓ M&amp;E implementation</li> </ul>	The M&E system designed has to some extent been implemented even though a formal monitoring system with appropriate training of the parties responsible for M & E activities to ensure that the data would continue to be collected and used after the closure of the project has not been put in place. At UNIDO headquarters, all the terms of reference and contracts developed are based on the targets provided in the logical framework and the monitoring of their implementation in accordance with the terms of reference	MS
4	<ul style="list-style-type: none"> <li>Reporting</li> </ul>	Without being exhaustive, the project document indicated reports needed. Progress reports, the mid-term and final evaluation report and thematic evaluations (such as the assessment of capacity needs), as well as publications related to the project including gender dimensions whenever	MU

	Evaluation criteria	Evaluator's summary comments	Rating
		appropriate. During this implementation phase, the periodicity of the progress reports not being specified by the project document, only two progress reports (PIR) for the years 2018 and 2019 and the first progress report from BMN are available. However, these reports are not widely disseminated to all project stakeholders. On the other hand, the reports of studies and training / awareness workshops are systematically drawn up, shared and archived	
5	<ul style="list-style-type: none"> <li>● Financial management and co-financing</li> </ul>	Management is therefore carried out according to UNIDO procedures guaranteeing transparency in management but the co-financing mobilization seems weak even though in-kind co-financing of BMN couldn't been estimated. Only 27% could be assessed by the MTR but probably more have been mobilized	MS
	<ul style="list-style-type: none"> <li>✓ Financial management</li> <li>✓ Co-financing and project outcomes and sustainability.</li> </ul>	<p>The financial management of the project is centralized at the level of UNIDO headquarters. The spending methods are those of DEX (Direct Execution). Management is therefore carried out according to UNIDO procedures guaranteeing transparency in management. Regarding the management of funds allocated to the BMN, the procedures applied are those of the BMN. However, as of the mid-term review, the financial report for the first installment of phase 1 had not yet been provided.</p> <p>The co-financing of APROSI is estimated at least two million five hundred one thousand (\$2,500,000). The BMN, co-financing in the form of a loan has not yet been mobilized since the upgrade process which should trigger the mobilization of loans by businesses has not yet started. This amount is estimated at this point at \$0 while the co-financing of this office in kind could not be estimated.</p>	S  MU
6	<ul style="list-style-type: none"> <li>● Stakeholder engagement and communication</li> </ul>	The project is already benefiting from very strong involvement of the main stakeholders, the internal communication of the project seems to have been a great challenge during this phase and for external communication, project experiences were share with a larger number of stakeholders in the framework of GPSC.	MS
	<ul style="list-style-type: none"> <li>✓ Stakeholder engagement</li> <li>✓ Communication.</li> </ul>	<p>The project is already benefiting from very strong involvement of the main stakeholders, in particular UNIDO, DEEC, the GEF operational Focal Point, APROSI and BMN. The project also organized an information and awareness workshop on the "Sustainable Cities" program for the banking and financial sector on May 21, 2019 in Dakar. The start of the investment phase for upgrading industries is expected to measure the commitment of banks and financial institutions</p> <p>The internal communication of the project seems to have been a great challenge during this phase of implementation of the project, as shown by one of the decisions of the meeting of the TOC on July 24, 2019, which decided to improve the communication between UNIDO and BMN on the progress of project activities. For external communication, efforts are made in this area to share project experiences with a larger number of stakeholders during training and awareness workshops and especially during meetings within the framework of GPSC.</p>	S  MU
7	<ul style="list-style-type: none"> <li>● Sustainability of benefits</li> </ul>	The likelihood that financial and economic resources will not be available once the project is completed is low. Institutional framework and governance and socio-political risks are very low. To improve sustainability benefits, new companies that are setting up around the Diamniadio platform and domain have to be upgrade.	ML



	<b>Evaluation criteria</b>	<b>Evaluator's summary comments</b>	<b>Rating</b>
	✓ Financial risks	The likelihood that financial and economic resources will not be available once the project is completed is very low for several reasons. With regard to public sector resources, the BMN has a financing mechanism, the Upgrading Fund which, beyond the resources of the State of Senegal, benefits from the support of technical and financial partners and APROSI has just obtained support from Exim Bank of China for phase 2 funding of 60 billion FCA (about \$1.2 billion).	ML
	✓ Institutional framework and governance risks	Legal frameworks, policies and governance structures and processes that frame the implementation of this project are remain perfectible. However, the likelihood that the risks associated with the functioning of these frameworks will compromise the sustainability of the project outcomes remains low.	ML
	✓ Socio-political risks	Senegal is one of the countries of the sub-region which enjoys great stability. Beyond this stability, the project fits perfectly into the ambitious development plan, "Plan Senegal Emergent" (PSE) launched by the President of the Republic and which aims to make Senegal an emerging economy by 2035.	L
	✓ Environmental risks	Industries and factories are setting on the outskirts of Diamniadio domain. The installation of certain industries not belonging to the Diamniadio domain will be subject only to the conventional conditions of environmental impact studies (often less rigorous than those put in place for the management of the Diamniadio domain) while their emissions could reach the domain. It is imperative that APEX, APROSI, DEEC and the BMN already take the necessary measures to support these industries to be upgraded before their installation	ML
<b>D</b>	<b>Performance of partners</b>	The field project team is reduced to the NPM who is not involved in the management of cash flow and procurement. The UNIDO project managers and their assistant had to carry out many missions in Senegal for monitoring. The main stakeholders at national level fully support the project objectives and the funds promised by donor have been paid in full in accordance with its commitments.	<b>S</b>
1	• UNIDO	The field project team is reduced to the NPM who is not involved in the management of cash flow and procurement. His proactivity and speed in ensuring the rapid implementation are variously appreciated. UNIDO has had to provide international assistance whose skills have never been questioned by the project partners. The UNIDO project managers and their consultants had to carry out many missions in Senegal for monitoring but the involvement of certain national stakeholders such as DEEC and BMN in the implementation of the project still needs to be improved. The promised funds have been paid in full in accordance with its commitments.	MS
	✓ Project team in the field	The field project team is reduced to the NPM. He mainly performs project implementation and management functions in terms of monitoring the implementation of certain activities entrusted to him by project managers based at UNIDO headquarters. The NPM is not involved in the management of cash flow and procurement. His proactivity and speed in ensuring the rapid implementation of the recommendations of experts from support missions to project managers at headquarters are variously appreciated.	MU

	Evaluation criteria	Evaluator's summary comments	Rating
	✓ UNIDO HQ-based management	After initial hesitations due to the arrival of a new project managers at UNIDO headquarters, permanent contact has been established between UNIDO HQ and the National Project Manager and other stakeholders (DEEC, APROSI and fairly BMN) based in Senegal. Problems are regularly reported and solution approaches found. As part of its support, UNIDO has had to provide international assistance whose skills have never been questioned by the project partners. The UNIDO project managers and their Consultants had to carry out many missions in Senegal for monitoring.	MS
2	• National counterparts	The involvement of main stakeholders at national level, notably DEEC, APROSI and BMN in the implementation of the project still needs to be improved even though APROSI mobilized over 57% of its co-financing. The downside at the national counterpart would be the delay by the BMN in the execution of its contract with UNIDO. But in the opinion of UNIDO, counterpart engagement is not easy. UNIDO is sometimes struggling to get results, feedbacks, documents, and action taken by national counterparts.	MU
3	• Donors	To regularly review the performance and implementation of the project, the GEF, the donor of the project, requires its partners to prepare an annual progress report (PIR). As part of the implementation of this project, two reports have already been written and submitted for appraisal. The promised funds have been paid in full in accordance with its commitments.	S
<b>E</b>	<b>Overall assessment</b>		MS

#### RATING OF PROJECT OBJECTIVES AND RESULTS

- Highly satisfactory (HS): The project had no shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.
- Satisfactory (S): The project had minor shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.
- Moderately satisfactory (MS): The project had moderate shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.
- Moderately unsatisfactory (MU): The project had significant shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.
- Unsatisfactory (U) The project had major shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.
- Highly unsatisfactory (HU): The project had severe shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.
- Likely (L): There are no risks affecting this dimension of sustainability.
- Moderately likely (ML): There are moderate risks that affect this dimension of sustainability.
- Moderately unlikely (MU): There are significant risks that affect this dimension of sustainability.
- Unlikely (U): There are severe risks that affect this dimension of sustainability.

### III. CONCLUSIONS, RECOMMENDATIONS AND LESSONS LEARNED

#### 1. Conclusions

- 152 The independent mid-term review of the “Sustainable cities initiative for Senegal; Promoting renewable energy and integrated waste management in sustainable industrial parks” was conducted in accordance with UNIDO procedures in this area and involved the various stakeholders both at national level and at UNIDO headquarters. A combination of methods was used to deliver evidence-based qualitative and quantitative information from various sources: desk studies, individual interviews, focus group meetings and direct observation. In close consultation with the UNIDO project Office and the national coordinator, the platform and the domain of Diamniadio and some enterprises. The review was carried out from 26 November 2019 to 21 January 2020 and the country visits took place between 10 to 16 December 2019 as During these visits, the Evaluator, with the support of the NPM in arranging appointments, interviewed the key partners / stakeholders of the project.
- 153 The mid-term review which rated **Overall assessment at Moderately Satisfactory**.
- 154 **Project design** is rated **Satisfactory**: The project was design clearly to address existing environment and waste issues of industries and cities and to facilitate project planning, monitoring and evaluation, the project document has provided a results / resources framework.
- 155 **Project performance and progress results** is rated **Moderately Satisfactory**: The initial objective and expected outcomes are still valid and relevant for the target groups. The relevance of the project was refined during interviews with stakeholders. Unfortunately, a nearly three years of implementation with an initial duration of four years, none of the results have been achieved Fifteen months from the end of the project, none of the outcomes have been achieved. At least, Outcome 2 should be reached, In accordance with project workplan, out of the 16 activities planned to be carried out before the mid-term, eight and activity 1.1.1 which was planned to after MTR were implemented. The project was also design adequately considers the gender dimensions in its interventions. Also, during the project preparatory phase, a preliminary gender analysis of the country context and a preliminary gender assessment project were conducted. Finally, the project is expected to implemented serious climate change mitigation but, addressing social issues to ensure inclusiveness of the project beneficiaries seems insufficiently taken into account.
- 156 **Project implementation and management** is rated **Moderately Satisfactory**: The project management was outlined in the Project Document and the responsibilities and reporting lines are very clear. Work plans based on the expected results of the project in accordance with the logical framework. The project document has planned and detailed the monitoring and evaluation plan with a budget and a timetable for implementing activities. But the project document did not provide for the establishment of a formal M&E system during the implementation of the project. During this implementation phase, the periodicity of the progress reports not being specified by the project document, only two progress reports (PIR) for the years 2018 and 2019 and the first progress report from BMN are available. Management is therefore carried out according to UNIDO procedures guaranteeing transparency in management but only 27% of the co-financing mobilized was estimated but it's very likely that it's more important. The project is already benefiting from very strong involvement of the main stakeholders, the internal communication of the project seems to have been a great challenge during this phase and for external communication, project experiences were share with a larger

number of stakeholders in the framework of GPSC. The likelihood that financial and economic resources will not be available once the project is completed is low. Institutional framework and governance and socio-political risks are very low. To improve sustainability benefits, new companies that are setting up around the Diamniadio platform and domain have to be upgrade.

157 **Performance of partners is rated Satisfactory:** The field project team is reduced to the NPM who is not involved in the management of cash flow and procurement. The UNIDO project managers and their consultants had to carry out many missions in Senegal for monitoring. The main stakeholders at national level fully support the project objectives and the funds promised by donor have been paid in full in accordance with its commitments.

## 2. Recommendations

158 For continued relevance, sustainability of the project results and impact, the following recommendations are addressed to the various key stakeholders of the project.

To All:
<ol style="list-style-type: none"> <li>1 The success of the most project strongly dependent on the working environment, the stakeholders and the quality of the communication between them, all stakeholders involved in the implementation of the project to are encouraged to make more efforts to strengthen collaborative work focused on achieving project outcomes, communication and proactivity.</li> <li>2 To avoid reducing the results of the efforts of UNIDO and its national partners to make the Diamniadio platform and domain a green city, it is imperative during the course of the rest of the duration of the project that special attention be paid to the industries and factories setting on the outskirts of Diamniadio domain. The installation of certain industries not belonging to the Diamniadio domain will be subject only to the conventional conditions of environmental impact studies (often less rigorous than those put in place for the management of the Diamniadio domain) while their emissions could reach the domain. It is imperative that APEX, APROSI, DEEC and the BMN already take the necessary measures to support these industries to be upgraded before their installation. It is at this price that the risk of diffuse pollution which these industries will be the source can be mitigated. It must ensure that these measures are taken into account in the strategy document for the design, implementation and management of sustainable industrial parks and integration into the urban fabric.</li> </ol>
To UNIDO:
<ol style="list-style-type: none"> <li>1 Update the logical framework of the project:</li> <li>2 define the end-of-project targets for the other three performance indicators 4.3, namely the total amount of recycled waste, the total amount of recovered waste and the total amount of energy produced;</li> <li>3 bring the end-of-project target of the second indicator of output 4.2 (number of industries undertaking energy audit) to 11 industries instead of 103 since it is among these that, 9 industries will benefit from pilot projects using the technologies of renewable energy and energy efficiency measures and two will implement pilot projects for waste recycling and energy recovery;</li> </ol>

<p>4 reformulate the third exit indicator 4.2 because in its current formulation, it is not realistic. A formulation proposal is: <i>Number of companies engaged in the ISO 14001 and 50001 certification process (staff mobilized, defined scope and first external audit carried out).</i></p> <p>5 Fifteen months before the end of the project, none of the four technical outcomes of the project have yet been achieved. Outcomes 1, 2 and 3 are likely to be achieved. On the other hand, Outcome 4 has very little chance of being entirely achieved. Yet this is one of the main results of the project, which is expected to create pilot companies that will serve as an example for other companies. In view of the importance of this outcome, it would be desirable to make arrangements already with the GEF to obtain an extension of the duration of the project's implementation by twelve months.</p> <p>6 Since the project document planned the recruitment of a project administration assistant and consultant/expert if required, UNIDO could strengthen the PMU in order to speed up the implementation of the project and avoid any more delays by recruiting a junior technical expert in place of administrative assistant and an environmental technical coordinator as a consultant. The Junior technical expert would assist the NPM and improve reporting to both project management of UNIDO and coordination locally to show as one. The environmental technical coordinator would support project implementation as adaptive management solution designed to close identified gaps in specifically POPs knowledge and related communications.</p> <p>The current approach to project implementation with two UNIDO project managers is perceived by the main project stakeholders (DEEC, APROSI, BMN) as if it were the execution of two separate projects despite the UNIDO explanatory efforts. The realization of a joint monitoring mission of the two Project teams undoubtedly improves understanding of the objectives of the project and mobilizes all the actors around a single action and thus contribute to improve the probability of reaching project outcomes.</p>
<p><b>To DEEC:</b></p>
<ol style="list-style-type: none"> <li>1 Get more involved in the implementation of the project and ensure, with the help of other partners and use its sovereign prerogatives, in order to continue monitoring the implementation of project activities.</li> <li>2 Provide of the administrative support necessary for the National Project Manager in the search for an adequate office to better accomplish his tasks.</li> </ol>
<p><b>To BMN:</b></p>
<ol style="list-style-type: none"> <li>1 Take all necessary measures to make up for the delay already observed in the execution of its contract with UNIDO according to the rules of the art. One of the measures consists in establishing, in addition to the procedures for selecting the companies, the terms of reference and the technical specifications of all the material / equipment to be purchased so that once the contracts will be signed with the companies, the procedure for purchase be shorter. Recruiting consultants to implement and monitor upgrading actions in companies could also be a time-saving option.</li> </ol>

- 2 The project document planned to conduct RECP assessments for 10 enterprises under Output 3.1 without proposing the upgrading of these companies. It is highly desirable that these enterprises be taken into account within the framework of a regular BMN implementation program. The resources committed to obtaining these results will thus be capitalized in co-financing of BMN on this project.
- 3 Evaluate its co-financing in kind and in the form of loans to facilitate the final evaluation of the project.

### 3 Lessons learned

159 One lesson emerged from this project at this step:

It still seems a bit early to learn from the implementation of the project. However, it appears from the first experiences of selection of companies to engage in the implementation of pilot projects that, the common assertion which presents industries as a little cautious when it comes to the adoption of BAT/BEP is less obvious than one would think. Meetings to explain the economic and environmental benefits generated by these changes in practices quickly convince them. The selection of companies by call for expressions of interest should therefore be preceded by a real awareness campaign and direct meetings with potential candidate companies. Without this, they will remain suspicious and will always suspect a strategy of identification and repression of polluting industries on the part of the public authorities.

## ANNEX

### Annex 1: Terms of Reference of External Mid-Term Review



UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

## TERMS OF REFERENCE

### Mid-term Review of UNIDO Projects:

**Sustainable cities initiative for Senegal: Promoting renewable energy and integrated waste management in sustainable industrial parks**

**UNIDO SAP ID 150270 GEF**

**Project ID 9123**

**November 2019**

## 1 Project context

Dakar, the capital of Senegal, is located on the coast at the extreme west of the country. With its surroundings, it constitutes a metropolis called the Greater Dakar. Currently Dakar represents 0.3% of the Senegalese territory but accounts for more than 80% of the economic activities in Senegal. It is home to more than a quarter of the total, and half of the urban, population of Senegal. The annual urban population growth rate is estimated at 3%. The city's infrastructure, built to accommodate 300,000 people, is evidently over-stretched. Over 90% of the population in peri-urban Dakar (Pikine and Guédiawaye) live in areas classified as slums or spontaneous settlements.

Over the years, Dakar has developed without much of integrated urban planning and has outgrown the initial infrastructure. This reinforces the complexity of dysfunctions and urban challenges within the city, which otherwise enjoys a symbolic status thereby making it worthy of the greatest attention by the government. In effect, the urban phenomenon of Dakar is characterised by a lack of spatial control. The urban structure is marked by a spatial disequilibrium and an incoherence of the urban tissue. To sum up, the city has several inherent inefficiencies that are affecting the quality and cost of services, the quality of life, among others.

The development of the city is strongly constrained by an ensemble of dysfunctions that originate in the city's poor spatial division over the past decades. The poor repartition of economic activities and organising infrastructure, the road system maladapted to this spatial division, the anarchy of land uses, the isolation of the suburbs, the overpopulation and overcrowding of poorer areas, real estate speculation, the absence of multimodal transport links, are some of the factors that hinder the harmonious development of the agglomeration.

The concentration of people and economic activities, as well as the particular setting on a peninsula, have induced a lot of environmental problems like coastal erosion, pollution and saltwater intrusion. Indeed, pollution is perhaps the major environmental problem in the Greater Dakar area. The system of waste collection is both obsolete and inefficient, and in some cases simply not existing. The city does not have any domestic waste sorting and treatment facilities. As such, all such waste is dumped near Mbeubeusse lake. This site is improperly managed and already saturated thereby causing massive pollution of groundwater.

Industrial pollution is one of the major challenges in Dakar. This is primarily due to the fact that most industries in the country do not have any solid and liquid waste treatment or disposal systems in place. As such, most of the solid and liquid waste from these industries is dumped in canals and flows to the ocean. Industrial pollution is concentrated mainly along the Hann bay where most of the industries are currently located. The bay, a 13km strip of land from the Dakar Port, is home to a local population of about 500 000 inhabitants from Mbao, Diamaguene, Sicap Mbao and Dalifort Ferail. This site is the first industrial zone in West Africa and the location of about 70 - 80% of Senegal's industries. Industrial pollution caused by industries discharging untreated solid and liquid waste on the shores has rendered the bay exceedingly toxic. Combined with domestic waste and sewage waste that is dumped on the beach through open canals, eutrophication of the bay with algal blooms is common feature. Efforts to clean the beach over the years have had short-term achievements since the source of the waste has continued to produce and dispose waste unhindered. The use of this bay to offload fish harvested from the open sea creates high chances of the fish being contaminated with the liquid toxic industrial waste coming from industries nearby. The bay, once known as one of the most beautiful beaches of Senegal, is now among the most polluted in West Africa.



To promote economic growth in Senegal, successive governments have in the last decade initiated large-scale projects within and surrounding the capital whose overall focus was to promote **industrialisation**. The government of Senegal is currently laying the groundwork to establish a new city near the town of Diamniadio called Diamniadio Urban Pole whose primary purpose is to ease congestion and the urbanization pressure on Dakar. Diamniadio urban pole will have the following facilities: a new airport nearby, a university, state ministries and a 53-hectare industrial park – Diamniadio Industrial Park. The Diamniadio Industrial Park is one of the most ambitious infrastructure project yet in Senegal and is an integral part of the current national level development plan - Plan Senegal Emergent (PSE) whose main target is to double economic growth by 2020. The main aim of the establishment of the Diamniadio Industrial park is to encourage industries in Dakar to relocate to this new park as well as attract new industries. The envisaged relocation of industries in Dakar will ultimately reduce the dumping of toxic industrial waste in the Hann bay and surrounding residential areas. However, most of the industries have not moved to the new park due to lack of infrastructure services in the new park. In the long-term, it is envisaged that some industries will eventually move to the new park with a significant number set to remain in Dakar. As such, there is basis for supporting the mainstreaming of renewable energy, resource efficient and chemical and management technologies in industries in Dakar and industries that will be located in the Diamniadio Industrial Park.

For its part, industry is confronted with several challenges that include low production levels, inadequate competitiveness of the local market, lack of capacities of industrial firms to upgrade their production systems, geographical and structural weakness of the industrial fabric. In operational terms, initiatives concerning partnership between the State and the private sector are still minimal, particularly with regard to the promotion of entrepreneurial initiatives, the development of innovation through research application, the creation of integrated competitiveness poles and the training of future champions of the different sectors and the development of venture capital. The shortage and unreliability of power supply and and the weak infrastructural platforms cripple the performance and competitiveness of industries, causing substantial additional costs. In addition to these drawbacks, industrial production suffers significantly from its strong concentration in the Dakar area as mentioned above, hampering the potential of provincial economic zones, as well as from lack of diversification and a system of product quality certification. Against this background, industry has not paid attention to the need to protect the environment as a general concept, but also as a strategy to improve their productivity and competitiveness. Environmental issues are generally perceived by industry as causing additional production costs to a sector that is faced with many other challenges.

The difficulties encountered in the implementation of industrial strategies and in the design and application of effective policies have hampered the efforts to establish an environment that promotes enterprise development and environmental mainstreaming. Successive governments have in the last decade prioritized industrialisation as a vehicle to propel rapid economic growth in Senegal. Accordingly, there is increased focus on promoting industrial zones and agro-poles in and around important urban centers, mainly in the Dakar area, but also in other cities like St. Louis and in the southern part of the country. However, with most industries still lacking in terms of adoption of renewable energy and energy efficient technologies and services, resource efficiency techniques, and chemical and waste treatment, this industrialization process will lead to even more environmental challenges. Besides the intensive use of natural capital, these industries tend to use carbon-inefficient technologies resulting in massive generation and accumulation of waste.

With industrial zones increasingly becoming part of cities, it is paramount that these industrial zones are sustainable and green as part of the sustainable cities principles. Accordingly, a multi-pronged

approach is required to ensure that Senegal adopts a sustainable industrialisation trajectory which will be part of the sustainable cities as following:

- For existing industries in Greater Dakar area, there is need to aggressively promote the integration of renewable energy, energy efficient, resource efficiency and cleaner production, and chemical and waste treatment technologies and measures;
- The management of new industrial parks, Diamniadio, should be based on sustainability principles as part of sustainable cities; and
- Enterprises that will operate from Diamniadio industrial park should systematically address environmental issues and integrate renewable energy and energy efficient technologies, resource efficient approaches and technologies and chemical and waste management technologies.

### **Energy and resource efficiency in industry**

With regard to energy, this sub-sector continues to weigh on the performance of all sectors of the national economy. The energy situation in Senegal can be characterised by the low volume of supply and the poor quality of electricity service in the urban and rural areas; recurrent power cuts which impede the performance of economic activities; lack of information and sensitization on the rational use of energy and technical and managerial failures of public and private operators. This situation is attributable to the quasi-exclusive dependence on oil imports and the non-existence of adequate mechanisms to cushion exogenous shocks. The poor refining capacity, the constrained logistical services at the Dakar port, the obsolete nature of most power generation, transportation and distribution assets, as well as delays in restructuring SENELEC and the operational recovery of ASER, in addition to the delays in setting up the regulatory framework for the development of renewable energy are not conducive to an energy efficient policy for the diversification of energy sources in industry. On average, most industries in Dakar are more energy intensive, compared to other regions, implying that they consume more energy per unit of production and hence pay more for energy.

### **Industrial Waste Management**

As regards waste management, Senegalese municipalities have major difficulties to cope with the waste. In Senegal, 2,438 tons of solid waste is collected every day in the municipalities, or 0.5 kg per resident per day. This waste mainly comprises of organic waste (44 percent), paper (10 percent), plastic (3 percent), glass (3 percent), metals (1 percent) and other types of waste - textile, electronic, medical, industrial, etc. (39 percent) (Bhada-Tata and Hoornweg, 2012). Nevertheless, the corresponding collection rate is only 21 percent nationally (Bhada-Tata and Hoornweg, 2012). Thus, more than three quarters of the population does not have access to any waste disposal service. At best, 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 dump site or dumped in an open and uncontrolled landfill, where waste is incinerated in an open-burning condition. Less than a quarter of the population is served by 'authorized' but unregulated landfills. Although plastic waste recovery experiments have been conducted, the main formal initiatives for solid waste recovery concern compost production. In any case, there is no industrial sector covering this field. However, the waste in landfills, homes and, more frequently, in unserved areas is separated and recovered. Plastic and glass bottles, jars, pots and plastic bags in good condition, scrap iron, shoes and other items that can be refurbished are recycled by households or resold. The government also adopted the national regulation on plastic wastes (Loi n° 2015-9 relative à l'interdiction de la production, de l'importation, de la détention, de la distribution, de l'utilisation de sachets plastiques de faible micronnage et à la gestion rationnelle de déchets plastiques). The regulation encourages the plastic industry to reduce its waste and recover the value of the plastic materials through industrial symbiotic solutions.

This general situation on waste also applies to industrial waste. Given the situation that most industries find themselves in, most industries do not have any liquid or solid waste treatment facilities on site. If anything, most of the waste generated by the industries is dumped in canals and flows to the sea.

## **1. Project objective**

The aim of the project is to improve capacity to plan and implement sustainable city management practices focusing on integration of sustainable industrial parks.

Component 1 – Integrated urban planning and management focusing on sustainable industrial parks

*Expected Outcome:*

Strengthening of national capacities on integrated urban planning for sustainable industrial parks and participation on Global Platform for Sustainable Cities (GPSC)

Component 2 – Integrated POPs management and hazardous waste management in industries

*Expected Outcome:*

An integrated POPs and hazardous waste management system is designed

Component 3 – An enabling framework is created for implementing sustainable and resilient industrialization

*Expected Outcome:*

An enabling framework is created for implementing sustainable and resilient industrialization

Component 4 – Promoting investments in renewable energy, low-carbon technologies and POPs in enterprises in Dakar and in Diamniadio industrial park.

*Expected Outcome:*

Increased use of renewable energy technologies and low-carbon technologies to reduce carbon intensity of industrialization and urbanization in Dakar and Diamniadio

Component 5 – Monitoring and Evaluation

*Expected Outcome:*

Project progress properly monitored and evaluated

## **2. Purpose and scope of the evaluation**

This mid-term review is expected to cover the projects activities in the first half of implementation of the projects, covering all technical plus management components in a balanced manner.

The purpose of the mid-term review (MTR) is to independently assess the projects to help UNIDO improve performance and achieve the expected outcomes as foreseen in the projects documents.

The MTR has the following objectives:

- Verify prospects for development impact and sustainability, providing an analysis of the attainment of the main project objective and specific objectives, global environmental objectives, delivery and completion of project outputs / activities, and outcomes / impacts based on indicators. The assessment includes re-examination of the relevance of the objectives and other elements of project design.
- Enhance project relevance, effectiveness, efficiency and sustainability by proposing a set of recommendations with a view to ongoing and future activities.
- Draw lessons of wider applicability for the replication of the experience gained in the project

The review will mainly focus on the achievement of the expected results indicated in the project logical framework, and in particular on the aspects of relevance, effectiveness in delivery, efficiency, impact, sustainability, management as well as cross-cutting issues such as gender mainstreaming.

The main geographical area is Dakar, Senegal

The International consultant will interview key stakeholders and executing partners, e.g. the DEEC, APROSI, BMN and UNIDO in Senegal; The international consultant will also visit selected interventions if needed in order to showcase the practical outcomes of the project activities.

### 3. Mid Term Review criteria and key questions

The following are the key criteria to be addressed by the MTR.

<b>A</b>	<b>Project design assessment</b>
1	Project design
2	Project results framework/logframe
<b>B</b>	<b>Project performance and progress towards results</b>
1	Relevance
2	Effectiveness and progress towards expected results
3	Efficiency
4	Gender mainstreaming
5	Sustainability
<b>C</b>	<b>Project implementation management</b>
1	Project management
2	Results-based work planning, monitoring and evaluation, reporting
3	Financial management and co-financing
4	Stakeholder engagement and communication
<b>D</b>	<b>Performance of Partners</b>

Detailed questions to address each of the review criteria are provided in Annex 2.

### 4. Ratings of project M&E

Monitoring is a continuing function that uses systematic collection of data on specified indicators to provide management and the main stakeholders of an ongoing project with indications of the extent of progress and achievement of objectives and progress in the use of allocated funds. Mid-term review is the systematic and objective assessment of an on-going or completed project, its design, implementation and results. Project mid-term review may involve the definition of appropriate standards, the examination of performance against those standards, and an assessment of actual and expected results.

The Project monitoring and evaluation system will be rated on the above review criteria as follows:

- Highly Satisfactory (HS): There were no shortcomings in the project M&E system.
- Satisfactory(S): There were minor shortcomings in the project M&E system.
- Moderately Satisfactory (MS): There were moderate shortcomings in the project M&E system.
- Moderately Unsatisfactory (MU): There were significant shortcomings in the project M&E system.
- Unsatisfactory (U): There were major shortcomings in the project M&E system.
- Highly Unsatisfactory (HU): The Project had no M&E system.

“M&E plan implementation” will be considered a critical parameter for the overall assessment of the M&E system. The overall rating for the M&E systems will not be higher than the rating on “M&E plan implementation.”

All other ratings will be on the GEF six point scale.

HS	= Highly Satisfactory	Excellent
S	= Satisfactory	Well above average
MS	= Moderately Satisfactory	Average
MU	= Moderately Unsatisfactory	Below Average
U	= Unsatisfactory	Poor
HU	= Highly Unsatisfactory	Very poor (Appalling)

## 5. Approach and methodology

The MTR will be conducted in accordance with the UNIDO Evaluation Policy<sup>11</sup>.

The MTR will be conducted by an international consultant, external to the project implementation team, supported by the National Project Manager. The international consultant will use a participatory approach whereby all key parties associated with the project are kept informed and regularly consulted throughout the MTR. The international consultant shall use different methods to ensure that data gathering and analysis deliver evidence-based qualitative and quantitative information, based on diverse sources, as necessary: desk studies and literature review, statistical analysis, individual interviews, focus group meetings, surveys and direct observation. This approach will not only enable the MTR to assess causality through quantitative means but also to provide reasons for why certain results were achieved and to triangulate information for higher reliability of findings.

The international consultant will develop interview guidelines. Field interviews can take place either in the form of focus-group discussions or one-to-one consultations, and in particular cases may have to be conducted over the phone or by Skype as deemed fit by those involved in leading this evaluation.

<sup>11</sup> UNIDO. (2015). Director General’s Bulletin: Evaluation Policy (UNIDO/DGB/(M).98/Rev.1)

The methodology will be based on the following:

1. **A desk review** of project documents, including, but not limited to:
  - a. The original project document, monitoring reports, such as progress and financial reports to UNIDO and Donor(s)/Partners, annual Project Implementation Reports (PIRs), back-to-office mission report(s), and other project-related material produced by the project. All these shall be provided by the implementation team at the beginning of the MTR.
  - b. The international consultant will check the continuous relevance of the project's results-chain in the project logframe and if necessary advise on amendments to the theory of change for the project.
  - c. Counterfactual information: In those cases where baseline information for relevant indicators is not available, the international consultant will aim at establishing a proxy-baseline through recall and secondary information.
  
2. **Interviews may be conducted** with:
  - a. UNIDO headquarters in Vienna:  
For Project 150270: Project Manager (PTC/ENE/ESI), Project Manager (PTC/ENV/SCD) and the team members assigned to the project.  
For Project 150083: Project Manager (PTC/ENV/SCD) and team members assigned to the project
  - b. Project team in Senegal: National Project Manager, PSC Members, and UNIDO Representative.
  - c. Meetings with key stakeholders  
  
For Project 150270: DEEC, APROSI, BMN.  
For Project 150083: CIAPOL and other partners if relevant.
  - d. Project Beneficiaries (people trained, selected pilots etc.)
  
3. **Country visit:** The evaluator will visit selected sites as determined in due course. At the end of the field mission, there will be a presentation of preliminary findings, conclusions and recommendations to the key stakeholders.

**6. Time schedule**

The mid-term evaluation of the Project is to be conducted during December 2019 – January 2020. Table presents an indicative time table.

Table 4. Tentative schedule:

Activity/deliverable	Indicative timing
Recruitment of the international consultant	November 2019

Activity/deliverable	Indicative timing
Desk review	November 2019
Briefing with UNIDO headquarter (through Skype)	December 2019
Evaluation Framework and Theory of Change of the project intervention	December 2019
Fieldwork in Senegal and Côte d'Ivoire	December 2019
Debriefing meeting with UNIDO HQ	January 2020
Preparation of the first draft of the reports	January 2020
Feedback from stakeholders	January 2020
Final Reports	January 2020

The debriefing presentation of the international consultant is foreseen in Vienna after the field mission.

For each project, the MTR report will be provided in French and English and will be shared with project stakeholders after the project management team at UNIDO HQ reviewed the final report and ensure compliance with UNIDO guidelines, GEF guidelines and requirements of the Terms of Reference. An executive summary (1-2 pages) including the evaluation approach and the key findings will be provided in English.

#### **7. MTR team composition**

The review team will be composed of one international consultant supported by the National Project Manager in Senegal. The International consultant will be contracted by UNIDO.

The tasks are specified in the job description annexed to these terms of reference.reference.

According to UNIDO Evaluation Policy, the International Consultant must not have been directly involved in the design and/or implementation of the project under review.

The UNIDO Project Managers and respective team will also support the International Consultant. GEF OFP(s) will, where applicable and feasible, also be briefed and debriefed at the start and end of the evaluation mission.

#### **8. Reporting**

These Terms of Reference (ToR) provide some information on the evaluation methodology, but this should not be regarded as exhaustive. After reviewing the project documentation and initial interviews with the project manager, the international consultant will prepare, an Evaluation Framework, including preliminary project theory model(s); elaboration of review methodology including quantitative and qualitative approaches through an evaluation framework ("evaluation matrix"); division of work between the International Consultant and National Project Manager;

mission plan, including places to be visited, people to be interviewed and possible surveys to be conducted and a debriefing and reporting timetable.

After the MTR, a draft report will be delivered to UNIDO HQ (the suggested report outline is in Annex E). Any comments or responses, or feedback on any errors of fact to the draft report provided by the stakeholders will be shared for necessary revisions. On the basis of this feedback, and taking into consideration the comments received, the international consultant will prepare the final version of the review report.

The international consultant may present its preliminary findings to the local stakeholders at the end of the field visit and take into account their feed-back in preparing the draft review report. A presentation of preliminary findings might take place at UNIDO HQ after the field mission.

The review report should be brief, to the point and easy to understand. It must explain the purpose of the review, the activities evaluated, and the methods used. The report must highlight any methodological limitations, identify key concerns and present evidence-based findings, consequent conclusions, recommendations and lessons. The report should provide information on when the review took place, the places visited, who was involved and be presented in a way that makes the information accessible and comprehensible. The report should include an executive summary that encapsulates the essence of the information contained in the report to facilitate dissemination and distillation of lessons.

Findings, conclusions and recommendations should be presented in a complete, logical and balanced manner. The review report shall be written in French and follow the outline given in annex E. An executive summary (1-2 pages) including the evaluation approach and the key findings will be provided in English.

#### **9. Quality assurance**

The quality of the review report will be assessed and rated against the criteria set forth in the Checklist on review report quality in Annex E. Project Team at HQ will review the overall quality and findings of the MTR in the draft report, and subsequently share comments to be taken into account when drafting the final report.



## Annex 2: List of documents consulted

« Sustainable cities initiative for Senegal: Promoting renewable energy and integrated waste management in sustainable industrial parks » project document

Back-to-office mission report, 2019

BMN's progress report, 2019

BMN's technical and financial proposal for supply of services related to the implementation of pilot projects on RE&EE, RECP, Waste Recycling and Energy Recovery, 2017

Compte rendu de la mission de l'ONUDI venue au Sénégal, 2018

Compte rendu de la première réunion du comité de coordination des deux composantes du projet "villes durables", 2017

Compte rendu de la réunion de consultation à la direction de l'APROSI, 2018

Compte rendu de la réunion du comité de coordination des deux composantes, 2019

Compte rendu de la réunion du Comité Technique : Echanges et vérification de l'état d'avancement de la composante 2 du projet Villes Durables, 2019

Contrat de création d'une plateforme numérique pour le projet « Villes durables » entre le BMN et la société RAKIDA

Contrat de Pré-diagnostic de production propre entre le BMN et AMC/EMASOL

Convention de partenariat entre l'Agence d'aménagement et de promotion des sites industriels (APROSI) et le Bureau de mise à niveau (BMN), 2018

Convention de partenariat entre l'Agence nationale pour la promotion des investissements et des grands travaux et le Bureau de mise à niveau (BMN), 2019

Convention de partenariat entre, la Direction de l'environnement et des établissements classés « DEEC), et le Bureau de mise à niveau (BMN), 2019

Demande de proposition pour la sélection de bureaux d'études pour des missions de pré-diagnostic de production propre

Lettres de notification d'éligibilité des sociétés AGRICE, AMSATA PLASTIQUES, CSIP, EIFFAGE Sénégal, GANAAN PECHERIE, RENOV INDUSTRIE, SM SUARL et NUMHERIT

Rapport de l'atelier d'échange et de partage sur le processus de mise en œuvre de la composante 2 du programme «Villes Durables», 2019

Rapport de l'atelier d'échange et de sensibilisation du secteur bancaire sur les «Villes Durables», 2019

Rapport de l'Atelier POP MTD/MPE et mise à niveau industrielle des entreprises, 2019, Dakar, Sénégal.

Spécifications techniques pour la prestation de services liés à la réalisation d'une cartographie environnementale, d'une stratégie de réduction des POP et de gestion des déchets dangereux, et d'audit d'entreprises pour l'efficacité énergétique et la production propre (RECP)

Term of reference for supply of services related to the implementation of pilot projects on RE&EE and RECP as well as on waste recycling and energy recovery and generation under Output 4.2 and 4.3

Terms of reference for the provision of services related to design, management and integration of sustainable industrial parks in Senegal

Terms of reference for the provision of services related to greenhouse Gas (GHG) accounting and capacity building for the Diamniadio Urban pole, Senegal

UNIDO GEF Annual Monitoring Report FY 2018

UNIDO GEF Annual Monitoring Report FY 2019

### Annex 3: List of persons interviewed

Name	Institution	Role
Project Management Unit		
Mr. Mark DRAECK	UNIDO	Project Manager
Mme Alexia CUJUS	UNIDO	Project administrator
Mme Clara FERNANDEZ	UNIDO	Project Associate
Mr. Sérigne Mansour TALL	UNIDO	National Project Manager
<b>Dakar, December 16</b>		
Mr. Ibrahim DIOUF	BMN	Director
Mr. Mouhamadou Chamsoudine DIA	BMN	Project Coordinator
M.me Oumou Khairy NIANG BA	BMN	Project Officer, Clean Production - Sustainable cities -
Mr. Abdoul Aziz SAMB	BMN	Energy efficiency Expert
<b>Dakar, December 17</b>		
Mr. Momath BA	APROSI	C.E.O
Mr. Bohoum SOW	APROSI	General Secretary
M.Me Fatou Barry MBENGUE	APROSI	Director of Marketing
M.Me Bineta Racine SY TOURE	APROSI	Head of Human Resources in charge of recruitment
Mr. Pape FALL	SEWACARD	Administrative and Finance Director
Mr. Ibrahima SARR	MULTI INDUSTRIES GROUP	General Director
M. Ousmane LOUM	CSIP	General Director
M.me Mariama SYLLA WADE	CSIP	Head of Marketing
M. Lahbib NIANG	APS	General Director
<b>Dakar, December 18</b>		
M. Souleymane MBENGUE	SM Suarl	General Director
M.me Béatrice SISSOKO	AMC	General Director
M. El Adj Mansour SOW	AMASOL	General Director
M. Sounkalo SANOKO	OKOSANEDER	Expert agréé
<b>Dakar, December 19</b>		
M. Cheikh FOFANA	DEEC	Deputy Director

#### Annex 4. Required Project Identification and Financial Data

The mid-term report should provide information on project identification, time frame, actual expenditures, and co-financing in the following format, which is modeled after the project identification form (PIF).

##### Project Identification

GEF Project ID: 9123

GEF Agency Project ID: 150270 Country: Senegal

Project Title: Sustainable cities initiative for Senegal: Promoting renewable energy and integrated waste management in sustainable industrial parks

GEF Agency (or Agencies): UNIDO

##### Dates

Milestone	Expected Date	Actual Date
CEO Endorsement/Approval	-	-
Agency Approval date	-	-
Implementation start	10/03/2017	
Midterm review	12/01/2019	December 2019
Project completion	09/03/2021	09/03/2021
Terminal evaluation completion	January 2021	January 2021
Project closing	January	January

Expected dates are as per the expectations at the point of CEO endorsement/approval.

### Financing plan summary - Outcome breakdown<sup>12</sup>

Project outcomes	Activity types	Donor (GEF/other) (\$)		Co-Financing (\$)	
		Approved	Actual	Promised	Actual
Strengthening of national capacities on integrated urban planning for sustainable industrial parks and participation on Global Platform for Sustainable Cities (GPSC)	Technical assistance	600,086	600,086	1,000,000	1,000,000
An integrated POPs and hazardous waste management system is designed	Technical assistance	217,750	217,750	800,000	800,000
An enabling framework is created for implementing sustainable and resilient industrialization	Technical assistance	422,590	422,590	900,000	900,000
Increased use of renewable energy technologies and low-carbon technologies to reduce carbon intensity of industrialization and urbanization in Dakar and Diamniadio	Investment	1,732,969	1,732,969	7,980,000	7,980,000
5. Project progress properly monitored and evaluated	Technical assistance	100,000	100,000	600,000	600,000
<b>Total (\$)</b>		<b>3,073,395</b>	<b>3,073,395</b>	<b>11,280,000</b>	<b>11,280,000</b>

Activity types are investment, technical assistance, or scientific and technical analysis. Promised co-financing refers to the amount indicated at the point of CEO endorsement / approval.

### Co-Financing source breakdown

Source of co-financing	Type	Project preparation		Project implementation		Total	
		Expected	Actual	Expected	Actual	Expected	Actual
GEF Agency (UNIDO)	Grants	80,000	80,000	80,000	80,000	80,000	80,000
	In kind	300,000	300,000	300,000	300,000	300,000	300,000
Private Sector (BMN)	In-kind	2,207,000	2,207,000	2,207,000	2,207,000	2,207,000	2,207,000
	Loans	4,793,000	4,793,000	4,793,000	4,793,000	4,793,000	4,793,000
Private Sector (APROSI)	Grants	4,400,000	4,400,000	4,400,000	4,400,000	4,400,000	4,400,000
Total co-financing		11,780,000	11,780,000	11,780,000	11,780,000	11,780,000	11,780,000

<sup>12</sup> Source: Project document.

Expected amounts are those submitted by the GEF Agencies in the original project appraisal document.  
Co-financing types are grant, soft loan, hard loan, guarantee, in kind, or cash.

**Expenditure details**

Outcome/Output	Expenditure (USD)			
	2017	2018	2019	Total
<b>Outcome 1. Strengthening of national capacities on integrated urban planning for sustainable industrial parks and participation on Global Platform for Sustainable Cities (GPSC)</b>	<b>56879,74</b>	<b>38489,21</b>	<b>133941,91</b>	<b>279766,94</b>
<b>Output 1.1.</b> A strategy to guide the design, implementation and management of sustainable industrial parks and integration into urban tissue developed	24453,55	4420,78	49112,48	77986,81
<b>Output 1.2.</b> APROSI, ADM, DGPU, architects, cities, private sector, local experts trained the integration of sustainable industrial parks in cities across the country	18950,75	7519,87	41691,04	68161,66
<b>Output 1.3.</b> Sustainability performance of Diamniadio industrial park measured and regularly reported	2571,61	0	3888,17	9489,83
<b>Output 1.4.</b> Project counterparts participate in GPSC activities that include annual meetings, targeted training programmes	10903,83	26548,56	39250,22	124128,64
<b>Outcome 2: An integrated POPs and hazardous waste management system is designed</b>	<b>3673,72</b>	<b>12330,76</b>	<b>53938,91</b>	<b>83923,41</b>
<b>Output 2.1.</b> An integrated POPs and hazardous waste management strategy developed for enterprises in Dakar and Diamniadio industrial park	3673,72	10816,72	39629,57	58534,6
<b>Output 2.2.</b> Technical assistance provided to conduct detailed feasibility studies of selected pilot projects		1514,04	14309,34	25388,81
<b>Outcome 3: An enabling framework is created for implementing sustainable and resilient industrialization</b>	<b>7387,85</b>	<b>3092,91</b>	<b>185940,94</b>	<b>206792,2</b>
<b>Output 3.1.</b> Environmental and resilience mapping of existing industries in greater Dakar, RECP assessments for selected enterprises conducted and technological and process upgrading opportunities promoted			4819,69	4819,69
<b>Output 3.2.</b> Technical and institutional capacity of Agence de la Maitrise de L'Energie (AEME) and other relevant stakeholders in supporting the adoption of renewable energy, resource efficiency, and chemical and waste management technologies in industrial sector strengthened	7387,85	3092,91	145567	159997,6
<b>Output 3.3.</b> Agence d'aménagement et de promotion des sites industriel (APROSI), Bureau de Mise a Niveau (BMN) and other companies assisted in designing and implementing sustainable industry approach for managing Diamniadio industrial park in terms of resource efficiency, chemical and waste management and renewable energy use			35554,25	41974,91
<b>Outcome 4: Increased use of renewable energy technologies and low-carbon technologies to reduce carbon intensity of industrialization and urbanization in Dakar and Diamniadio</b>	<b>0</b>	<b>1585213</b>	<b>101448</b>	<b>1689278,89</b>

<b>Output 4.1.</b> GHG emission inventory/ Energy audit conducted for Diamniadio urban pole and an action plan for climate smart and resilient urban development elaborated and developed as NAMA			101448	101448
<b>Output 4.2.</b> Enterprises in Dakar and Diamniadio industrial park implement small to medium scale pilot renewable energy and energy efficient applications and RECP measures (at least 1 MW systems) and get ISO 50001 and ISO 14001 certified;		1095213		1095213
<b>Output 4.3.</b> Enterprises in Dakar and Diamniadio industrial park implement pilot projects on waste recycling, recovery and energy generation to reduce dioxin and furan emissions and hazardous waste		490000		490000
<b>Output 4.4.</b> Business model designed to mobilise investment in replication and scale-up of sustainable industry approach in sustainable industrial parks			0	2617,89
<b>Output 4.5.</b> Pilot projects monitored, evaluated, and showcased				
<b>Outcome 5. Project progress properly monitored and evaluated</b>	<b>26418,58</b>	<b>60158,84</b>	<b>30822,91</b>	<b>138793,95</b>
<b>Output 5.1.</b> Project results regularly monitored and reported in line with GPSC time frames	20248,02	54626,08	23836,5	99889,55
<b>Output 5.2</b> Mid-term review and independent terminal evaluation conducted	6170,56	5532,76	6986,41	38904,4
<b>Total</b>	<b>94359,89</b>	<b>1699284,72</b>	<b>506092,67</b>	<b>2398555,39</b>

## Annex 5: Rating for activities and outputs

Rating of activities and output: HS: Highly satisfactory; S: Satisfactory; MS: Moderately Satisfactory; MU: Moderately Unsatisfactory; U: Unsatisfactory; HU: Highly Unsatisfactory

- The rating of an activity is based on whether that activity has been completed or not (On track to be achieved or **Not on target to be achieved**) or achievement exceeds what was expected at design (**Achieved**). A rating of HS is given in case if achievement exceeds expectation at design, which is the case for Activity 1.4.2.
- In the case of outputs, the rating is based on average rating obtained by all the activities of that output. Note that a score has been attributed to each rating as follows: HS = 6; S = 5; MS = 4; MU = 3; U = 2; HU = 1. If the average score for an output is not a whole number, then this figure is rounded off to the nearest whole number, and the rating corresponding to that number is the rating for the output.



## Review against project results framework

Green = Achieved	Yellow = On track to be achieved	Red = Not on target to be achieved
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Interventions	Objectively Verifiable Indicators (Goals)	Mid-term Target	End of project	Progress at project end and comments	Status	Rating
<b>Outcome 1. Strengthening of national capacities on integrated urban planning for sustainable industrial parks and participation on Global Platform for Sustainable Cities (GPSC)</b>	A report on integrated urban planning strategy for sustainable industrial parks  Number of training workshop (2) and participants (male/female: 40/20)	0  1 training workshop (20/10)	1  2 training workshops (40/20)	A report on integrated urban planning strategy for sustainable industrial parks and integration into urban tissue developed not yet available and no training organized		MU
<b>Output 1.1.</b> A strategy to guide the design, implementation and management of sustainable industrial parks and integration into urban tissue developed	A strategy on integrated urban planning strategy for sustainable industrial parks	0	1	No target of output indicator was planned to be reached at mid-term. Terms of reference for the study are developed and validated. The work will be carried out by an already selected subcontract and the study will cover the period from January to July 2020.		S
<b>Activity 1.1.1</b> Prepare TOR for the study				Realized but was not scheduled to be realized absolutely be realized before mid-term		S
<b>Activity 1.1.2</b> Development of a strategy on design, implementation and management of sustainable industrial parks and integration into urban tissue developed				Not yet realized but bidding is over and subcontractor has been selected. Activities will start early 2020 to be over in July 2020.		S
<b>Output 1.2.</b> APROSI, ADM, DGPU, architects, cities, private sector, local experts trained the integration of sustainable industrial parks in cities across the country	Number of training workshop (2) and participants (male/female: 40/20)	1 training workshop (20/10)	2 training workshop (40/20)	No training organized. The assessment of training needs and the development of the related training program which are prerequisites for the organization of training have not yet been carried out. However, the strategy of the project is to proceed by subcontracting. According to this approach, a bidding is over and subcontractor has been selected.		U

Interventions	Objectively Verifiable Indicators (Goals)	Mid-term Target	End of project	Progress at project end and comments	Status	Rating
				Activities will start early 2020 to be over in July 2020..  In addition, a workshop with representatives of the banking sector bringing together 26 people organized in May 2019 to raise awareness among these players and facilitate the mobilization of investment funds to upgrade industries		
<b>Activity 1.2.1</b> Verify training needs of governmental institutions on creating new green industrial parks under integrated urban planning				Not yet realized		U
<b>Activity 1.2.2</b> Develop a training program tailored to governmental institutions needs				Not yet realized		U
<b>Activity 1.2.3</b> Prepare training material				Not yet realized		U
<b>Activity 1.2.4</b> Develop knowledge products targeted at integrated urban planning for sustainable industrial parks				Not yet realized		U
<b>Activity 1.2.5</b> Deliver 2 training workshops targeting a total of 50 trainees of which 30% will be women				Not yet realized		U
<b>Activity 1.2.6</b> Guidelines and decision support tools for creating new green industrial parks under integrated urban planning developed and disseminated				Not yet realized		U
<b>Output 1.3.</b> Sustainability performance of Diamniadio industrial park measured and regularly reported	Report on best appropriate internationally recognized standards for Senegal industry Annual monitoring report of sustainable industrial parks	2	5	The two reports expected at mid-term of project implementation have not been drawn up and it will not be easy to reach the end project's target. No sustainable performance of the Diamniadio industrial park has been measured either. The project management team has planned to define a measurement, reporting and verification system and the measurement of the park's performance according to internationally recognized		U

Interventions	Objectively Verifiable Indicators (Goals)	Mid-term Target	End of project	Progress at project end and comments	Status	Rating
				GHG inventory standards during the first half of 2020.		
<b>Activity 1.3.1</b> Definition of a measurement, reporting and verification (MRV) system				Not yet realized		HU
<b>Activity 1.3.2</b> Performance measurement of the park following an internationally recognized GHG inventory standard				Not yet realized		U
<b>Output 1.4.</b> Project counterparts participate in GPSC activities that include annual meetings, targeted training programmes	Number of events (8) and participants (male/female: 35/15)	GPSC events :4	GPSC events :8	<p>Mid-term and end project targets are reached and over in term of number of events since project counterparts also participated in other global events such as:</p> <p>Abidjan Regional GPSC in 2017,</p> <p>In 2018: Training in Singapore on municipal financing, expert visit to Malaysia with World Bank Colleagues and GPSC Annual meeting</p> <p>BRIDGE FOR CITIES in Vienna in 2018 and 2019</p> <p>In 2019: UNIDO-EU-GoS Circular economy conference, Diamniadio, Expert Group Meeting on EVs and GPSC Annual Meeting, Sao Paulo</p> <p>Triggered EUR 500k cofinancing for solar PV in the IP</p> <p>A national platform for sustainable cities in Senegal was developed (<a href="http://eco-industriedurable.com/">http://eco-industriedurable.com/</a>).</p>		HS
<b>Activity 1.4.1</b> Participation in teleconferences				Realized		HS

Interventions	Objectively Verifiable Indicators (Goals)	Mid-term Target	End of project	Progress at project end and comments	Status	Rating
<b>Activity 1.4.2</b> Participation in GPSC workshops and events				Realized		HS
<b>Outcome 2:</b> <b>An integrated POPs and hazardous waste management system is designed</b>	A report on integrated POPs and hazardous waste management strategy for greater Dakar enterprises	1	1	Report not yet prepared		MU
<b>Output 2.1.</b> An integrated POPs and hazardous waste management strategy developed for enterprises in Dakar and Diamniadio industrial park	A strategy on integrated POPs and hazardous waste management strategy for greater Dakar enterprises (1)	1	1	A strategy on integrated POPs and hazardous waste management to be developed in a gender-specific manner for companies in Dakar and the Diamniadio industrial park, which shall be ready at mid-term of the project implementation, has not yet been developed. However, the terms of reference are developed. The achievement of the result was integrated into Output 3.1 to be attributed to a single service provider. The bidding is ongoing		MU
<b>Activity 2.1.1</b> Prepare TOR for the study				Realized		S
<b>Activity 2.1.2</b> Development of a strategy on integrated POPs and hazardous waste management strategy for greater Dakar enterprises				Not yet realized		U
<b>Output 2.2.</b> Technical assistance provided to conduct detailed feasibility studies of selected pilot projects	Number of feasibility study : 2	0	2	There was no target at mid-term. But, an international consultant from UNIDO will investigate pre-selected pilot projects (SODEA and SOGAS), identify BAT/BEP, provide a report on the suggested BAT/BEP including economic feasibility and possibility to mobilize resources		MU
<b>Activity 2.2.1</b> Further investigation of pre-selected pilot projects				Not yet realized but was not scheduled to be realized absolutely before mid-term		MU

Interventions	Objectively Verifiable Indicators (Goals)	Mid-term Target	End of project	Progress at project end and comments	Status	Rating
<b>Activity 2.2.2</b> Detailed assessment of pilot projects				Not yet realized but was not scheduled to be realized absolutely before mid-term		MU
<b>Activity 2.2.3</b> Technical assistance and transaction advice for selected pilot projects				Not yet realized but was not scheduled to be realized absolutely before mid-term		MU
<b>Outcome 3: An enabling framework is created for implementing sustainable and resilient industrialization</b>	RECP assessments are conducted for 10 enterprises Number of training workshop (2) and participants (male/female: 35/15)	5 1/(20/10)	10 2/(35/15)	The mid-term targets are not reached. No RECP assessments was conducted and no training workshop organized		U
<b>Output 3.1.</b> Environmental and resilience mapping of existing industries in greater Dakar, RECP assessments for selected enterprises conducted and technological and process upgrading opportunities promoted10	Number of reports on environmental mapping of greater Dakar industries : 1  RECP assessments are conducted for 10 enterprises	1  5	1  10	The report on the mapping of the environment and the resilience of existing industries in the Greater Dakar is not yet prepared and even less the evaluation of the RECP of five companies. The terms of reference of the technical specifications for the provision of services related to the realization of an environmental mapping and audit of companies for RECP are developed. The subcontractor is under selection and it is hoped that the work will be completed in July 2020. The mapping report and the five RECP audits of the expected companies were not obtained in accordance with the forecasts of the logical framework.		U
<b>Activity 3.1.1</b> Environmental mapping of greater Dakar existing industries and selection of 10 potential industries				Not yet realized		U
<b>Activity 3.1.2</b> Full-fledged assessment on resource efficient and cleaner production of selected enterprises				Not yet realized		U
<b>Activity 3.1.3</b> Coaching and assisting national consulting firms in conducting RECP assessments				Not yet realized		U

Interventions	Objectively Verifiable Indicators (Goals)	Mid-term Target	End of project	Progress at project end and comments	Status	Rating
<b>Activity 3.1.4</b> Develop a training program tailored to governmental institutions needs				Not yet realized		U
<b>Activity 3.1.5</b> Drafting an action plan for technologies and processes improvements				Not yet realized		U
<b>Output 3.2.</b> Technical and institutional capacity of Agence de la Maitrise de L'Energie (AEME) and other relevant stakeholders in supporting the adoption of renewable energy, resource efficiency, and chemical and waste management technologies in industrial sector strengthened	Number of training workshop (2) and participants (male/female: 35/15)	1 training workshop (20/10)	2 training workshops (35/15)	The training workshop for 20 people, including 10 women, not organized.  The terms of reference have been drafted and the subcontractor has been selected. However, it is hoped that activities will start in early 2020 and end in July 2020.		U
<b>Activity 3.2.1</b> Assess training needs of governmental institutions on renewable energy and low-carbon technologies in industrial sector				Not yet realized but will be easy to realized		U
<b>Activity 3.2.2</b> Prepare training material				Not yet realized		U
<b>Activity 3.2.3</b> Deliver 2 training workshops targeting a total of 50 trainees of which 30% will be women				Not yet realized		U
<b>Output 3.3.</b> Agence d'aménagement et de promotion des sites industriel (APROSI), Bureau de Mise a Niveau (BMN) and other companies assisted in designing and implementing sustainable industry approach for managing Diamniadio industrial park in terms of resource efficiency, chemical and waste management and renewable energy use	Green industry approach for managing Diamniadio industrial park report (1)	1	1	The toolbox for industrial environmental assessment in Senegal has been developed with a manual of recommendations and a user guide for companies and APROSI.  Training in the use of this toolkit was held in October 2019.		S
<b>Activity 3.3.1</b> Review of best practices in resource efficiency, waste management and renewable energy use in other industrial parks				A document entitled "handbook of recommendations" has been developed for APROSI and the companies applying to set up and those already established on the platform. These recommendations were formulated on the basis of a documentary review of		S

Interventions	Objectively Verifiable Indicators (Goals)	Mid-term Target	End of project	Progress at project end and comments	Status	Rating
				BAT/BEP applicable to the industrial park		
<b>Activity 3.3.2</b> Analysis of Diamniadio industrial park energy and waste profiles				Not yet realized		MS
<b>Activity 3.3.3</b> Technical assistance to APROSI and management company in designing, sizing, assessing the techno-economic feasibility and implementing waste management and renewable energy equipments				A training workshop on sustainable park management workshop for APROSI was organized in October 2019 and another is planned for January 2020. Another workshop on the integration of BAT/BEP for the reduction of POPs and the improvement of industrial waste management in RECP audits has been organized in March 2019 for the benefit of APROSI and BMN.		S
<b>Outcome 4: Increased use of renewable energy technologies and low-carbon technologies to reduce carbon intensity of industrialization and urbanization in Dakar and Diamniadio</b>	NAMA proposal report	0	1	The mid-term targets are not reached and it'll be difficult to certified ISO 50001 and 14001, five enterprises according to the remain time for the project implementation		MU
	5 enterprises are ISO 50001 and ISO 14001 certified	2	5			
	Number of industries piloting the use of renewable energy technologies and energy efficient measures and amount of renewable energy generated	3	9			
	Waste Pilot facilities	1	2			
	Total amount of energy generation	4214 MWh	8429 MWh			
<b>Output 4.1.</b> GHG emission inventory/ Energy audit conducted for Diamniadio urban pole and an action plan for climate smart and resilient urban development elaborated and developed as NAMA	GHG Inventory report (1)	0	1	The terms of reference have been drawn up and the subcontractor selected. The activities would start in early 2020 and end in June 2020. It should be noted that although not provided for in the project document, the terms of reference provide as deliverable in addition to the GHG and		M U
	NAMA report (1)	0	1			

Interventions	Objectively Verifiable Indicators (Goals)	Mid-term Target	End of project	Progress at project end and comments	Status	Rating
				NAMA inventory reports, a green climate funds proposal		
<b>Activity 4.1.1</b> Conduction a GHG emission inventory/ Energy audit for Diamniadio urban pole				Not yet realized but was not scheduled to be realized absolutely be realized before mid-term		MU
<b>Activity 4.1.2</b> Drafting of an action plan for climate smart and resilient urban development				Not yet realized but was not scheduled to be realized absolutely be realized before mid-term		MU
<b>Activity 4.1.3</b> Development of a NAMA proposal				Not yet realized but was not scheduled to be realized absolutely be realized before mid-term		MU
<b>Output 4.2.</b> Enterprises in Dakar and Diamniadio industrial park implement small to medium scale pilot renewable energy and energy efficient applications and RECP measures (at least 1 MW systems) and get ISO 50001 and ISO 14001 certified;	Number of industries undertaking energy audits Renewable energy and low-carbon technology options applicable to Diamniadio identified and promoted  Number of industries implementing small to medium scale pilot RE applications and energy efficient measures (5);  Number of new industries ISO 50001 and ISO 14001 certified (5)	5  3  2	10  9  5	Only one of three indicators came close to the mid-term target. Indeed, five industries (CSIP, EIFFAGE, Amsata Plastique, and SM Suarl) undertaking energy audits Renewable energy and low-carbon technology options applicable to Diamniadio identified and promoted However, Amsata Plastique's report had not yet been presented during the field mission of the Evaluator.		MU
<b>Activity 4.2.1</b> Conduction of preliminary audits for enterprises to be installed in Diamniadio industrial zone				Realized		S
<b>Activity 4.2.2</b> Identification of EE/RE opportunities				Realized		S
<b>Activity 4.2.3</b> Promotion of small to medium scale pilot applications and energy efficient measures that do not require large upfront investments				Not yet realized		U
<b>Activity 4.2.4</b> Technical assistance to industries in implementing energy and environment management systems				Not yet realized		U



Interventions	Objectively Verifiable Indicators (Goals)	Mid-term Target	End of project	Progress at project end and comments	Status	Rating
<b>Activity 4.2.5</b> Technical assistance to industries in getting ISO 50001 and ISO 14001 certified				Not yet realized		HU
<b>Output 4.3.</b> Enterprises in Dakar and Diamniadio industrial park implement pilot projects on waste recycling, recovery and energy generation to reduce dioxin and furan emissions and hazardous waste	Number of waste recovery and energy generation facility pilot (2) Total amount of waste recycled Total amount of waste recovered Total amount of energy generation	1 N/A N/A N/A	2 N/A N/A N/A	The mid-term target of at least one company implementing a pilot projects on waste recycling, recovery and energy generation to reduce dioxin and furan emissions and hazardous waste for recycling and recovering energy from waste has not been reached.		MU
<b>Activity 4.3.1</b> Installation and commissioning of pilot projects				Not yet realized		U
<b>Activity 4.3.2</b> Training of beneficiaries on servicing and maintenance of equipment				Workshop on POPs and energy efficiency conducted in March 2019 to build capacity of BMN on POPs and implementation of BAT/BEP but it's steel need training of beneficiaries on servicing and maintenance of equipment		S
<b>Output 4.4.</b> Business model designed to mobilise investment in replication and scale-up of sustainable industry approach in sustainable industrial parks	Business model report on management of sustainable park and industrial application of small to medium scale renewable energy based systems (1)	0	1	This Output is not yet addressed but It will only be addressed after Output 4.2 and Output 4.3.		MU
<b>Activity 4.4.1</b> Documentation of results of managing Diamniadio industrial park in terms of resource efficiency, waste management and renewable energy use and preparation of case studies				Not yet realized but was not scheduled to be realized absolutely be realized before mid-term		M U
<b>Activity 4.4.2</b> Development of best practice manual				Not yet realized but was not scheduled to be realized absolutely be realized before mid-term		MU

Interventions	Objectively Verifiable Indicators (Goals)	Mid-term Target	End of project	Progress at project end and comments	Status	Rating
<b>Output 4.5.</b> Pilot projects monitored, evaluated, and showcased	Number of projects monitored, evaluated and showcased: 2	0	2	Not yet realized but was not scheduled to be realized absolutely be realized before mid-term		MU
	Best practice manual : 1	0	1			
<b>Activity 4.5.1</b> Performance Monitoring and analysis of installed projects				On track		MS
<b>Activity 4.5.2</b> Documentation of results of demonstration projects and preparation of case studies				Not yet realized but was not scheduled to be realized absolutely be realized before mid-term		MU
<b>Activity 4.5.3</b> Development of best practice manual				Not yet realized but was not scheduled to be realized absolutely be realized before mid-term		MU

Note: N/A = None available