



Part I: Project Information

GEF ID

10080

Project Type

FSP

Type of Trust Fund

GET

CBIT/NGI

CBIT **No**

NGI **No**

Project Title

AIM-WELL: Algeria Integrated Management of Waste Energy at the Local Level

Countries

Algeria

Agency(ies)

UNDP

Other Executing Partner(s)

Ministry of Environment and Renewable Energy

Executing Partner Type

Government

GEF Focal Area

Climate Change

Sector

Renewable Energy

Taxonomy

Focal Areas, Climate Change, Climate Change Mitigation, Technology Transfer, Renewable Energy, Sustainable Urban Systems and Transport, Sustainable Development Goals, Influencing models, Convene multi-stakeholder alliances, Strengthen institutional capacity and decision-making, Transform policy and regulatory environments, Demonstrate innovative approaches, Stakeholders, Private Sector, Large corporations, SMEs, Communications, Education, Behavior change, Awareness Raising, Public Campaigns, Local Communities, Type of Engagement, Partnership, Information Dissemination, Consultation, Participation, Beneficiaries, Civil Society, Non-Governmental Organization, Academia, Gender Equality, Gender Mainstreaming, Gender results areas, Knowledge Generation and Exchange, Participation and leadership, Capacity Development, Capacity, Knowledge and Research, Enabling Activities, Knowledge Exchange, Knowledge Generation, Paris Agreement, United Nations Framework Convention on Climate Change

Rio Markers

Climate Change Mitigation

Significant Objective 1

Climate Change Adaptation

No Contribution 0

Biodiversity

Land Degradation

Submission Date

11/23/2022

Expected Implementation Start

4/1/2023

Expected Completion Date

3/31/2028

Duration

60In Months

Agency Fee(\$)

419,540.00

A. FOCAL/NON-FOCAL AREA ELEMENTS

Objectives/Programs	Focal Area Outcomes	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
CCM-1-3	Promote innovation and technology transfer for sustainable energy breakthroughs - Cleantech innovation	GET	4,416,210.00	20,250,000.00
Total Project Cost(\$)			4,416,210.00	20,250,000.00

B. Project description summary

Project Objective

To promote an integrated and comprehensive solid waste management by fostering technology deployment, dissemination, and transfer in collaboration with private sector

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
1. Integrated management of household waste (MSW) at source; minimisation of ultimate waste; reduced transport distance	Technical Assistance	Progressive upstream sorting by households of fermentable (organic fraction) and dry waste (inorganic fraction) with separate collection, and communal sorting planned and established in Constantine and Setif municipalities, so as to reduce the volume	1.1 Source sorting of waste at household level supported by education & awareness campaign 1.2 The collection process for Constantine and Setif's Municipal Solid Waste (MSW) is designed, planned and implemented. 1.3 A supply chain for poultry waste from neighbouring farms is established and operational 1.4 Waste sorting centre is planned and designed.	GET	736,013.00	3,145,200.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
1. Integrated management of household waste (MSW) at source; minimisation of ultimate waste; reduced transport distance	Investment	Equipment necessary for the collection, transportation and sorting of waste is installed and operational	1.5 Eight waste collection points are operational. 1.6 Two electric vehicles for waste collection are acquired. 1.7 Waste sorting facility capable of processing 750 tonnes of MSW per day is installed, equipped and operational.	GET	968,627.00	4,749,375.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
2. Value creation through transformation of waste and poultry manure into fertilizer and energy	Technical Assistance	The management of value creation from transformation of the organic fraction of MSW and poultry manure to fertilizer and renewable energy, and the management of the recycling of the inorganic fraction of MSW is planned and operational	<p>2.1 A waste transformation plant, which will convert the organic fraction of the waste into fertilizer and renewable energy is designed.</p> <p>2.2 Capacity building for analysis and monitoring of the quality of outputs from transformation plant is planned and designed.</p> <p>2.3 Legal and regulatory framework for the standardisation of organic fertilisers is developed and implemented.</p> <p>2.4 An enabling environment for the recycling companies is established, including the introduction of financial mechanisms and incentives for communities and individual participants involved.</p> <p>2.5 Explore opportunities to develop waste management</p>	GET	930,883.00	2,088,134.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
2. Value creation through transformation of waste and poultry manure into fertilizer and energy	Investment	Equipment for the production of fertilizer and energy is installed and operational.	<p>2.6 An organic waste transformation plant for the production of fertilizer and renewable energy (approximately 2MWe and capacity factor ? 80%) is equipped and operational.</p> <p>2.7 An analysis, research and development centre for the monitoring and optimisation of the quality of outputs from transformation plant is equipped and operational.</p> <p>2.8 Poultry waste collection point and processing plant in S?tif , providing approximately 100 tonnes fertilizers per day.</p>	GET	1,085,132.00	6,017,291.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
3. Promotion of the municipal model of integrated waste management at the regional and national levels	Technical Assistance	Replicability of the municipal waste management model	3.1 Implementation mechanism for project replicability across 48 wilayas (Algerian provinces) designed and implemented.	GET	161,088.00	837,500.00
3. Promotion of the municipal model of integrated waste management at the regional and national levels	Investment	Replicability of the municipal waste management model	3.2 One factory for the production of spare parts is installed and equipped	GET		1,900,000.00
4. Knowledge management and monitoring and evaluation	Technical Assistance	Lessons learned are captured and disseminated widely, and project monitoring and evaluation is carried out in order to ensure adaptive management and achievement of project objectives	4.1 Inception workshop 4.2 Project monitoring 4.3 Project evaluations 4.4 Knowledge management	GET	324,467.00	500,000.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
Sub Total (\$)					4,206,210.00	19,237,500.00

Project Management Cost (PMC)

GET	210,000.00	1,012,500.00
Sub Total(\$)	210,000.00	1,012,500.00
Total Project Cost(\$)	4,416,210.00	20,250,000.00

Please provide justification

C. Sources of Co-financing for the Project by name and by type

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount(\$)
Private Sector	SOPTE	Equity	Investment mobilized	10,000,000.00
GEF Agency	UNDP	Grant	Investment mobilized	250,000.00
Recipient Country Government	Ministry of Environment	In-kind	Recurrent expenditures	10,000,000.00
Total Co-Financing(\$)				20,250,000.00

Describe how any "Investment Mobilized" was identified

UNDP co-financing is from TRAC resources, and equity investment from DIVINDUS/SOPTE is balance sheet financing, Ministries contributes to DIVINDUS/SOPTE as it is a para-statal company.

D. Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)
UNDP	GET	Algeria	Climate Change	CC STAR Allocation	4,416,210	419,540	4,835,750.00
Total Grant Resources(\$)					4,416,210.00	419,540.00	4,835,750.00

E. Non Grant Instrument

NON-GRANT INSTRUMENT at CEO Endorsement

Includes Non grant instruments? **No**

Includes reflow to GEF? **No**

F. Project Preparation Grant (PPG)
PPG Required **true**

PPG Amount (\$)
150,000

PPG Agency Fee (\$)
14,250

Agency	Trust Fund	Country	Focal Area	Programmin g of Funds	Amount(\$)	Fee(\$)	Total(\$)
UNDP	GET	Algeria	Climat e Change	CC STAR Allocation	150,000	14,250	164,250.00
Total Project Costs(\$)					150,000.00	14,250.00	164,250.00

Core Indicators

Indicator 6 Greenhouse Gas Emissions Mitigated

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO ₂ e (direct)	1888320	8603514	0	0
Expected metric tons of CO ₂ e (indirect)	1132995	25810542	0	0

Indicator 6.1 Carbon Sequestered or Emissions Avoided in the AFOLU (Agriculture, Forestry and Other Land Use) sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO ₂ e (direct)		4,301,757		
Expected metric tons of CO ₂ e (indirect)		12,905,271		
Anticipated start year of accounting				
Duration of accounting				

Indicator 6.2 Emissions Avoided Outside AFOLU (Agriculture, Forestry and Other Land Use) Sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO ₂ e (direct)	1888320	4,301,757		
Expected metric tons of CO ₂ e (indirect)	1132995	12,905,271		
Anticipated start year of accounting		2035		
Duration of accounting				

Indicator 6.3 Energy Saved (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Total Target Benefit	Energy (MJ) (At PIF)	Energy (MJ) (At CEO Endorsement)	Energy (MJ) (Achieved at MTR)	Energy (MJ) (Achieved at TE)
Target Energy Saved (MJ)				

Indicator 6.4 Increase in Installed Renewable Energy Capacity per Technology (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Technology	Capacity (MW) (Expected at PIF)	Capacity (MW) (Expected at CEO Endorsement)	Capacity (MW) (Achieved at MTR)	Capacity (MW) (Achieved at TE)
Biomass		2.00		

Indicator 11 People benefiting from GEF-financed investments

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female	250	371,250		
Male	250	378,750		
Total	500	750000	0	0

Provide additional explanation on targets, other methodologies used, and other focal area specifics (i.e., Aichi targets in BD) including justification where core indicator targets are not provided

Part II. Project Justification

1a. Project Description

Systems description (environmental problems, root causes and barriers)?

1. In recent decades, the population of large Algerian cities has increased, mainly due to rapid urbanization. It is the biggest cities, especially the coastal ones that welcomed most of the migrating rural population. Local authorities face the challenge of maintaining a better quality of public services in the context of solid waste management. Table 1 lists the upward trend in the production of household and similar waste (HSW) in Algeria in 2035. The projected quantities of HSW produced between 2016 and 2035 considers that the same ratio is maintained in terms of type of waste generated and in terms of use.

Table 1. Generation of HSW in Algeria: 2016 - 2035

	2016	2035
Population (million)	39.6	54.5
Waste (million tonnes / year)	11.6	17.9
Waste per capita (kg / person / day)	0.8	0.9

Source: Ministry of Environment and Renewable Energies (2018a)

2. According to an inventory of waste management in Algeria[1]¹, the waste products are mainly putrescible waste (54.4%). Of the non-putrescible portion (45.6% of the total production), 18% is plastic, 12.62% is textile, 9.75% is paper and cardboard, and 2.84% is metal. Between 35% and 40% of HSW are buried in sanitary landfills, and 55% to 60% are stocked in open dumps. The share of recycled waste accounts for less than 7% and composting for less than 1%. This represents a significant loss for the economy, especially because raw materials account for a large share of annual imports. The above data do not take into account the potential value of organic waste, either as raw material for the manufacture of fertilizers or as a resource of renewable energy. There are also foregone opportunities in creating green jobs and to reduce GHGs by setting up a circular economy focusing on the recovery and transformation of solid wastes. Table 2 summarizes the multiple benefits that will result from the implementation of a National Strategy and Action Plan for Integrated Waste Management 2035 (SNGID 2035).[2]²

Table 2. Key performance indicators of SNGID 2035

Indicator	2016	2019	2022	2025	2028	2031	2035
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Quantity HSW products kg / day / capita	0.79	0.85?	0.90	0.95	1.00	1.04	1.10
Recovery rate (household waste)	7%	8%	10%	14%	19%	23%	29%
Recovery rate (similar waste)	13%	13%	14%	22%	28%	34%	42%
Share of waste (excluding inert waste) buried in TL international standards	0%	0%	1%	24%	47%	70%	100%
Number of illegal dumps remaining to be closed and rehabilitated	1,300	880	340	0	0	0	0
Cost coverage (OPEX + CAPEX) by revenue for municipalities and public enterprises carrying out waste collection (EPIC)	N / A	5%	21%	55%	78%	96%	100%
Net number of jobs created in FTE (direct private and public sector, indirect and informal employment)	N / A	2,650	11,850	26,000	44,000	63,500	91,000
Net annual emissions from the waste management industry (MtCO ₂ e)	22	25	26	21	14	7	-3

Source: Ministry of Environment and Renewable Energies (2018b)

Note: ? SNGID mentions 0.56 kg / day / capita. This value was revised upwards by interpolation.

3. As such, there are significant areas of concern, including health and public health problems and the pollution of rivers and groundwater and greenhouse gases emissions (GHG) generated by a non-performing waste management system. The second national communications to the UNFCCC

(2010) indicates that the waste sector was responsible for 10% of GHG emissions in Algeria (excluding land use change and forestry), and in 2000, landfills, which accounted for 66% of GHG emissions from the waste sector, had emitted 7.542 million tCO₂e.

4. However, there are variations that exist at the local level in terms of the amount and types of waste. For example, the production of household and similar waste (HSW) in Constantine is above the national average. It was estimated at 1.07 kg / person / day (kg / per / d) in 2008 and is expected to reach 1.10 kg / per / day in 2019. In 2035, the solid waste production rates in Constantine will converge towards the national production rate (Table 2). Furthermore, the waste that is produced in some municipalities are associated with commercial or industrial activities. For four wilayas namely Batna, Sétif, Bouira and Medea it is poultry production, accounting for a quarter of the national poultry production. Poultry production over the past ten years has grown by a marked average of 10,3% for white meat and 6.2% for eggs meant for consumption. In value terms, poultry production is worth around 155 billion dinars per year in 2017.[3]³ In these wilayas, socio-economic benefits are accompanied by serious environmental and public health impacts from an artisanal management of poultry waste. And this is despite a legal framework that prohibits the handling and use of raw poultry wastes.

5. The management of HSW is made in the context of the National Program for the Management of Household and Similar Waste (NPMHSW). The implementation of NPMHSW is an extension of Law No. 01-19 and is the starting point and the framework of the new policy on HSW management. The three components of NPMHSW are: (a) the development of HSW management master plans; (B) the closure and rehabilitation of open dumps and (c) construction of sanitary landfills and acquisition of equipment. The majority of planning schemes are linked to the evaluation of current and real costs of waste management in a chain that leads to waste landfilling. Although the solution for integrated management of HSW is generally addressed, technical and economic studies on the opportunities for waste recovery and value addition through transformation, and on the infrastructure that needs to be put in place is lacking.[4]⁴ Consequently, HSW management in the 1,541 Algerian towns comes down to the implementation of the components (b) and (c) of NPMHSW.

6. As discussed above, the financial evaluation of the recovery and transformation, and appraisal costs for managing HSW are generally absent despite the socioeconomic and environmental benefits. Nevertheless, it is important to note that financial management of solid waste in Algeria is almost completely subsidised by the government. A baseline analysis carried out in the process of formulating the SNGID has found that 95% of all costs related to waste management were born by the central government; 2.8% by international grants; 1.2% by regional development funds; and 0.5% by local governments.[5]⁵ As it were, waste management is a net contributor to government

deficit. This state of financial unsustainability in solid waste management has been a factor strongly influencing the formulation of the SNGID.

7. The stress exerted by solid waste management on public finance needs to be analysed in the current context of the COVID-19 health and sanitary crisis and falling oil prices. Algeria is facing a combined shock from halving oil prices, a public health crisis and the consequences of global economic disruptions following the COVID-19 outbreak. An oil price at US\$ 30/barrel in 2020 would decrease Algeria's total fiscal revenues by 21.2%. Despite cuts to public investment (-9.7%) and public consumption (-1.6%) envisaged by the 2020 Finance Law, the fiscal deficit would increase to 16.3% of GDP. Meanwhile, the sharp decline in export revenues (-51%) will lead the trade deficit to expand to 18.2% of GDP and the current account deficit to peak at 18.8% of GDP in 2020, despite efforts to contain imports and weak domestic demand.[6]⁶ Improving the financial management of solid waste through a circular economy and private sector investments can contribute towards better management of public finances and support post-COVID economic recovery. Conversely, continued reliance of the waste sector on public funding may lead to poorer waste management services delivered to the population because of a combination of cuts in public investment coupled with changing government priorities to address the health and sanitary COVID-19 crisis and to provide better social safety net to dampen the social impacts of the pandemic.

8. There are many obstacles and root causes to the sustainability of integrated waste management in Algeria. The major obstacles are listed in Table 3.

Table 3. Obstacles to the implementation of integrated management of HSW at the local level

Obstacle	Description
Technical weaknesses	<ul style="list-style-type: none"> ? Lack of upstream sorting of waste (household level). ? Large volumes of unsorted waste must be transported over long distances to solid waste disposal sites. ? Lack of value associated with recyclable waste, resulting in a relatively low participation of SMEs; It is estimated that the saturation level of landfills is three times faster than it could be due to the low level of sorting and recycling of waste. ? Insufficient means for the collection of municipal waste, due to the lack of integrated management plans to transform wastes, and the reduction of resources for their implementation. ? A lack of technical expertise to optimize fertilizer production and to generate power through the transformation of organic waste.

Institutional weaknesses	<ul style="list-style-type: none"> ? A lack of intersectoral waste management approach involving the relevant sectors at every level of the value creation process. ? Lack of adequate policies triggering a sustainable and integrated waste management. ? Inability of local authorities to manage municipal solid waste sustainably. ? Need for greater involvement of the Ministry of Education and Ministry of Religious Affairs: the active participation of schools and mosques to raising awareness of the population to waste problems is considered essential to reduce the generation of waste and promote the sorting / recycling. ? Lack of adequate funding.
Sociocultural barriers	<ul style="list-style-type: none"> ? Lack of adequate information, with poor communication or inadequate support of the media. ? The lack of effective communication and awareness leads to a lack of concern for sustainable waste management at the household level

Baseline scenario and baseline projects

9. In the current context (Figure 1A) that serves as baseline, the management of HSW is made through a linear chain consisting of three steps including (i) waste production; (ii) collection and transport; and (iii) disposal in managed landfills or open dumps. The main objective of the UNDP-GEF project aims to transform this linear chain into a circular chain (Figure 1B) with aims to transform HSW while reducing the amount of waste to be landfilled. The sorting of solid waste at source (mainly in the households) and the various means of transforming HSW are two additional steps in the new circular chain and are central to the paradigm shift that underpins the circular economy. It is pointed out that there are no ongoing or planned initiatives for the establishment of the circular economy in Algeria, and the UNDP-GEF project is considered to be the first of its kind in the country.

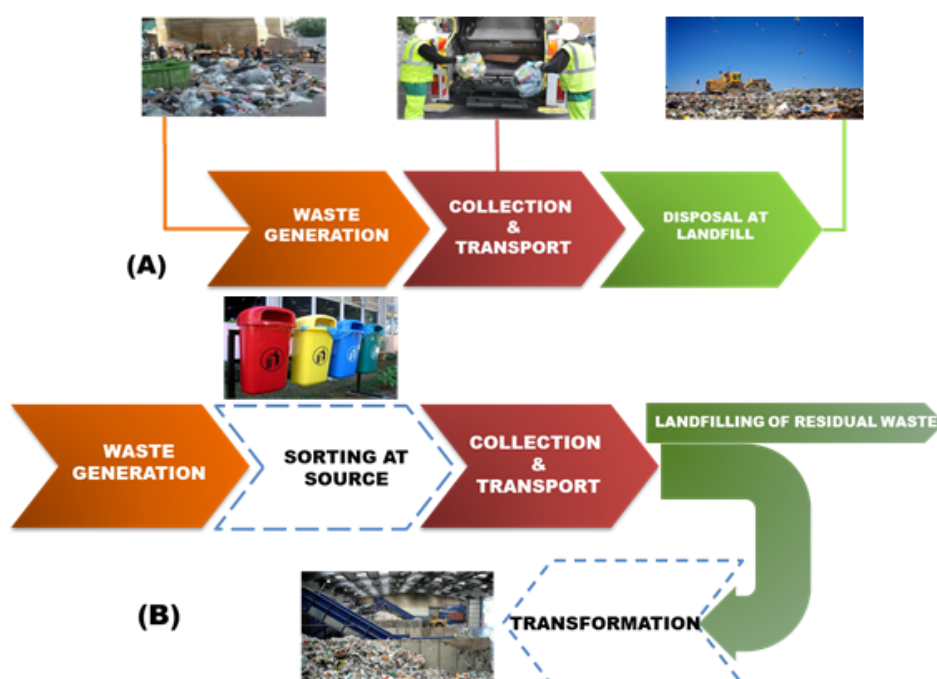


Figure 1. (A) Chain of current solid waste management; (B) Value chain of integrated solid waste management.

Proposed alternative scenario

10. The benefits of a circular economy listed in Table 2 are related to the link 'transformation' in Figure 1 (B). The GEF funding will be used to operationalize the various technology options to enhance the recovery and transformation of solid wastes. The diagram of an integrated management of HSW which comprises (i) the optimization of the waste collection; (ii) the complete sorting of waste; and (iii) three means to transform solid waste (the production of fertilizers, recycling and electricity production) is shown in Figure 2. The main levers to avoid GHG are also indicated in this diagram.

11. The project will implement a strategy founded on a solid Theory of Change (ToC, Annex H) that will lead to changes that will overcome the above barriers and will *promote an integrated and comprehensive solid waste management by fostering technology deployment, dissemination, and transfer in collaboration with private sector?*. This strategy will lead to 4 outcomes: i) Outcome 1: Progressive upstream sorting by households of fermentable (organic fraction) and dry waste (inorganic fraction) with separate collection, and communal sorting planned and established in Constantine and Sétif municipalities, so as to reduce the volume of landfilled waste; ii) Outcome 2: Managing value creation resulting from the conversion of the organic fraction of household solid waste and poultry waste into fertilizer and renewable energy, and the management of the recycling of the inorganic fraction of solid waste is planned and operational; iii) Outcome 3: replicability of the municipal integrated waste management model in all Wilayas in Algeria; and iv) Outcome 4: lessons learned are captured and disseminated widely, and project monitoring and evaluation is carried out in order to ensure adaptive management and achievement of project objectives. The integrated solid waste management value chain shown in Figure 2 will be established to develop a circular waste economy through achievement of the three project outcomes. In the absence of the UNDP-GEF project, the prevailing barriers will persist with increasing negative social and environmental impacts due to deficient solid waste management at the municipal level. Further, significant economic opportunities will be foregone (Table 2).

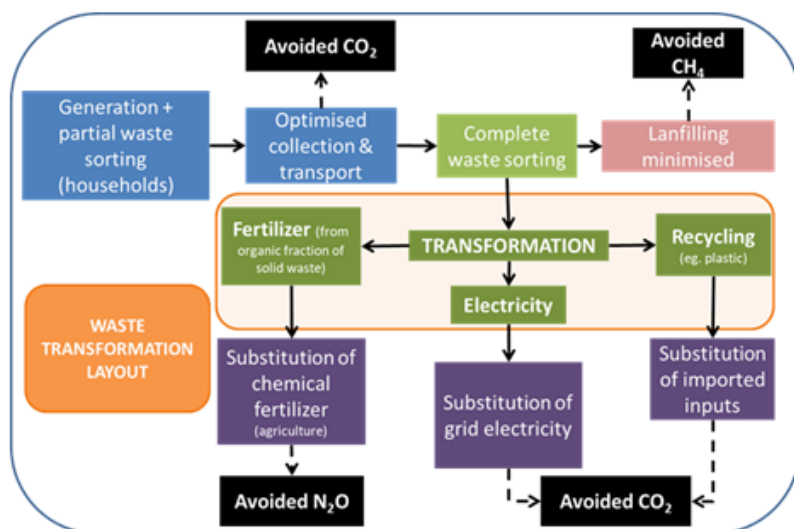


Figure 2. Integrated solid waste management value chain

12. There are different levers of change and assumptions that are involved at various levels in the ToC. External levers are variables that are found outside the project perimeter. Even if they are not under the control of the project, they exert pressure in the right direction to support the project interventions. The main external factors that will have a positive influence on the logic of the project are: (1) the increasing demand for a better quality of service in municipal waste management; (2) a municipal fiscal deficit context that causes unsustainable pressure on public finances; and (3) a political commitment to reduce emissions through integrated solid waste and renewable energies in order to combat climate change.

13. Key project internal levers are: (1) a circular value chain for integrated management of solid waste is established; (2) demonstrate the financial viability of the circular economy; (3) waste processing technologies are appropriate to the local context; and (4) optimal coordination of market players is ensured. The internal levers are reflected in the activities proposed under the different outputs and results discussed in the next section.

14. Assumptions: The ToC contains a number of assumptions outlined in red boxes in Annex SA1. These assumptions are aligned with those identified in Annex I. In terms of project interventions, key assumptions are:

- ? A political and institutional support received at all levels (national and public);
- ? The willingness of the private sector to engage in the model of an integrated solid waste management;
- ? Reliable and accurate data are available to demonstrate the multiple benefits of sustainable development of the project, as well as for monitoring and evaluation purposes;
- ? Choosing appropriate waste processing technologies leads to a successful demonstration of the circular value chain;
- ? Adequate participation of households in waste sorting at source;
- ? The potential resistance to change by threatened actors in the baseline is overcome by creating win-win solutions especially concerning the public enterprise (EPIC) responsible for managing the sanitary landfill in Constantine; and
- ? The information and training needs of market participants are adequately met.

15. In terms of long-term results, the assumptions are:

- ? Human capacity built by the project are maintained and put into application in the project's partner institutions;
- ? The business climate and the macroeconomic framework are conducive for private investment in the circular economy;
- ? The market mechanism is an appropriate way to increase the scale GHG emission reduction while providing co-benefits of sustainable development at local level;
- ? Creation of green jobs through small and medium enterprises in the solid waste circular economy; and
- ? The financial burden on public finances in municipalities represents a lever toward integrated solid waste management.

16. Assumptions concerning the intermediate milestones are:

- ? Private investors are sufficiently stimulated by a framework to enhance investment in the circular economy;
- ? Public-private partnerships set up to ensure win-win situations for all market players; and
- ? The awareness is created among the players in the value chain to enable them to fulfil their roles and responsibilities.

17. Expected results: The proposed GEF-funded project is designed to address weaknesses identified in the baseline. It is targeted at the city (wilaya) level so as to cover all components of the solid waste value chain (Figure 1B, Figure 2) and to be easily replicated at national level in the NPMHSW. The project is based on three pillars:

- ? Reducing the volume of waste at source and transport distances to landfills (open dumps or sanitary landfills) by: sorting upstream waste at household level; strengthening municipal institutions and technical support; improving the status of the waste sector employees; waste collection and recycling network developed with micro- and small enterprises at the local level; and the planning and design of municipal waste sorting plant;
- ? Integration of biomechanical waste processing in order to separate the organic fraction; and
- ? Promoting the creation of economic value from waste by increasing recycling activities and the production of fertilizers and energy by transforming the organic fraction of solid waste.

The three pillars to provide the proof-of-concept for developing a circular solid waste economy will combine to also support Algeria's post-COVID 19 economic recovery.

Changes made to the project design

18. An adaptive approach has been used to develop the project document. Changes have been brought to the project design based on more informed baseline assessments. These changes are summarized in Table 4.

Table 4: Summary of changes brought to the project design.

Proposition at PIF stage	Change in project design at CEO ER stage	Justification for change
Output 1.5: Eight waste collection points are installed and operational	Output 1.5: Eight waste collection points are operational	Baseline assessment carried out at PPG revealed that the eight collection points have already been installed, but are yet to be operationalised. Hence, the UNDP-GEF project will no longer invest in these collection points and will focus exclusively on making them functional.
Output 2.8: Poultry manure collection point in S?tif	Output 2.8: Collection point and poultry waste processing plant in S?tif.	There seemed to have been a confusion in the PIF regarding the transformation of poultry waste generated in Setif. In the PIF, it appears that the poultry waste would be transported to Constantine (15 km from Setif) for value addition. However, discussions with the investors revealed that this was not the case and that the value addition would take place in Setif itself. Consequently, Output 2.8 has been changed slightly to be more precise; mentioning that not only the collection point for poultry waste will be operationalised in Setif, but also the waste transformation plant producing 100 tonnes of poultry-derived fertilizers daily.

Lack of Component 4	<p>Component 4 on Knowledge Management and Monitoring and evaluation has been added with the following outputs:</p> <p>Output 4.1: Inception workshop</p> <p>Output 4.2: Project monitoring</p> <p>Output 4.3: Project evaluations</p> <p>Output 4.4: Knowledge management</p>	Component 4 has been added to be in alignment with recent UNDP and GEF guidelines for a standalone component dedicated to Knowledge Management.
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19. The cofinancing amount decreased slightly from \$47 million at PIF stage to \$40 million. The latter is more realistic and based on various discussions with the private sector and the Government. However, despite this change, the cofinancing amount still represents a ratio of 1:9.

Project Components, Outcomes, Outputs and Activities

Component 1: Integrated management of household waste at source; minimization of final waste; and reduced transport distance

Outcome 1: Progressive upstream sorting by households of fermentable (organic fraction) and dry waste (inorganic fraction) with separate collection, and communal sorting planned and established in Constantine and Sétif municipalities, so as to reduce the volume of landfilled waste.

20. This component aims to implement the sorting of upstream solid urban waste by households in the towns of Constantine and Sétif, with a collection mechanism for different types of waste (organic and dry waste) and a high-performance centralised sorting facility in Constantine. This upstream link will rest on a cross-sectoral strategy and a communication plan to sensitize households, to put in place incentive schemes, and to integrate solid waste management in school curriculum to sensitise students. In addition, this component will assist in the implementation of NPMHSW through support to eradicating open dumping practices, to organize the collection, the transportation and disposal of municipal solid waste under conditions that guarantee the protection of the environment and public health in the wilayas of Constantine and Sétif.

21. By focusing on the 3Rs - reduce, reuse, recycle, it aims to reduce GHGs at every stage of the waste management process in upstream sorting, recycling and transformation; only the remaining waste that cannot be used will be sent to the landfill. This will not only avoid methane emissions at the landfill, but also significantly reduce the total distance for transporting the waste to the landfill (Figure 2).

22. SOPTE (Société Polyvalente de Travaux et Environnement) brings major advantages to the implementation of outputs and the activities under Component 1. Its existing network capacity to collect, transport and dispose of waste is as follows:

- ? Over 20 years of service in the municipality of Constantine;
- ? A recently modernized fleet of 53 specialised trucks;
- ? 540 people dedicated to the collection and transportation of waste;
- ? Computerized organization with an information and database system since 2004;
- ? A volume of household waste that exceeds the critical mass necessary for economic viability. This corresponds to about 257 tonnes per day, of which 90 tonnes are inorganic and 167 tonnes of organic waste. This does not include industrial and commercial waste;
- ? Information Technology Infrastructure (ITI) to capture and manage the performance of waste collection in the various sectors of the municipality;

- ? SOPTE is also active in other wilayas, including Algiers, Biskra, Tebessa, Oued Souf, and Ouargla Laghouat, which will facilitate replication and scaling up of the project;
- ? Its long working relationship with the People's Municipal Assembly (PMA) Constantine and the Wilaya of Constantine, ensure that the state structures of the Ministry of Internal Affairs, Local Government and Land Use Planning (MICLAT) can be used to facilitate the project activities;
- ? In collaboration with the Directorate of Environment of the Wilaya (DEW), it gained recent experience in the installation and maintenance of 225 open recycling bins that facilitate the sorting of organic and inorganic waste (recyclable); and
- ? Experience in education and community awareness.

23. *Output 1.1: Source sorting of waste at household level is supported by education and awareness campaign:* The implementation of this output will be based on preliminary surveys carried out during the preparatory phase with one hundred households in the communes of Constantine and El Khroub (Annex K). The following activities will strengthen the advocacy and outreach carried out by the DEW of Constantine and those of civil society. In addition to avoiding potential contamination of organic waste by household hazardous wastes in order to ensure the quality of transformed products, upstream sorting will also reduce the cost of processing the raw materials. Upstream sorting reduces the occupational health and safety risks of waste handlers.

? Act. 1.1.1: Detailing the surveys carried out during the preparatory phase: Detailing the household surveys will help to ascertain the willingness of households to practice waste sorting and participate in recycling, and also to better understand the barriers that they face. This activity will also provide inputs to implement the other activities planned under Output 1.1.

? Act. 1.1.2: Identify the means of communication, develop appropriate outreach materials and raise awareness: The most appropriate means to communicate with households were identified in preliminary surveys (Annex K). These means of communication will be validated by the results of Act. 1.1.1, and outreach materials will be developed accordingly. Means and communications messages and materials will be gender sensitive.[7]⁷

? Act. 1.1.3 Identify and formulate incentive mechanisms: The motivators for sorting household waste are economic incentives, personal and social norms, and the encouragement of authorities. However, economic incentives alone can reduce the effectiveness of the other motivators and become a perverse incentive to produce more waste. Building on the achievements of past experiences of the DEW of Constantine, the project will focus on motivating waste segregation in households and communities through personal and social norms, and non-financial rewards. The best incentive mechanisms will be validated by the results of the Act. 1.1.1. This activity will benefit from sharing of lessons learned by the UNDP-GEF ?COMPOST? project in Ethiopia that is discussed below (paragraph 75).

24. *Output 1.2: The municipal solid waste collection in Constantine and S?tif is designed, planned and implemented.* The upstream sorting and transformation of municipal solid waste will require a new plan for waste collection in the city of Constantine and S?tif.

? Act. 1.2.1: Technical study for the design of a process of collection and transport of sorted household waste: Upstream sorting will require a new process of municipal solid waste collection in Constantine. Although there will be no sorting on poultry waste in S?tif, the transformation of this waste will also require a new process of collection and transport. The project will finance a socio-economic and technical study to define the optimised waste collection and transport processes in an integrated waste management value chain in the Wilaya of Constantine. The study will propose scenarios with a growing share of upstream sorting over time.

? Act. 1.2.2: Implementation of the new process of waste collection and transport: The recommendations emanating from Act. 1.2.1 will be implemented, and the optimization of the new process will be ensured using an adaptive project management (Section III). This activity will offer sorting and collection solutions for household hazardous waste (HHW) (or special household waste) such as batteries, paint, detergents or chemical cleaners, among others.

? Act. 1.2.3: Development of new Masterplans for HSW: The UNDP-GEF project will lead the development of new Masterplans for integrated management of HSW for the communes of Constantine and S?tif. The formulation of the Masterplans will draw on the results of other project activities. This activity will also promote South-South Cooperation (see paragraphs 75 and 76) through exchanges with the UNDP-GEF project entitled COMPOST Ethiopia and the adhesion of

ME and the Wilayas of Sétif and Constantine to the African Clean Cities Platform (ACCP). These exchanges will enrich the ability of wilayas to better define their strategies and action plans for integrated solid waste management. In addition, these exchanges serve to bring innovative elements to the project activities.

25. Output 1.3: A supply chain for poultry waste from nearby farms is established and operational. A field survey (Annex K) was conducted during the preparatory phase of the project to map poultry waste producers, and to clearly identify the chain of collection and transport of this waste stream. This survey also served to clarify the conditions under which poultry farmers and especially collectors and transporters (also referred to as collector-transporters, since both functions are typically done by the same individuals) of poultry waste would want to participate in the UNDP-GEF project. The results of this survey have informed the following activities.

? Act. 1.3.1 Identification and acquisition of land for the poultry waste transformation plant: As discussed above and supported by a field study in Sétif (Annex K), poultry waste in its raw state is spread outdoors at Ksar El Abtal (and other sites) that causes serious detrimental environmental and public health impacts. The transformation of poultry waste into organic-based fertilizers will improve the quality of the environment and alleviate public health problems. However, the implementation of a supply chain of poultry waste for value addition will rest on the existence of a poultry waste processing plant. This activity will support the ongoing discussions between SOPTE and the Wilaya of Sétif to finalize the identification and acquisition of land in the town of Ksar El Abtal (Annexes K, O and P) where the poultry waste processing plant will be established. Also, this activity will develop a site development plan detailing the specifications of poultry waste processing plant. The project will support identification of land for setting up the poultry waste transformation plant so that eviction is absolutely avoided. Please see Annex P on Environmental and Social Management Framework (ESMF).

? Act. 1.3.2: Assessments of impacts and risks: The transformation plant will have the capacity to handle 600 tonnes of poultry waste daily (600 t/day). The Executive Decree No. 07-144 of 19 May 2007 provides for environmental impact and risk assessments for waste volumes above 10 t/day. The technical assistance of the project will support these assessments. These impact studies will also cover environmental and public health hazards in the vicinity of the town of Ksar El Abtal that will be avoided. It is pointed out that the open air waste storage areas at Ksar El Abtal operate without licenses from the competent authorities (Wali), and the public health hazards arising from the open-air storage of raw poultry waste may cause social unrests.

In addition, the project will have social impacts downstream in the existing poultry waste chain; specifically among transporters of the dried poultry waste to agricultural areas in the south of the country. In this case, this activity will apply the Environmental and Social Management Framework (ESMF) that accompanies the CEO ER (Annex P) to develop an Environmental and Social Management Plan (ESMP), including a rehabilitation plan for any job losses.

? Act. 1.3.3: Contract finalized with licensed collector-transporters: The processing plant will receive ~ 28% of the daily production of poultry waste generated in Sétif. The investigation of the preparatory phase has highlighted that collector-transporters were in favour of the proposed integrated solid waste management project on the condition that they did not suffer financial losses. The project will help identify the collector-transporters that are licensed with ME in order to establish long-term contracts for the supply of 600 tonnes of poultry waste daily.

26. Output 1.4: The waste sorting centre is planned and designed. The project will begin with a first phase of transforming 500 tonnes of municipal solid waste (MSW) per day, expandable to 750 tonnes / day towards the end of the 5-year lifetime of the project, and eventually to reach a capacity of 1,000 tonnes per day. The SOPTE has already acquired 10 hectares of land within the region of Ben Badis, which will serve, among others, to accommodate the waste sorting facility. The site is located in an industrial area and will also house the solid waste transformation plants (outputs 2.1 and 2.6) as described in the section on Project Map and Geo-Coordinates and demarkations shown in Annex E.

? Act. 1.4.1: Plan and design a waste sorting centre: Although the project proposes upstream sorting at the household level, it will be done on a pilot basis in four districts only. The bulk of MSW will still be mixed and requiring sorting prior to transformation into value-added products. For this, a centralized sorting centre will be constructed on the site already identified by SOPTE. A site development plan will be established to place the centralized sorting centre in relation to the solid waste transformation plants. The site development plan will consider the need to increase the waste flow over time.

? Act. 1.4.2: Technical specifications for the sorting centre: The management plan will be accompanied by a technical specification sheet for the sorting centre. The technical specifications will be finalized with inputs from the Canadian partners constituting the PPP, and the means of incorporating women in the construction of the sorting centre will be proposed.

? Act. 1.4.3: Assessments of impacts and risks: The construction and operation of the MSW sorting centre will be regulated by a number social and environmental legislations as described in the ESMF (Annex P). A study of environmental impacts was conducted in February 2019 but it is not up to the standards of UNDP's Social and Environmental Safeguards (SES). Also, it is noted that the project has been rated as high risk (Annex H). Technical assistance from the UNDP-GEF project will support an Environmental and Social Impact Assessment (ESIA), and the formulation of an ESMP. It should be noted that the PPP (or Joint Venture, JV) has already developed three rehabilitation scenarios with respect to job and financial losses that could affect the public enterprise (EPIC-CET) responsible for managing the sanitary landfill and transfer station in Constantine. The ESMP will build on these scenarios.

An important element to highlight in the ESMF is to study the social and environmental impacts of the entire solid waste value chain, and not at the level of individual plants (e.g. waste sorting and transformation units). This means that even if the design and planning of the sorting centre and waste transformation are found under different outputs (output 1.4 and output 2.1, respectively) Activity 1.4.3 will be carried out jointly with Activity 2.1.3 in order to ensure that this global value chain perspective is maintained.

27. Output 1.5: Eight waste collection points are operational. Eight waste collection points are already installed in public spaces in Constantine since 2008, but they are still not operational. The operationalization of these collection points, each of which consists of two underground bins, can only be made once a harmonized solid waste value chain has been put in place. In the absence of this integrated system, the sorted waste will be mixed with the waste collected and transported to open dumps.

? Act. 1.5.1: Awareness Campaign: An awareness campaign will be conducted to inform the public of the proper use of underground bins and collection points. The campaign will be accompanied by an appropriate collection of waste from these collection points to send the signal to the public concerning the new waste collection and transformation value chain. This activity will be implemented in conjunction with the campaigns promoted under Activity 1.1.2 on waste sorting by households.

Act. 1.5.2: Waste collection scheme from underground bins is established: The awareness campaign will be accompanied by a measurement campaign to establish the quantities of solid waste that are generated at the eight waste collection points. This measurement campaign will be used to determine the waste collection frequency at these collection points. Regular monitoring will ensure the identification of seasonal trends in the volume of waste generated.

28. Output 1.6: Acquisition of two electric vehicles for municipal waste collection. The collection and transportation of household waste are ensured by diesel garbage collection trucks. This results in GHG emissions as shown in Figure 2. An incremental element of GEF investment will be the collection and transportation of household waste using two electric garbage trucks to reduce GHG emissions. These electric trucks will be used in two waste collection areas in the city of Daksi Abdesalem and the city of Zouaghi Slimane. The electric vehicles available on the market are mostly of European origin and are highly automated. The capacity ranges from 18 to 20 m³ and a typical electric truck has a range of about 200 km for a battery capacity of about 200 kWh. Typically, the price of an electric garbage truck is double that of a conventional truck.

? Act. 1.6.1: Technical datasheet for electric trucks: The specifications of electric trucks will be made according to criteria that will be identified by the technical working group (TWG) for Component 1. A list of the most appropriate technological options in the context of Constantine will be produced and validated by the same TWG.

? Act. 1.6.2 Design of tender and procurement: A competitive and transparent tendering process will be developed for the purchase of the two electric trucks using the results of Act. 1.6.1. The tender document will include a clause on maintenance and supply of parts and batteries. Proposals received will be evaluated by a selection committee comprising members of the Project Steering Committee (PSC) and excluding working group members who have developed the data sheet at Act. 1.6.1. The two electric vehicles will be used in areas of the city and the city Daksi Abdesalem and Zouaghi Slimane, and will be operated and maintained by SOPTE.

29. Output 1.7: A waste sorting centre capable of processing 750 tonnes per day of MSW is installed, equipped and operational. This output is complementary to Output 1.4. The capital to invest in the centralized waste sorting plant will come from the joint venture (JV) comprising SOPTE, the National Waste Agency (AND), and Canadian partners. Technical assistance will be used for training selected SOPTE personnel for the operation and maintenance of the facility. Some members of the AND staff will also be introduced to the maintenance and operation of the processing units and waste recovery. This will not be for the purpose of assuring daily operations of these units but to ensure a minimum technical knowledge, which is deemed important for good operation of the PPP. The centralized waste sorting centre will be located on the industrial complex shown in Annex E.

? Act. 1.7.1 Construction of waste sorting centre: Centralized sorting unit of household waste will be constructed according to the site development plan for the industrial site and the specifications that will be developed under Output 1.4. The equipment specifications are as specified in the technical datasheet. The construction and operation of this unit will be made in line with the ESMP that will be developed under Activity 1.4.3.

? Act. 1.7.2: Capacity Building to operate the sorting centre: The innovative character of the UNDP-GEF project implies that the technical expertise required for the proper operation and maintenance of the new sorting facility is not available in Algeria. The project will support the technical training of AND and SOPTE staff who will be responsible for the operation and maintenance of the waste sorting centre. Two options are identified: (1) study tours, and (2) on-the-job training programs from qualified trainers.

Component 2: Value creation through the transformation of solid waste and poultry waste into fertilizer and energy

Outcome 2: Managing value creation resulting from the conversion of the organic fraction of household solid waste and poultry waste into fertilizer and renewable energy (2 MWe installed capacity), and the management of the recycling of the inorganic fraction of solid waste is planned and operational.

The fact of ensuring the regular production of a reliable alternative to chemical fertilizers at a competitive price is of paramount importance to the underlying business model of the PPP. One of the key aspects to achieving this is the introduction of poultry waste in the transformation process, which can be used to improve the levels of NPK in the organic-based fertilizer. The project plans to develop a network of suppliers to ensure a constant supply of poultry waste and to develop testing facilities supported by research and development in order to optimize the quality of the final product.

30. Output 2.1: A waste processing plant that will convert the organic fraction of the waste into fertilizer and renewable energy is designed. The household waste processing plant will be installed at the industrial site that will also house the waste sorting centre (Outputs 1.4 and 1.7). This plant will process about 60% of total waste collected into fertilizer and renewable energy.

? Act. 2.1.1: Site development plan of the waste transformation plant developed: The waste processing plant will be installed adjacent to the centralized solid waste sorting centre (Output 1.7). The development plan for the industrial site will be established to locate the solid waste transformation plant relative to the centralized sorting centre. The site plan will also consider the need to increase the throughput of solid waste over time as discussed in Output 1.4. It is planned that poultry wastes collected around the Wilaya of Constantine will be transformed into fertilizers at the Constantine processing unit. This unit will not receive any poultry waste from S?tif.

? Act. 2.1.2: Technical datasheet of the plant: The site development plan will be accompanied by a technical data sheet for the waste processing plant. This technical factsheet will be prepared with inputs from the Canadian partners in the PPP, and it will also propose means of incorporating women in the construction of plant.

? Act. 2.1.3: Assessments of impacts and risks: This activity will be carried out jointly with Activity 1.4.3 in order to retain an overview of the entire solid waste value chain. The GEF-UNDP project will support the upgrading of the environmental impact assessment that was carried out in February 2019 through a detailed ESIA and formulation of a corresponding ESMP. This study and the action plan will be implemented as planned in the ESMF (Annex P).

31. Output 2.2: Capacity building for analysis and monitoring of the quality of outputs from transformation plant is planned and designed. A centre for laboratory analysis and research and development, whose main purpose will be to monitor and optimize the quality of fertilizer and

combustible material produced by the waste processing plant will be designed and operational. The centre will work in partnership with the General Directorate for Scientific Research and Technical Development (DGRSDT).

? Act. 2.2.1: Identifying equipment needs: A preliminary list of equipment^[8] that will be needed to analyze the quality of fertilizers and ensure agricultural productivity was identified during the preparatory phase of the project. This list will be finalized and endorsed by the TWG for Component 2 at the beginning of the project implementation. The specifications of each equipment will also be developed and validated.

? Act. 2.2.2: Training needs gap analysis: Preliminary analysis of training needs was made during the preparatory phase of the project. This analysis will be expanded in tune with the Act. 2.2.1, and the project technical support will ensure that the gaps in expertise to operate the new equipment and the adoption of new laboratory protocols are bridged (Act. 2.7.2). The gap analysis will have a specific focus on gender balance and propose measures to bridge any gender gaps. It is expected that a total of 15 persons will receive capacity building.

32. Output 2.3: A legal and regulatory framework for the standardization of organic fertilizer is developed and implemented. Formulation of policies and regulatory framework for the standardization of NPK-enriched fertilizers produced from the organic fraction of MSW and poultry waste.

? Act. 2.3.1 Standards for fertilizer developed and validated: The establishment of a standard for fertilizer requires the development of (1) a standard for the specification of the product; and (2) an evaluation standard for product conformity.^[9] These standards will be developed by the Algerian Institute for Standardization (IANOR) through the following steps: (i) activating the National Technical Committee 31 (or 31 NTC) whose title is "Fertilizer"^[10]¹⁰ (ii) training members of this Committee, (iii) providing all normative documentations to members of the Committee, (iv) adoption of the standard by the Technical Committee, (v) national and international public consultations through the IANOR website (2 months), (vi) responses to any comments and suggestions emanating from the public consultation process, and (vii) validation of the standard by IANOR.

? Act. 2.3.2: Regulations for Technical Conformity: After having developed the Standard of fertilizers (Act. 2.3.1), the Ministry of Industry (MI) will initiate the procedure for developing the regulations for ensuring the technical conformity of fertilizers that will be produced from the organic fractions of solid wastes.^[11]¹¹

? Act. 2.3.3 Fertilizer homologation by the Ministry of Agriculture, Rural Development and Fisheries: The project will ensure that the quality of fertilizers will be according to the Standards developed under Act. 2.3.1. Once the quality of the fertilizer has been established, testing their biological efficiencies will be carried out to certify the fertilizers in terms of their agricultural performance. The tests will encompass all aspects and parameters which determine the contribution of fertilizer such as soil type, dosages of fertilizer, impact on yield, and impact on soil quality, among others. The Institut Technique des Cultures Maraîchères et Industrielles (ITCMI) will carry out these field tests.^[12]¹² As most of the poultry wastes in the baseline are used in the cultivation of potatoes in the south of the country, fertilizers from poultry waste will be tested in these same areas. The homologation process will culminate in a protocol for the use of the fertilizers according to agro-ecological conditions.

33. Output 2.4: An enabling environment for the recycling companies is established, including the introduction of financial mechanisms and incentives for communities and individual participants involved. The National Waste Agency (AND) has a register of licensed operators, which are active in the MSW sector. But there are still informal operators operating without authorization. This makes it difficult to have accurate statistics on the volume of waste that is recycled. Without a register or a complete inventory, regulation of the sector remains difficult. For example, adequate working conditions of informal operators cannot be guaranteed. With an inclusive and equitable

development approach, the project will help the AND to update its register of coded activities in the solid waste sector, and to develop incentive mechanisms for involving recycling companies in the integrated solid waste management value chain.

? Act. 2.4.1: Census of informal operators: The UNDP-GEF project will develop and validate a methodology to identify informal operators in Constantine. Once validated, this methodology will be used by the AND, in collaboration with the Ministry of Commerce, to update the register of commercial operators in the recycling industry. Companies thus identified will be invited to participate in the project through Act. 2.4.2.

? Act. 2.4.2: Incentive mechanisms for businesses, communities and individuals: A strategic orientation of the UNDP-GEF project is its contribution to equitable and inclusive socioeconomic development. To protect the financial interests of existing operators who have been identified in Act. 2.4.1, they will be invited to develop long-term contracts with the project. This will ensure these companies of long term revenues through the sale of recovered dry materials from the sorting process for recycling. The first financial incentive for operators is therefore in the form of contractually-secured, long-term revenues. Another incentive for that will ensure the financial sustainability of recyclers is the possibility to recover dry waste, such as plastic, glass, metal, electronic waste, paper and carton for recycling from the centralised waste sorting facility (Output 1.7). Table 1 in Annex I shows the percentage amount of different types of waste that will be transformed by the UNDP-GEF project. In both phases, dry wastes (except for plastic that will have a surplus to recycling market only in the first phase of the project) will be diverted to the market for recycling. This design is part of the inclusive approach of the UNDP-GEF project to share benefits with the wider community of market operators that will be able to develop (where they do not exist like for e-waste) and sustain recycling markets for the dry wastes through secured provisioning by the project. The project design will therefore support the financial sustainability of the recycling industry in Constantine. Communities and individuals will be encouraged to deliver all recyclable materials directly to the industrial centre of SOPTE against financial remuneration. The categorization of communities and individuals will be made by the AND to differentiate them from private companies.

34. Output 2.5: Explore the possibilities of developing a waste management project for the voluntary carbon market. A national voluntary carbon market will be designed and operationalized in order to support country preparedness for subsequent implementation of market mechanisms under Article 6.4 of the Paris Agreement. Although modalities of the market-based mechanisms have not yet been finalised under the Paris Agreement, it can be expected that the procedures will capitalize on experiences from mechanisms under the Kyoto Protocol.[13]¹³ Since Algeria does not have much experience with carbon markets, Output 2.5 will be used to support local actors to become familiar with the operation of the carbon market. In effect, the pilot will support the ratcheting up process under Article 6 of the Paris Agreement.[14]¹⁴ Once operational, the market mechanism will be available to buyers of public and private institutions, individuals and NGOs to voluntarily offset their GHG emissions. Collaboration with the UNDP-GEF project "Ethiopian NAMA: Creating Opportunities for Municipalities to Produce and operationalized Solid Waste Processing (COMPOST)" will be assured by the UNDP to capitalize on the achievements of this GEF6 project, which started its implementation in 2017. The COMPOST project has already taken steps to develop a voluntary carbon market. The proposed market mechanism will make use of the enhanced transparency framework and MRV system that will developed under Output 4.4.

? Act. 2.5.1: Design and operationalization of a voluntary carbon market: Standardized methodologies (Act. 4.4.1) will be used to register the emission reductions accruing from the project in a "Registry" that will be hosted by ME. Emission reductions will be verified by an external auditor to provide more credibility and transparency to the market mechanism, which will give the 'buyers' confidence to engage in the carbon market. A "Project account" will be set up at MI[15]¹⁵ to receive income from the sale of carbon credit to "buyers" and will be managed with the technical support of the UNDP Country Office. Once a "buyer" has transferred funds to the "Project account" after purchasing carbon certificates, the certificates will be retired from the 'Register'. This step will prevent double counting of carbon credits. In order to support the financial

viability of the GHG emission reduction activities of the project, revenue from the sales of carbon credits will be used in its scaling up. Protocols and guidelines for the operation of the carbon market will be developed. The institutional capacities of the actors listed in Figure 3 for proper operation of the carbon market will be strengthened.

A voluntary market mechanism is in the process of being set up under the project 'COMPOST (PIMS 5541)' funded by GEF and implemented by UNDP in Ethiopia. Links have already been established between the UNDP Country Offices in Ethiopia and Algeria for knowledge sharing (South-South Cooperation) in the design and operationalization of such a market.

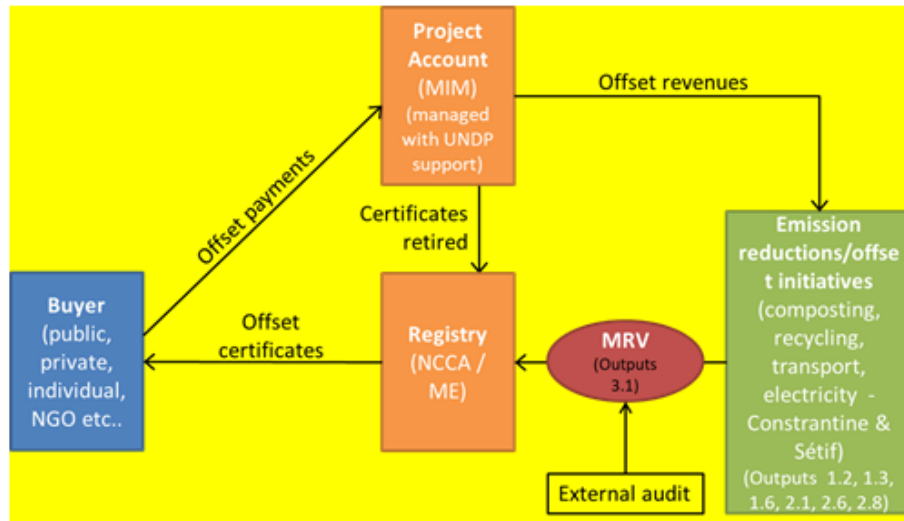


Figure 3: Voluntary Carbon Market Mechanism.

? Act. 2.5.2 Training and awareness on the voluntary market mechanism: There is no voluntary carbon market in Algeria, and the experience of Algeria engaging in any type of carbon market mechanisms is very low. The implementation of a voluntary market diagram shown in Figure 4 will, therefore, require the strengthening of human and institutional capacities. The technical assistance will develop training modules designed especially for staff of the National Climate Change Agency (NCCA), the Directorate for the management of climate change (DMCC) and engineers of the AND. The experiences and Ethiopia training materials (COMPOST project - PIMS 5541) will be sought for strengthening human and institutional capacities.

35. Output 2.6: An organic waste transformation plant for the production of fertilizers and renewable energy is equipped and operational. The waste transformation plant in Constantine will convert the organic fraction of the waste (about 60% of total waste collected) into fertilizer and renewable energy. Approximately 60 tonnes of NPK-enriched fertilizers will be produced per day, and thermal power generation will be provided from a steam turbine with a capacity of about 2 MW and operated at a capacity factor ? 80%. The waste transformation plant will be placed on the same location (Annex E) as the centralized waste sorting facility in Constantine.

? Act. 2.6.1: Construction of waste transformation plant: The site development plan for the industrial site and the specifications that will be developed under the output 2.1 will be implemented for the construction of a solid waste transformation plant with the support of Canadian partners in the PPP. The equipment specifications will be as specified in the technical datasheet. The construction and operation of this unit will be made in line with the ESMP that will be developed under activity 2.1.3.

? Act. 2.6.2: Capacity Building to operate the transformation plant: The innovative character of the UNDP-GEF project implies that the technical expertise to ensure the proper operation and maintenance of the waste processing plant is not available in Algeria. The project will support the training of selected AND and SOPTE staff who will be responsible for the operation and maintenance of the plant. The training will be based on a combination of: (1) study tours, and (2) learning-by-doing training programmes with qualified trainers. Around 45% of the work force will be women (see Project Results Framework).

36. Output 2.7: An analysis, research and development centre for the monitoring and optimisation of the quality of outputs from transformation plant is equipped and operational. A well-equipped

and operational laboratory for carrying out analysis and research is needed to optimize the waste transformation process and finished products (e.g. fertilizers and combustibles). The activities proposed below are directly related to the activities of Output 2.2.

? Act. 2.7.1: Analysis centre is equipped: Investments will be made to equip the existing analysis centre housed by SOPTE at its facilities at Oued-Smar (Alger) using the results of Act. 2.2.1. The equipment specifications will be as specified in the technical datasheets.

? Act. 2.7.2: Capacity Building to operate the analysis centre: Technical training will be provided to fill the training gaps in terms of skills needed for the operation of new equipment and to establish and adopt new laboratory protocols.

37. Output 2.8: Collection point and poultry waste processing plant in S?tif. A facility to receive and transform poultry waste into fertilizer will be installed on the storage site at Ksar El Abtal in the commune of S?tif (Annex K). This site already serves as a storage area for poultry waste from the north-eastern parts of Algeria. As described in Annex SA4, the spreading of poultry waste on this site for drying is an illegal operation with adverse environmental and public health impacts. The implementation of the poultry transformation facility at Ksar El Abtal will be made so that there is no disturbance in the collection system, distribution and existing storage. On the other hand, the value added transformation of these wastes will eliminate environmental impacts and risks to public health. The following activities will be implemented in connection with the activities of Output 1.3.

? Act. 2.8.1: Installation of the poultry waste transformation plant: The site development plan for the industrial site and the specifications that will be developed under Act. 1.3.1 will be implemented in the installation of poultry waste transformation plant with the support of Canadian partners in the PPP. The equipment specifications will be as specified in the technical datasheet.

? Act. 2.8.2: Capacity Building to operate the plant: UNDP-GEF project will support training of AND and SOPTE staff for the operation and maintenance of this poultry waste transformation plant. The project provides for two means of training: (1) study tours, and (2) training programmes on-the-job with qualified trainers. Around 45% of the work force (20 persons expected) will be women (see Project Results Framework).

Component 3: Promotion of municipal model of integrated waste management at regional and national levels

Outcome 3: Replicability of the municipal waste management model.

38. This component addresses the replication of the municipal integrated waste management model, and infrastructure and equipment needed to achieve the objective of the project. Although most of the equipment will be imported, the project will maximize local production of mechanical parts and spare parts to ensure project sustainability. Local parts manufacturing will not only create jobs but by meeting the demand for these services, the country will have the opportunity to strengthen its level of expertise, making it more autonomous in engineering, design and manufacturing. The materials used in the manufacture of spare parts can be obtained (in part) from recycling facilities established in Component 2. Further, a replication plan accompanied by investments plans and supported by wilaya-specific technology transfer will be developed for scaling up the circular waste transformation model regionally and nationally.

39. Output 3.1: A mechanism for the replication of the project in 48 Wilayas is designed and implemented. The UNDP-GEF project will provide the proof-of-concept for a circular waste economy in Constantine and S?tif with the objective that the integrated solid waste management business model can be scaled-up in all Wilayas. A replication plan accompanied with a detailed investment plan will be defined for scaling up of a circular economy through the integrated management of solid waste in the other 48 wilayas. In view of supporting the sustainability of the business model, the project will collaborate with tertiary institutions. This output will use the results from Outcome 4. The proof-of-concept circular solid waste management, together with the replication plan will squarely support implementation of the SNGID with multiple sustainable development dividends that will be captured using the SDG Impact Framework that will be developed under Output 4.4. In particular, the replication plan will serve to catalyse private sector investments in the financially viable circular waste economy to deliver better municipal services, reduce municipal public deficit, produce local and global environmental benefits, and creating jobs in small and medium enterprises. The UNDP-GEF project will therefore contribute towards the

post-COVID economic recovery in tangible ways by promoting a circular solid waste economy as a first-of-its kind in Algeria.

? Act. 3.1.1. Professional and graduate-level training in solid waste processing technologies. The project will collaborate with the University of Mentouri Brothers Constantine1 that launched a professional diploma entitled Sustainable Management, Treatment and Waste Recovery (GDTVD) in September 2018 to upgrade the technical skills of staff of the project partners. The diploma will be updated to include the elements of GHG mitigation and sustainable development impacts (e.g. Impact on SDGs). By the end of the project, 40% of the trained persons will be women (see Project Results Framework).

? Act. 3.1.2: Develop a replication plan. Using the results of Activities 3.1.1 and 3.1.2, a replication plan will be developed for the scaling up of integrated solid waste management in 48 Wilayas. This replication plan will be accompanied by an investment plan and transfer of appropriate technologies in the context of each Wilaya. An important feature of the replication plan is to incorporate the conduction of Strategic Environmental and Social Assessments (SESA) as suggested by the SESP (Annex O). The SESA will ensure that the replication plan is grounded in a human rights-based approach; is gender inclusive and transformative; and adopts environmentally sound technologies and management approaches that will deliver local (e.g. negative impacts of mismanagement of solid waste) and global (e.g. reductions in GHGs) environmental benefits and minimize impacts on natural resources and ecosystems (both in terms of quantities used and any pollutions created).

40. Output 3.2: One factory for the production of spare parts is installed and equipped. For the sustainability of the project, selected spare parts will be manufactured locally so that they are readily available for equipment used in the sorting and transformation of solid waste. It will be essential to have the services of a precision engineering centre capable of manufacturing spare parts in the shortest possible time. The Divindus Group already has a factory that will be upgraded to manufacture spare parts. The investments to modernize the existing plant will be borne by the SOPTE co-financing in the project.

? Act. 3.2.1: Feasibility study: A feasibility study will be conducted to identify changes that will be required to the existing plant in the Divindus group. This study will be based on inputs from the Canadians partners who will advise on mechanical parts that can be manufactured locally. The study will determine the timeline and investment plan for the modernization of the existing plant.

? Act. 3.2.2 Modernization of the mechanical factory: The plant will be modernized for the production of mechanical parts based on the results of Act. 3.2.1. Attention will be given to increasing the level of women inclusion in the fabrication of mechanical parts.

Component 4: Knowledge management and monitoring & evaluation

Outcome 4: Lessons learned are captured and disseminated widely, and project monitoring and evaluation is carried out in order to ensure adaptive management and achievement of project objectives.

41. This component deals with knowledge management in order to put in place an efficient and effective system of adaptive management that will allow the project to achieve its objectives. The system will be based on two main attributes, namely: (1) capturing and disseminating the lessons learned from the project widely, and (2) ensuring appropriate monitoring and evaluation of the project. The two attributes constitute the Monitoring and Evaluation Plan. Four outputs are proposed to achieve the outcome.

42. Output 4.1: Inception workshop. An inception workshop will be planned within 60 days of project CEO endorsement.

? Act. 4.1.1. Planning and carrying out national inception workshop: The national inception workshop will be carried in Constantine at the beginning of project implementation in order to achieve the goals described at paragraph 74. The workshop will be organised by the PMU with support from UNDP, SOPTE and AND.

43. Output 4.2: Project monitoring. Adaptive management is a prerequisite for successful project implementation. This in turn requires effective monitoring of the project.

? Act. 4.2.1. Monitoring of results framework and GEF core indicators: The GEF Core indicators included at Annex L will be used to monitor global environmental benefits and will be

updated for reporting to the GEF prior to MTR and TE. Also, the indicators found in the Results Framework will be monitored as per the Monitoring Plan given in Annex Q.

? Act. 4.2.2. Monitoring of project plans: The UNDP-GEF project is accompanied by various plans including Stakeholder Engagement Plan (Annex L), mitigation plan for project risks (Risk Register in Annex N), and Gender Action Plan (Annex M). This activity also covers the contribution of the PM to organise PB (PSC) meetings.

? Act. 4.2.3. Monitoring of social and environmental safeguards: The UNDP-GEF project is rated as a 'high' risk project. Consequently, there is a need to carry out continuous monitoring of the social and environmental safeguards as proposed in the ESMF (Annex P). The ESMP that will emanate from the ESMF will also be monitored under this activity.

44. Output 4.3: Project evaluations. As per standard UNDP-GEF procedures, independent evaluations will be carried out at the mid-term and at the end of the project. The financials of the project will also be verified by an independent accredited auditor on an annual basis.

? Act. 4.3.1. Mid-term review: An independent mid-term review (MTR) will take place at the half-way mark of project implementation. The MTR will be translated in French to make it widely available to all project stakeholders

? Act. 4.3.2. Terminal evaluation: An independent terminal evaluation (TE) will take place upon completion of all major project outputs and activities. The TE will be translated in French to make it widely available to all project stakeholders.

? Act. 4.3.3. Independent financial audits: As per standard procedures, the financials of the project will be verified by an accredited auditor every year.

45. Output 4.4: Knowledge management. Good practices and lessons learned from the implementation of the project will be identified, documented and shared among all project partners. Monitoring and evaluation frameworks to measure the project's impacts on the SDGs and avoided emissions will be established. The project will follow seven elements that are recommended in a best practice knowledge management approach: 1) Overview of existing lessons and best practice that inform project concept; 2) Plans to learn from relevant projects, programs, initiatives & evaluations; 3) Proposed processes to capture, assess and document info, lessons, best practice & expertise generated during implementation; 4) Proposed tools and methods for knowledge exchange, learning & collaboration; 5) Proposed knowledge outputs to be produced and shared with stakeholders; 6) Discussion on how knowledge and learning will contribute to overall project/program impact and sustainability and 7) Plans for strategic communications.

? Act. 4.4.1: Develop improved transparency frameworks and impacts on sustainable development goals (SDGs): Since the main objective of the project is to reduce GHG emissions, while offering sustainable development benefits to local communities, the project will establish a measurement, reporting and verification (MRV) mechanism to track emission reductions resulting from the integrated solid waste management. In addition, the project will support the development of a framework for measuring the impact of GEF investments on SDGs.^[16] The SDG Impact Framework will be useful to monitor the impacts of public and private sector investments in integrated solid waste management at local and national levels.

? Act. 4.4.2: Surveys to capture and share lessons learned: As part of an adaptive project management approach, lessons learned from the project will be measured on an annual basis, and the results used to inform adjustments to the project annual work plans. The lessons learned will be published and disseminated to all stakeholders of the project and made available to a wide audience inside and outside of Algeria through a website project that will be developed by Act. 4.4.3. The project findings will be integrated in the national environmental action plan and will be published in the form of a good practice guide.

? Act 4.4.3: Develop a project website: A dedicated website will be developed for the project, and this website will constitute the main portal for communicating about the project in order to increase its visibility and to communicate its lessons learned to a wide audience. The website will also provide a means for receiving grievances, and hence, forming an integral part of the GRM.

Incremental reasoning

46. The proposed UNDP-GEF project will be complementary to the baseline initiatives as it addresses barriers that are specifically related to the investment in new technologies for a sustainable management of solid waste. The waste management in Algeria, especially in the two municipalities targeted by the project, is still basic and primitive. It is essentially dumping/discharging the waste into uncontrolled landfills. In that context, the proposed GEF funded project is highly innovative with new set of technologies for the country. There will be a need to transfer that technology from abroad. Thus, this project is consistent with the GEF-7 strategy to address climate change (CCM- Program 1 Promote innovation and technology transfer for sustainable energy breakthroughs), especially the Cleantech innovation entry point; because its main objective is to promote an integrated and comprehensive solid waste management by fostering technology deployment, dissemination, and transfer in collaboration with private sector in Algeria.

47. Post-COVID economic recovery: Compared to the baseline situation, the solid waste circular economy is expected to also provide an opportunity to support the post-COVID 19 economic recovery. As is further discussed below, the UNDP-GEF project will be a first-of-its-kind in Algeria from multiple perspectives, namely: (1) it will use private sector investments thereby liberating much needed public finances for more needful social investments (e.g. in the health and social security sectors); (2) improving the public deficit that is related to government subsidies for solid waste management that will provide more government flexibility to address the social and economic impacts of COVID-19; and (3) generation of direct and indirect green jobs in the circular solid waste economy. These are over-and-above enhancing the quality of service in municipal waste management, reducing negative local environmental and social impacts of inadequate solid waste management, and producing the global environmental benefit of reducing greenhouse gas emissions.

48. The proof-of-concept circular solid waste management, together with the replication plan will squarely support implementation of the SNGID with multiple sustainable development dividends that will be captured using the SDG Impact Framework that will be developed under Output 4.4. In particular, the replication plan will serve to catalyse private sector investments in the financially-viable circular waste economy to deliver better municipal services, reduce municipal public deficit, produce local and global environmental benefits, and creating jobs in small and medium enterprises. The UNDP-GEF project will therefore contribute towards the post-COVID economic recovery in tangible ways by promoting a circular solid waste economy as a first-of-its kind in Algeria.

Global environmental benefits

49. The project will help the implementation of the Nationally Determined Contribution (NDC) which contains (i) recovery of waste, and (ii) composting of organic waste and green waste as key actions in the waste sector.[17]¹⁷ During its lifetime, the project will help reduce greenhouse gases (GHGs), including methane avoided from landfill resulting from the organic fraction of solid waste

that will be transformed; optimized transportation (the collection of household waste and transport in Constantine and poultry waste fertilizers in Sétif) and transportation avoided (the distance between the project site and landfill avoided in Constantine); plastic recycling; and substitution of chemical fertilizers with organic-base fertilizers. It is expected that GHGs will be avoided as from the second year of project implementation. At the end of the 5-year project, the cumulative avoided emissions will be about 357,279 tCO_{2e}. GHG emission reduction calculations, including the methodologies used, are found in Annex I. Modeling over a 15-year economic life gives a total reduction of direct GHG emissions of 4,301,757 tCO_{2e}. The direct GHG emission reductions give a carbon abatement cost of 1 US\$/tCO_{2e}.

50. Both bottom-up and top-down approaches were used to estimate indirect GHG emission reductions. Applying a replication factor of 3 to reduce direct emissions, the bottom-up approach results in reduced indirect emissions of about 12.91 MtCO_{2e}. Using a post-project 10-year market potential, the top-down indirect GHG emission reduction is estimated at about 15.40 MtCO_{2e}.

51. Innovation: The innovativeness of this project rests largely on the notion of a 'first of its kind' of project in the context of Algeria. As discussed at paragraphs 1 to 10, the current solid waste management approach in Algeria follows a linear economy model of waste generation to waste disposal using suboptimal technologies that given rise to health and environment hazards. Further, the subsidized system in the baseline is not financially sustainable. The GEF-financed project will support a commercially viable strategy of circular waste economy that aims to connect the abundant supply of waste with a strong demand for affordable fertilisers. It is expected that this will be made possible because of an efficient supply chain of organic waste as well as technology that currently does not exist in Algeria. Successful implementation of the GEF-funded project will pave the way for a restructuring of solid waste management in Algeria, while delivering multiple socioeconomic and environmental benefits.

52. Sustainability: The introduction of the integrated waste management at the university will encourage not only research level in this area, but will also offer a new pool of qualified technical experts to facilitate the replication of similar projects. The inclusion of a research and analytical laboratory in Component 2, which will be connected to the local universities, will help optimize the waste transformation process, particularly regarding the process of processing and manufacturing fertilizers; this will contribute to the economic performance of future waste management projects, improving their economic feasibility and facilitating reproducibility. An awareness campaign and communication strategy will involve civil society so that job offers and the benefits of supply and demand for waste management can be made public. Such an approach will enhance public support and increase participation in integrated waste management opportunities.

53. Regarding financial sustainability, the PPP will be based on two sources of income: (1) the sale of organic-based fertilizers, and (2) the sale of electricity to the grid. Information received from SOPTE shows that the project will have a payback period of between 30 and 36 months

depending on the sensitivity of input parameters. One of the significant parameters is the price of NPK-enriched organic-based fertilizers that will be produced by the UNDP-GEF project. The financial model proposes to sell these fertilizers between 10% and 30% less than the unit price of chemical fertilizers. In order to support the market acceptability of the NPK-enriched, organic-based fertilizers, the project will develop national Standards and Regulations for them, as well as their homologation in agricultural use. The homologation process will involve comparative studies between organic fertilizer and imported fertilizer. It should be noted that because of the many benefits of producing organic fertilizer from waste, the Government could consider introducing subsidies to help improve the sustainability of the business model. This is a risk mitigation measure proposed in the Risk Log in Annex I to the ProDoc.

54. Scaling up: Through the Ministries of Industry (MI) and the Ministry of Environment (ME), the government appointed parastatal organizations (including SOPTE) to invest about 81.5 million to address the problems related to waste. This project is part of the contribution of SOPTE to this mandate, but it should be noted that it is also operating in several other cities, namely El Oued, Biskra and Algiers, which will facilitate replication of the project. In addition, the performance of this project relies on the performance of the PPP, which, if successful, will create an important precedent for other potential private sector partners to adopt this business model throughout the country.

55. Given the similarities between the ways all municipalities are governed, there is a great possibility to replicate the project. Component 3 is almost entirely focused on this issue in that it is concerned with the monitoring of project objectives and their degree of impact on the country's sustainable development goals. In addition, it also ensures the integration of integrated solid waste management (and associated technologies and approaches) at the tertiary level. This lever of sustainability is also a critical factor to support replication. A factory owned by Divindus will be upgraded to allow spare parts for the waste sorting and transformation facilities to be manufactured locally and possibly with recycled materials, which will give additional impetus to future replication exercises.

56. The scaling up of project results will be done through a replication plan, with investment plans for the 48 Wilayas in Algeria. As mentioned in Section II, one of the main justifications for establishing a circular solid waste economy using private sector investments is to achieving the financial sustainability of municipal solid waste management. In so doing, the solid waste management will eventually become independent of public subsidies that are provided predominantly by central government. Hence, the scaling up of a circular solid waste economy will liberate public finances that can be invested instead in other social sectors and contribute towards the economic recovery in a post-COVID era. As shown in Table 2, significant numbers of green jobs can be expected to be created in scaling up the UNDP-GEF project to implement the SNGID.

[1]Minist?re de l'environnement et des ?nergies renouvelables (2018a) Synth?se de l'?tat des lieux de la gestion des d?chets en Alg?rie.

[2] Minist?re de l'environnement et des ?nergies renouvelables (2018b) Etude sur la Strat?gie Nationale et Plan d'Actions de la Gestion Int?gr?e et de la Valorisation des D?chets ? l'Horizon 2035 : Mission 4 : les plans de mise en ?uvre de la strat?gie.

[3]<https://www.elwatan.com/edition/actualite/filiere-avicole-la-production-en-viande-blanche-a-atteint-53-millions-de-quintaux-10-09-2018> - 20 november 2019.

[4] Idem pg. 21.

[5] Minist?re de l'environnement et des ?nergies renouvelables (2018c) Etude sur la Strat?gie Nationale et Plan d'Actions de la Gestion Int?gr?e et de la Valorisation des D?chets ? l'Horizon 2035 : Mission 1 : Etat des lieux de la gestion des d?chets en Alg?rie.

[6] <https://www.worldbank.org/en/country/algeria/publication/economic-update-april-2020> - accessed 19 October 2020.

[7] The project will ensure the involvement of the Ministry of Religious Affairs (MRA) and the Ministry of National Education (MNE), schools, neighbourhood committees, associations, local media and radio, and to ensure the setting up of communication cells within the public enterprises (EPIC) responsible for the collection of waste and landfill management at the level of Wilayas.

[8] For example: flame spectrophotometer, auto analyzer for accurate analysis of organic carbon, atomic absorption spectrophotometer and lamps (trace elements).

[9] The list of Algerian Standards (NA) adopted in TNC 31 relating to "fertilizers" is given in Annex SA5.

[10] In addition to the experts, the CTN is made up of several representatives of the Ministries, including the Ministry of Agriculture, Rural Development and Fisheries (MADRP), ME, the Ministry of Industry and Mines, the Ministry of Agriculture and Rural Development. Commerce, the Ministry of Health, etc.

[11] The process consists of three steps: (i) take advice from the relevant economic sectors; (ii) establish the consistency of the data sheet and legal text; and (iii) the law signed by at least two ministers is tabled in Cabinet for approval.

[12] The Institute works nationally and can operate in different parts of the country in the North, East, West and South. In areas where it does not have experimental stations, it can call on its farmer partners to have small plots for agronomic trials. For laboratory analysis, the Institute uses the National Institute of Soils, Irrigation and Drainage (NISID) with which they are used to collaborate. For possible plant diseases, they call on the National Institute of Plant Protection (INPV). For the conduct of agronomic tests, the Institute does not require support from the GEF-UNDP project.

[13] L. Schneider et al. (2016) Market Mechanisms in the Paris Agreement ? Differences and Commonalities with Kyoto Mechanisms: Discussion Paper, German Emissions Trading Authority, Berlin, Germany.

[14] Asian Development Bank (2018) Article 6 of the Paris Agreement: Piloting for enhance readiness, ADB, Metro Manila, Philippines.

[15] In the organizational scheme proposed in Figure 4, two separate public institutions have been chosen to ensure good governance of the carbon market, including the independence of the institutions holding the 'carbon certificate register' or 'project account'. ME has been chosen as the holder of the 'register' because it is the focal point for climate change in Algeria. In addition, ME will be involved in setting up the measurement, verification and reporting mechanisms to track emission reductions from integrated solid waste management, which will be converted to carbon certificates. The fact that SOPTE is the majority shareholder in the JV and that it is under the aegis of MI, the latter was chosen as holder of the 'project account' to receive the profits from the sale of carbon credits. It is also the case that the Nationally Determined Contribution (NDC) is planning a national pilot project for the recovery of household and similar waste with low greenhouse gas emissions by the MI. The proposed scheme is on a pilot-basis and the institutional structure will be evaluated during the mid-term and final evaluations when improvements could be brought in.

[16] Please see <https://sdgimpact.undp.org/> - accessed 16 February 2019.

[17] MEER (2019) Plan National Climat.

New Co-financing Letters:

LETTER 1

To :

Naoko Ishii, CEO and Chairperson
Global Environment Facility
1818, H Street, NW
Washington, D.C., 20433

Date: 4 December 2019

Subject : Co-financing letter for the project " AIM-WELL: Algeria Integrated Management of Waste Energy at the Local Level"

Madam,

I am pleased to confirm UNDP Algeria's contribution of US\$ 250,000 as cash co-financing to the above-mentioned project over the period from March 2020 to March 2025.

This strategic project provides an excellent platform for the Government of Algeria to pilot the integrated management of waste energy at local level. It is fully aligned with national priorities, Algeria's Country Programme Document 2016-2020 and the Strategic Cooperation Framework 2019-2021 between the UN and the Government.

The project is well aligned with the UNDP Strategic Plan multidimensional approach to development and covers several issues, such as capacity building for public institutions, civil society, and the private sector to promote an integrated and comprehensive solid waste management by fostering technology and knowledge transfer. The project will reduce greenhouse gas emissions, thus limiting the impact of climate change.

The project will be implemented in full synergy with UNDP's ongoing projects and programmes in Algeria and coordinated with other initiatives being planned as part of the current programme cycle.

With UNDP's contribution, the proposed UNDP-GEF project will support the country's sustainable development needs and will be complementary to the baseline initiatives as it addresses barriers that are specifically related to the investment in new technologies for a sustainable management of solid waste.

UNDP looks forward to the approval of this project and its contribution as an important and strategic intervention in Algeria's development portfolio.

Please accept, Madam, the assurances of my highest consideration.



Blerta Aliko
UNDP Resident Representative

LETTER 2



الجمهورية الجزائرية الديمقراطية الشعبية
REPUBLIQUE ALGERIENNE DEMOCRATIQUE ET POPULAIRE

MINISTRE DE L'ENVIRONNEMENT
ET DES ENERGIES RENOUVELABLES
LE SECRETAIRE GENERAL

وزارة البيئة
والمطابقات المتجددة
والطاقة المتجددة

ن: 3049 SG/MEER

10 2 DEC 2010

MONSIEUR LE DIRECTEUR GENERAL
DES RELATIONS MULTILATERALES

-Ministère des Affaires Etrangères-

Objet : A/S du Projet sur la gestion intégrée et de valorisation énergétique
des déchets ménagers.

Dans le cadre de la coopération entre le Ministère l'Environnement et des
Energies Renouvelables (MEER) et l'Agence Onusienne PNUD (Programme des
Nations Unies pour le Développement), relative au projet de gestion
intégrée et de valorisation énergétique des déchets ménagers dans les
wilayas de Constantine et Sétif, j'ai l'honneur de porter à votre
connaissance que le montant de la contribution en nature du cofinancement
de notre département ministériel, sur les projets en cours de réalisation au
niveau des deux Wilayas, Constantine et Sétif, estimé à hauteur de un
milliard quatre cent soixante millions de dinars (1.460.000.000 DA).

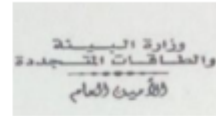
Veuillez agréer, Monsieur le Directeur Général, l'expression de ma parfaite
considération.

الأمين العام
كمال الدين بنطرش





Ministry of Environment and
Renewable Energy
Secretary General



N°3049 / SG / MEER

December 2nd, 2019

**The Multilateral Relations
General Director**

– Ministry of Foreign Affairs –

Object: About integrated waste management and energy project

As part of the cooperation between the Ministry of Environment and Renewable Energy (MEER) and UN Development Agency (United Nations Development Program, UNDP) for the integrated waste management and energy project in the Constantine and Sétif wilayas, I have the honor to inform you of the amount of our contribution in-kind from our Ministry, for the ongoing projects in the two wilayas, Constantine and Sétif, which is estimated at a billion four hundred sixty million dinars (1,460,000,000 DZD). *(equivalent roughly to USD 10,000,000).*

Yours, faithfully.

The Secretary General

**A l'attention de, Madame la Représentante
résidente du Programme des Nations Unies pour le
Développement «PNUD» en Algérie**

Objet : A/s du cofinancement du projet de gestion intégrée et de valorisation énergétique des Déchets Ménagers.

Réf : N/différents courriers du Groupe DIVINDUS.

N° 2868 du 6.12.2016

N° 499 du 6.07.2017.

N° 645 du 2.10.2018

N° 804 du 26.11.2019.

et de notre filiale du 16.06.2020.

Madame,

Additivement aux différents courriers rappelés en référence, nous avons l'honneur, Madame la représentante résidente du PNUD en Algérie de vous réitérer notre engagement auprès du Secrétariat du Fonds pour l'Environnement Mondial et auprès du PNUD à cofinancer les activités du projet intitulé : «Gestion intégrée des déchets énergétiques au niveau local».

Toutes les parties prenantes à savoir le Gouvernement Algérien à travers le Ministère de l'Environnement, via l'Agence Algérienne des déchets, le Ministère de l'Industrie via le Groupe DIVINDUS et sa filiale environnementale la SOPTE, vont concourir à hauteur de 40 millions de \$USD de cofinancement entre la période 2021 et 2025 répartis comme suit :

Acteurs	Montants
Ministère de l'Industrie	15 millions de \$
Ministère de l'Environnement	15 millions de \$
SOPTE (à travers des privés étrangers)	10 millions de \$
TOTAL	40 millions de \$

Siège Social : Pavillon 12, Résidence la butte des deux bassins - El-Achour - Alger

Tél : +213 23 34 86 38 / Fax : +213 23 34 86 38

Email : divindus.gil@gmail.com / Divindus.gil@divindus.dz

Ces co-financements vont principalement servir à l'investissement nécessaire pour le bon fonctionnement de l'usine de transformation des déchets.

Nos vifs remerciements au Fonds Mondial pour l'Environnement et au programme des Nations Unies pour le Développement, pour leur soutien, pour faire face, aux défis actuels et futurs du changement climatique et de gestion intégrée des déchets en Algérie.

Veuillez agréer, **Madame**, l'expression de notre haute considération.



**To the attention of Madam the Resident Representative of the United Nations
Development Program "UNDP" in Algeria**

Object: Co-financing letter for the project: AIM-WELL: Algeria Integrated Management of Waste Energy at the Local Level.

Ref: N/different correspondences of DIVINDUS Group.

N°2868 of 6.12.2016

N°499 of 6.07.2017

N°645 of 2.10.2018

N°804 of 26.11.2019

And our subsidiary in 16.06.2020.

Madam,

In addition to the various letters recalled in reference, we have the honor, Madam the Resident Representative of UNDP in Algeria, to reiterate our commitment to the Secretariat of the Global Environment Facility and to UNDP to co-finance the activities of the project entitled: "Integrated Management of Waste Energy at the Local Level".

All the stakeholders, namely the Algerian Government through the Ministry of Environment, via the Algerian Waste Agency, the Ministry of Industry via the DIVINDUS Group and its environmental subsidiary SOPTE, will contribute up to USD 40 million of co-financing between the period 2021 and 2025 distributed as follows:

Stakeholders	Amounts
Ministry of Industry	USD 15 millions
Ministry of the Environment	USD 15 millions
SOPTE (through foreign partners)	USD 10 millions
TOTAL	USD 40 millions

This co-financing will mainly be used for the investments necessary for the proper functioning of the waste transformation plant.

Our sincere thanks to the Global Environment Facility and the United Nations Development Program for their support in dealing with current and future challenges related to climate change and integrated waste management in Algeria.

Please accept, Madam, the expression of our highest consideration.

Zemmouri Messaoud

Chief executive officer

DIVINDUS Group

1b. Project Map and Coordinates

Please provide geo-referenced information and map where the project interventions will take place.

57. Project Sites: Through its waste management arm, SOPTE, the parastatal of the Ministry of Industry (MI), Divindus, identified the neighbouring towns of Constantine and Sétif as candidates for the project of integrated waste management. The communes (wilayas) of Constantine (where the headquarters of SOPTE is found) and of Sétif are separated by 15 km. This will allow piloting the project in two different cities, each with its own characteristics (household waste in Constantine and poultry waste in Sétif); not only will this better inform the reproducibility of the process, but the additional volumes of waste will also provide better economies of scale in fertilizer production. The project targets 2 Wilayas (municipalities) in Algeria: Constantine : N 36°21'54" E 6°36'53" and Sétif : N 36°11'28" E 5°24'49". The map locating the two municipalities is shown in Annex E below.

58. The sorting and processing units proposed by SOPTE would be inside an 8-hectare property fully owned by SOPTE that is fenced and constantly guarded, and is free of any encumbrances. It is within the El Tarf industrial zone located approximately 5 km South East of El Khroub, and 16 km south east of Constantine as shown in Annex E. The project boundary is not in any disputed territory of any neighboring countries.

1c. Child Project?

If this is a child project under a program, describe how the components contribute to the overall program impact.

2. Stakeholders

Select the stakeholders that have participated in consultations during the project identification phase:

Civil Society Organizations Yes

Indigenous Peoples and Local Communities

Private Sector Entities

If none of the above, please explain why:

59. A number of project partners have been identified as a part of the project approach to catalyse a multi-stakeholder process (MSP). The MSP has been adopted during the design stage, and Annex J provides a detailed account of stakeholders that were engaged during the PPG stage. Annex J also contains the outcomes of the validation workshop. The design of the project was also informed by field surveys that were carried out in proposed project locations, and the results are found in Annex K. The MSP approach will also be implemented during project implementation. The stakeholders that have been engaged in the preparation of the project and their participation (roles and responsibilities) in its implementation are given in Table 5 below. All the stakeholders were consulted during the PPG stage and their views and suggestions were used to shape the design of the UNDP-GEF project.

Table 5: Stakeholder involvement in the implementation of the project.

Stakeholder	Contributions	Output
The Ministry of Environment (ME)	<p>ME is coordinating with stakeholders on policies to be included in the National Strategy for Integrated Waste Management 2035 (SNGID 2035). Its mission extends to protecting the environment, preserving water tables and providing solutions to the saturation of sanitary landfills.</p> <p>ME is also involved in achieving the SDGs Goals, including sanitation, the fight against climate change, deforestation, desertification, protecting biodiversity and reducing pollution and greenhouse gas.</p> <p>Whereas household waste constitutes a permanent pressure on the flora, fauna, and public health, it can also be transformed through recycling, energy production, and fertilizer production so as to substitute for the importation of plastics, fertilizers, paper, glass, leather, and clothing. In achieving these objectives through the circular waste economy, the National Waste Agency (AND) is the focal point of ME. The Agency is responsible for promoting the sorting, collection, transport, treatment, recovery and transformation of waste.</p> <p>In its mission, the AND provides assistance to local authorities in the field of waste management in sorting, collection, transport, treatment, recovery and transformation of waste.</p> <p>AND provides public service mission in information and extension of technical and promotional sorting, collection, transport, treatment, recovery, transformation and disposal of waste in accordance with the guidelines of the relevant Ministry.</p> <p>Also, the Ministry will facilitate coordination of all stakeholders during the development of replication plan for scaling up the integrated solid waste management model under Output 3.1. In particular, it will ensure the meaningful participation and consultation of stakeholders throughout the preparation of the SESA.</p>	<p>? Output 1.1: The source separation of waste at household level is supported by education and an awareness campaign</p> <p>? Output 2.3: A legal and regulatory framework for the standardization of organic fertilizers is developed and implemented</p> <p>? Output 2.5: Explore the possibilities of developing a waste management project for the voluntary carbon market</p> <p>? Output 3.1: A mechanism for the replication of the project in 48 provinces is designed and implemented</p> <p>? Output 4.1: Inception workshop</p> <p>? Output 4.2: Project monitoring</p> <p>? Output 4.4: Knowledge management</p>

<p>The Ministry of Industry (MI) and SOPTE, through its commercial arm Divindus</p>	<p>MI is the major partner directly involved in the project through the SOPTE, which is a subsidiary of Divindus. As part of the integrated project management of household waste and energy production, MI supports micro enterprises through access and tax exemptions. SOPTE will play a leading role in the first part of the collection project for various types of waste for the pilot project and the development of poultry waste collection network Constantine and Sétif. The subsidiaries of the industrial group Divindus contribute to the development of components production plant.</p> <p>The objectives of the development of the environmental industry were recently inserted into the Algerian Nomenclature of Activities (NAA) Section "E" (abstraction and distribution of water, sanitation, collection and management of waste recovery for recycling waste and avoiding pollution). These new sustainable, environmentally friendly activities are expected to generate value and create employment. DIVINDUS Industrial Group and its subsidiary SOPTE in Constantine are well positioned in the development of these activities that will boost the circular economy.</p>	<p>? output 1.3: A supply chain for poultry waste from nearby farms is established and operational</p> <p>? output 1.2: The municipal solid waste collection process in Constantine and Sétif is designed, planned and implemented</p> <p>? output 1.4: The waste sorting centre is planned and designed</p> <p>? output 1.5: Eight of waste collection points are operational</p> <p>? output 1.6: Acquisition of two electric vehicles for waste collection within the reach of cities</p> <p>? output 1.7: A waste sorting system capable of processing 750 tonnes per day of MSW is installed, equipped and operational</p> <p>? output 2.1: A waste processing plant that will convert the organic fraction of the waste into fertilizer and renewable energy is designed.</p> <p>? output 2.2: Capacity building for analysis and monitoring of product quality from processing facilities is planned is designed.</p> <p>? output 2.4: A favourable environment is created for recycling businesses, including the introduction of financial mechanisms and incentives for communities and individual participants involved</p> <p>? output 2.5: Explore the possibilities of developing a waste management project for the voluntary carbon market</p> <p>? output 2.6: An organic waste processing plant for the production of fertilizers and renewable energy features and operational</p> <p>? output 2.7: A centre of analysis, research and development for monitoring and optimizing product quality processing facility is equipped and operational</p> <p>? output 3.2: A spare parts production plant is installed and equipped</p> <p>? output 4.1: Inception workshop</p> <p>? output 4.2: Project monitoring</p> <p>? output 4.4: Knowledge management</p>
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<p>Wilaya of Constantine and S?tif under the Ministry of Internal Affairs, Local Authorities, and Land Use Planning (MICLAT)</p>	<p>The protection of the natural environment requires continuous efficiency in waste management in order to prevent any negative impacts on the population, the urban environment, social infrastructure, and wastewater treatment plants.</p> <p>The Wilayas of Constantine and S?tif are decentralized local authorities with legal authority and financial autonomy. They have a People's Assembly of the Wilaya (PAW), with mandate for socio-economic development, land use and environmental protection in municipal areas. The PAW defines the master plan and development plans, participates in formulation of procedures for operations planning and can initiate the creation of municipal facilities depending on their size, importance or use. It also implements strategies and action plans for the protection and promotion of agricultural land.</p> <p>These functions and powers and their cross-cutting nature, make the Wilayas of Constantine and S?tif key players to ensure the successful implementation of the UNDP-GEF project.</p> <p>The missions of MICLAT also integrate the development of communal activities and the fight against unemployment by the new value chains related to sorting, recovery, and recycling of MSW. These actions are accompanied by improved communal services.</p>	<p>? output 1.2: The municipal solid waste collection process in Constantine and S?tif is designed, planned and implemented</p> <p>? output 2.8: Collection point and poultry waste processing plant in S?tif</p> <p>? output 3.1: A mechanism for the reproducibility of the project in 48 provinces is designed and implemented</p> <p>? output 4.1: Inception workshop</p> <p>? output 4.2: Project monitoring</p> <p>? output 4.4: Knowledge management</p>
<p>The Ministry of Agriculture, Rural Development and Fisheries (MADRP)</p>	<p>The MADRP is interested in the benefits of integrated management of household waste from the perspectives of improving food security and the development of organic agricultural production to be supported by the production of fertilizers from household waste and poultry waste. In this context, MADRP will be responsible for the homologation of NPK-enriched, organic-based fertilizers produced by the UNDP-GEF project. The Directorate for Plant Protection and Technical Controls also leads the early stages of testing the performance of the organic fertilizer through appropriate approval and certification procedures. In addition, it will also play a crucial role in raising farmers' awareness of the organic-based fertilizers.</p>	<p>? output 1.3: A supply chain for poultry waste from nearby farms is established and operational</p> <p>? output 2.1: A waste processing plant that will convert the organic fraction of the waste into fertilizer and renewable energy is designed.</p> <p>? output 2.3: A legal and regulatory framework for the standardization of organic fertilizer is developed and implemented</p> <p>? output 2.6: An organic waste processing plant for the production of fertilizers and renewable energy features is operational</p> <p>? output 3.1: A mechanism for the reproducibility of the project in 48 provinces is designed and implemented</p> <p>? output 4.1: Inception workshop</p> <p>? output 4.2: Project monitoring</p> <p>? output 4.4: Knowledge management</p>

The Ministry of Energy (ME)	<p>In its new programme and the Executive Decree of February 2017, "Renewable Energy and Energy Efficiency", the ME can guarantee a PPA with conditions suitable for the production of electricity generated from biomass resulting from the conversion of the organic fraction of municipal solid waste. Electricity production from waste transformation can be an effective substitute for natural gas contributing to the reduction of Greenhouse Gas (GHG) emissions and promoting the consolidation of revenue from hydrocarbons. The impact of the using biomass-based electricity compared to natural gas has been estimated to save around 26 million US Dollars for some twenty Wilayas, which opens the opportunity for duplication to other provinces of the country.</p>	<p>? output 2.6: An organic waste processing plant for the production of fertilizers and renewable energy features is operational</p> <p>? output 4.1: Inception workshop</p> <p>? output 4.2: Project monitoring</p> <p>? output 4.4: Knowledge management</p>
The Ministry of Communication (MC)	<p>The media and communication plays a determining role to place all project partners acting in symbiosis. The participation of the Department of Communication is essential to ensure the effectiveness of the communication strategy and the communication plan of the UNDP-GEF project and for effectiveness of the outreach activities planned under Component 1. The Department may, inter alia, facilitate partnerships with the local radio and local television free-of-charge. After the implementation of the project, it will contribute to its scaling up by ensuring media coverage nationally</p>	<p>? output 1.1: The separation of waste at the household level at source is supported by education and awareness campaign</p> <p>? output 1.5 Eight of waste collection points are operational</p> <p>? output 4.1: Inception workshop</p> <p>? output 4.2: Project monitoring</p> <p>? output 4.4: Knowledge management</p>
Ministry of National Education (MNE)	<p>In the context of the GEF project, MNE develops educational curriculum and course modules on the protection of the environment and environmentally sound waste management for students of primary and secondary schools, and these are supported by expert intervention and appropriate pedagogical tools.</p>	<p>? output 1.1: The separation of waste at the household level at source is supported by education and awareness campaign</p> <p>? output 1.5 Eight of waste collection points are operational</p> <p>? output 4.1: Inception workshop</p> <p>? output 4.2: Project monitoring</p> <p>? output 4.4: Knowledge management</p>
Ministry of Education and Vocational Education (MEVE)	<p>The GEF project will generate a significant potential for employment and vocational training will be required capitalize on opportunities afforded in the collection, sorting, recycling and transformation of solid waste. The cooperation with this institution will ensure adequate technical and vocational training programmes are developed and advertised in order to ensure sustainability of the GEF project.</p>	<p>? output 3.1: A mechanism for the replicability of the project in 48 provinces is designed and implemented</p> <p>? output 4.1: Inception workshop</p> <p>? output 4.2: Project monitoring</p> <p>? output 4.4: Knowledge management</p>

<p>The Ministry of Higher Education and Scientific Research (MHESR)</p>	<p>The Ministry has the expertise of its researchers and research centers such as the Centre for Research in Physical and Chemical Analysis, the Centre for Renewable Energy Development, and the Centre for Research, Science and Technology in Arid Regions. The National Agency for the Commercialization of Research Results is involved in the creation of start-ups in the field of waste management. This expertise will be supportive of the overall objective of the project to scale up its results at the national and regional levels.</p> <p>The project will also allow researchers to gain practical experience in waste transformation, as well as upgrade existing university courses in waste management and recovery (Universities of Constantine, Sétif, Bab Ezzouar, Boumerdes, Tizi Ouzou, Annaba, Mostaganem, Oran, Saida) through twinning.</p>	<p>? output 2.7: A centre of analysis, research and development for monitoring and optimizing product quality processing facility is equipped and operational</p> <p>? output 3.1: A mechanism for the replicability of the project in 48 provinces is designed and implemented</p> <p>? output 4.1: Inception workshop</p> <p>? output 4.2: Project monitoring</p> <p>? output 4.4: Knowledge management</p>
<p>Economic Actors (Public, Private) and Social (Households, Associations, Cooperatives)</p>	<p>Companies and actors involved in the collection, sorting and recycling of waste and materials (paper / cardboard, plastics ...) from households are positioned along the environment industry related to "Sorting, Recycling, Waste-to-Energy and Fertilizers ". They contribute by creating enterprises to cleaner surroundings, reduction of pollution and health preservation of the population.</p> <p>Companies set up in the recycling of materials (paper, cardboard / plastic) create jobs; generate revenue from value addition through recovery and transformation of solid waste; and provide direct waste management services to local communities. In the municipal waste sector, opportunities are significant to increase the circular economy since only 7% of total wastes are transformed.</p> <p>Because of the innovative nature of the UNDP-GEF project and the importance of the upstream management of household waste, the participation of civil society in Constantine and Sétif (Imams, neighborhood associations, associations working on the environment, an association of parents of students) is decisive in education, advocacy, and household sensitization in integrated waste management. Importantly, these organizations operate in closest proximity to households who are the principal waste generators. Having the buy-in and participation of households starting with sorting of waste at source is an important link for the sustainability of the circular economy.</p>	<p>? output 1.1: The separation of waste at household level at source is supported by an education and awareness campaign</p> <p>? output 1.2: The municipal solid waste collection process in Constantine and Sétif is designed, planned and implemented</p> <p>? output 1.3: A supply chain for poultry waste from nearby farms is established and operational</p> <p>? output 1.5: Eight of waste collection points are operational</p> <p>? output 1.6: Acquisition of two electric vehicles for waste collection within the reach of cities</p> <p>? output 1.7: A waste sorting system capable of processing 750 tonnes per day of MSW is installed, equipped and operational</p> <p>? output 2.1: A waste processing plant that will convert the organic fraction of the waste into fertilizer and renewable energy is designed.</p> <p>? output 2.2: Building capacity for analysis and monitoring of product quality from processing facilities is planned is designed.</p> <p>? output 2.4: A conducive environment is created for recycling businesses, including the introduction of financial mechanisms and incentives for communities and individual participants involved</p> <p>? output 4.1: Inception workshop</p> <p>? output 4.2: Project monitoring</p> <p>? output 4.4: Knowledge management</p>

Please provide the Stakeholder Engagement Plan or equivalent assessment.

60. Details of the Stakeholder Engagement Plan (SEP) are found in Annex L. Participation plans were developed to ensure that the needs and priorities of stakeholders at all levels, including women, were expressed and taken into account in the formulation and implementation of the project. During the design of the project, stakeholder engagement and dialogue was carried out in coordination with ME, which appointed a dedicated staff to accompany the PPG Team during bilateral meetings and field visits. All stakeholder engagements in Constantone and Setif were carried out through prior coordination with officials of the Local Government and the Wali of each municipality. A matrix of stakeholder importance in and influence on the project was designed based on detailed stakeholder engagements (Annexes J and K). Using this matrix, a detailed communications strategy (including outreach tools such as market fairs, caravans and exhibitions; project website and social networks; brochures, bulletins and press releases; policy briefs; project monitoring reports) and engagement methodology (including methods such as, general workshops, specific workshops, strategic meetings, expert consultation, field visits, interviews and surveys, and project committees) to target each category of project stakeholders have been developed (Table 6). A SEP timeline of activities and budget totalling US\$644,956 are also provided in Annex L. The SEP has been fully integrated in the project activities discussed between paragraphs of the ProDoc in order to ensure stakeholder participation in project implementation. Annex L also gives the details of the two-tiered grievance redress mechanism (GRM) that the project will use to address the grievances and complaints of project stakeholders.

Table 6. Mapping of stakeholder engagement methods

Stakeholders / Methods	General workshops	Specific workshops	Strategic meetings	Expert consultation	Interviews and surveys	Field visits	Steering Committee & Technical Working Groups
Ministry of Environment (ME)	X	X	X	X			X

Ministry of Industry (MI)	X		X	X			X
Ministry of Internal Affairs, Local Government and Land Use Planning (MICLAT) - Wilayas of Constantine and S?tif	X	X	X		X	X	X
Ministry of Agriculture, Rural Development and Fisheries (MADRP)	X	X	X	X			X
Ministry of Energy (MEEn)	X	X	X				X
Ministry of Commerce (MC)	X						
Ministry of Communications (M.Comm.)	X	X					X
Ministry of National Education (MEN)	X						
Ministry of Labour, Employment and Social Security (MTESS)	X		X				X
Ministry of Tertiary Education and Scientific Research (MESRS)	X	X				X	X
SOPTE	X	X	X	X		X	X
National Waste Agency (AND)	X	X	X	X		X	X
Households					X	X	
Civil Society Organizations and local communities (Constantine et El-Khroub)	X	X		X	X	X	X

In addition, provide a summary on how stakeholders will be consulted in project execution, the means and timing of engagement, how information will be disseminated, and an explanation of any resource requirements throughout the project/program cycle to ensure proper and meaningful stakeholder engagement

Select what role civil society will play in the project:

Consulted only;

Member of Advisory Body; Contractor;

Co-financier;

Member of project steering committee or equivalent decision-making body; Yes

Executor or co-executor;

Other (Please explain) Yes

Member of Technical Working Groups

3. Gender Equality and Women's Empowerment

Provide the gender analysis or equivalent socio-economic assessment.

61. A gender-differentiated approach was used to inform the design of the UNDP-GEF project design. During the preparatory phase, the project team conducted a gender analysis through field consultations in Constantine and Sétif (Annexes K and L), collecting gender-disaggregated socioeconomic data and by integrating measures, indicators, targets and budget in the project activities. The gender analysis and Gender Action Plan (GAP) is found in Annex M and highlights the gender dimension in relation to the status in the family and in society, capacity and participation in decision making.

62. The analysis resulted in the following recommendations regarding the gender dimension in the project:

? Spouses (men and women) have a central and shared role in waste management at the household level. They should be encouraged to participate in the upstream sorting and the means and communications materials to households must respond to this gender dimension;

? We must put in place favourable conditions for women's access to waste-derived products that are transformed by the project, as well as jobs created by the project, and access to incentives to income generating businesses and micro-enterprises. Women must be involved in productive activities in the solid waste recovery and transformation processes, and their working conditions improved;

? The entrepreneurial context must become favourable to the effective participation of women in integrated solid waste chain to develop a circular economy locally; and

? Finally, women should be encouraged and provided with the means to participate in project activities, including sensitization and training sessions for the integrated solid waste management, including sharing of experiences in order to reduce their work burden and if possible increase their independence.

63. In response to the main conclusions of the consultations, the project will make gender equality a priority in many ways. The project will advocate the mainstreaming of gender equality among its staff so that they are conversant with gender-related issues in the project design and attentive to issues gender mainstreaming; the Project Coordinator will be responsible for all gender issues relevant to the development, implementation and project monitoring and for the strategy to integrate gender equality internally and externally. This will be primarily to promote gender equality in capacity building and enhancement of the role of women in project activities. The project also will work with UNDP gender experts in order to integrate their knowledge in the

development and implementation of GEF funded projects. This GEF project can be classified as gender transformative with a strong gender-sensitive approach, whereby gender equality in participation will be incorporated in the project design as per the Gender Action Plan (GAP) shown in Table 7. The GAP will guide the project implementation to build project partner capacity to mainstream gender and bring along strategies that empower women's participation and decision making in integrated solid waste management at the household and municipal levels, and to participate as equal in climate change mitigation. This plan will be facilitated by the Stakeholder Engagement Plan (Annex L), which outlines the multiple ways in which women will be engaged in the project implementation as well as having recourse to the grievance resolution mechanism.

Table 7. Gender Action Plan

Objective	Action	Indicators and targets	Responsible institution	timeline	Budget (US \$)
Outcome 1: Progressive upstream sorting by households of fermentable (organic fraction) and dry waste (inorganic fraction) with separate collection, and communal sorting planned and established in Constantine and Sétif to reduce the volume of landfill.					

1- Integrated management of household waste at source, minimizing residual waste, reducing transport distance.	<p>Output 1.1 & Output 1.5 - The progressive upstream sorting is to implement a process of separation and recycling of household waste in Constantine to reduce the volume of landfilled waste. To be successful, the involvement of heads of households (men and women) in upstream sorting is crucial. Incentive mechanisms that are sensitive to Gender will be identified and formulated (Act. 1.1.3)</p> <p>Waste sorting at source involves an ongoing campaign of awareness and education. The means of communication and the messages communicated will be sensitive to the gender dimension (Act. 1.1.2 Act. 1.5.1)</p>	<p>Base: 46% Indicator: Number of women involved in the waste sorting</p> <p>Target: Achieve at least 80% of women involved in sorting, waste minimization and awareness of the benefits of waste reduction.</p>	UNDP / ME / MICLAT / CSOs / local communities	Year 1 Q2 - Year 5, Q4	288,625
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2. A supply chain for the poultry waste is established and is operational in S?tif	Output 1.3 ? The baseline analysis carried out during the preparatory phase has highlighted that collector-transporters would support the UNDP-GEF project as long as they did not suffer financial losses. It is likely that there are downstream transporters to job losses in the existing chain as explained in the Risk Log. The study of social impacts (Act. 1.3.2) that will be conducted in S?tif under the social and environmental management framework will take into consideration the Gender dimension of potential job losses and the formulation of appropriate rehabilitation plans (Act. 1.3 .3).	Base: 0% Indicator: Number of women involved in the poultry waste value chain Target: Reach at least 15% of the women involved in the collection and transport of poultry waste.	SOPTE (PPP), UNDP, ME, Wilaya	Year 1, Q 2 - Year 2, Q4	72,587
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3. Reinforce the technical capacity of staff to operate and to maintain the waste sorting centre in Constantine.	Output 1.7 - Waste sorting in Constantine will need qualified personnel for its operation and maintenance. Technical expertise in these areas does not exist because this unit will be the first of its kind in Algeria. The project will invest in training and skills development using a Gender-sensitive approach (Act. 1.7.2).	Base: 0 Indicator: Number of women involved in the operation and maintenance of the sorting centre Target: Achieve at least 50% of women involved in the operation and maintenance of the sorting centre.	UNDP / SOPTE / AND (PPP)	1 Year, Q4 - Year 3, Q2	121,080
Outcome 2: The management of the value creation resulting from the conversion of the organic fraction of household solid waste and poultry waste fertilizer and renewable energy, as well as management of the recycling of inorganic fraction of solid waste are planned and operational.					
4. Creating value through transformation of waste with the participation of recycling companies for equitable and inclusive social development.	Output 2.4 ? Establishing an environment conducive to the participation of recycling companies in the integrated solid waste management value chain with appropriate financial arrangements and incentive mechanisms in place. This will be primarily through the identification of informal operators In Constantine (Act. 2.4.1) and then involving them in integrated waste management chain (Act. 2.4.2).	Base: 0 Indicator: Number of women in the waste processing business, recycling companies Target: Reach at least 25% of women who are active in the recycling companies.	UNDP / MI / ME / Private enterprises	Year 1 Q2 - Year 5, Q2	89,046

5. Create jobs based on gender equality in the waste transformation plants in Constantine and Sétif.	Output 2.6 & Output 2.8 ? The solid waste transformation plants in Constantine and Sétif will create about 105 direct jobs. As for centralized sorting centre in Constantine, the solid waste transformation plants will be the first of its kind in Algeria. Consequently, these new positions will be accompanied by technical training. The creation of jobs and technical training will be sensitive to gender.	Base: 0; 0 Indicator: Number of women employed in the solid waste recovery units Constantine Sétif; Number of women who have received technical training Targets: Reach at least 40% of jobs created for women; 100% of women operators and technicians have received adequate training.	UNDP / SOPTE / AND (PPP)	1 Year, Q4 - Year 3, Q2	289,600
Outcome 3: Replicability of the municipal waste management model					

6. Formulate an integrated solid waste management replication model at regional level	<p>Output 3.1</p> <p>Activity 3.1.1: To enable women to contribute to this new circular economy arising from the integrated solid waste management, the project will support the technical capacity building of women.</p> <p>This contributes to improving the ability of women to participate as decision makers in developing projects of strategic importance in the integrated solid waste management value chain to further cross-sectoral policies. This is squarely aligned within the perspective of gender transformation in decision-making at all levels.</p>	<p>Base: 0, 0</p> <p>Indicator: Percentage of women and men who participate in the surveys; Percentage of men and women with vocational training and university courses in the project area</p> <p>Targets: Reach at least 50% of women</p>	UNDP / ME / MI / MICLAT	Year 1 Q2 - Year 5 Q4	55,425
Outcome 4: Lessons learned are captured and disseminated widely, and project monitoring and evaluation is carried out in order to ensure adaptive management and achievement of project objectives.					

7. Participation of women in knowledge management	<p>Output 4.4</p> <p>Activity 4.4.1: To ensure that SDG Goal 5: Gender equality is taken into consideration in the measurements of the project's impacts on the SDGs, and to ensure that the gender dimension is considered as a cross-cutting issue in other SDGs relevant to the project;</p> <p>Activity 4.4.2: Surveys that will be conducted annually to draw and share lessons from the project will ensure participation of women stakeholders. This will cover the gender dimension across all project activities and ensure that the perspectives of women and men (all stakeholder groups combined) are included in the adaptive management of the project.</p> <p>This activity will also collect data and disaggregate these by gender for the calculation of gender indicators that are the basis for monitoring and evaluation of project results;</p>	<p>Base: 0, 0</p> <p>Indicator: Percentage of women and men who participate in the surveys;</p> <p>Targets: Reach at least 50% of women</p>	<p>UNDP / ME / MI / MICLAT</p>	<p>Year 1 Q2 - Year 5 Q4</p>	<p>120,202</p>
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Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment?

Yes

Closing gender gaps in access to and control over natural resources;

Improving women's participation and decision making Yes

Generating socio-economic benefits or services or women

Does the project's results framework or logical framework include gender-sensitive indicators?

Yes

4. Private sector engagement

Elaborate on the private sector's engagement in the project, if any.

64. The infrastructure investments for the solid waste recovery and transformation facilities will be carried out with strong private sector partnership. In fact, at least 60% of the co-financing of this project comes from private sector. A PPP has been put in place between the Government and the private operators of the waste management system. This led to a partnership with Divindus, a parastatal company that serves the Ministry of Industry (MI). *Divindus*, exercising various industrial activities, has recently entered in the waste management sector through its subsidiary *SOPTE*; it is already active in the collection and disposal of waste, but it also mandated to participate in the waste sector at all levels, including value added activities through waste recovery and transformation. A Joint Venture has been set up to implement the project through a memorandum of understanding was signed on April 18, 2018 between Divindus, the National Waste Agency (AND) and a consortium of three private Canadian companies, namely: Global Green Links Inc., Sherbooke OEM Ltd and Lakson International Development Incorporated.

5. Risks to Achieving Project Objectives

Elaborate on indicated risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, the proposed measures that address these risks at the time of project implementation.(table format acceptable):

65. The risks faced by the project and the countermeasures that have been proposed to reduce or eliminate them are detailed in Annex N. The risks include those emanating from the SESP shown in Annex O, as well as that arising from the COVID-19 pandemic. The project has been rated as being a ?high? risk project, and Table 8 summarises only the moderate to high risks. As per standard UNDP requirements, these risks will be monitored quarterly by the Project Coordinator. The Project Coordinator will report on the status of the risks to the Project Manager at the UNDP Country Office, which will record progress in the UNDP ATLAS Risk Log. Management responses to critical risks will also be reported to the GEF in the annual PIR.

Table 8: Assessment of key project risks and mitigation measures.

Risk	Risk category	Mitigation Action

The COVID-19 Pandemic may slow down project implementation due to restricted mobility of persons and inability to carryout technology transfer because of closed borders.	Moderate	<p>The effects of the pandemic will be attenuated by the fact that movement within the country is not restricted outside of the nighttime hours of curfew. The following project design provide mitigation actions that reduce the need for physical travel:</p> <p>? The biggest threat relates to the movement of international consultants and partners of the Joint Venture. The project has been designed to make maximum use of local expertise as far as practicable. This is reflected in the budget figures with national consultancy fees higher than international consultancy fees by a factor 1.45.</p> <p>? A project website will be developed under Output 4.4 that will facilitate data and information sharing, and enable the use of virtual meetings to carry out stakeholder meetings and consultations. For instance, the Inception Workshop can be planned to take place virtually if needed.</p> <p>? Technology transfer can be impeded because the borders may be closed. However, the project envisages to first carry out detailed environment and social impacts studies (Annex H and Section IV in the ProDoc) prior to technology transfer. These studies will be front loaded, which will give more time for the restoration of normality in Q3 and Q4 of 2021.</p> <p>Further it is pointed out that SOPTE has put in place stringent health and sanitary practices that have ensured its continued daily delivery of public services related to waste collection, transport and disposal.</p>
Risk of PPP disintegration or undercapitalized sorting and waste transformation that would delay project implementation.	Moderate	This risk may result in project failure. In such a case, MI must take full responsibility for ensuring that the company remains operational. To this end, it will assume financial responsibility for initial costs and unpaid expenses until an alternative private partner is found or the GEF project is completed.
Lack of technical expertise for the development and implementation of the waste processing facilities.	Moderate	A series of detailed technical and economic feasibility studies will be conducted and capacity building exercises will be undertaken by the UNDP-GEF project to increase local expertise in the operation and maintenance of solid waste processing plants. This risk is further mitigated given that the Canadian partners master all the technologies that will be transferred to Algeria.
<u>Social / cultural risk</u> Project could perpetuate the current low representation of women in the construction sector.	Moderate	The ESIA and ESMP terms of reference for the waste processing units require that contractors include procedures for the equitable gender selection of labor. These are included in Outputs 1.3, 1.4 and 2.1, which will develop the technical specifications for construction the waste collection, recovery and transformation infrastructure, as well as Output 3.2 that will support the production of mechanical parts.

<p><u>Environmental risk (pollution and resources)</u></p> <p>The transformation of solid wastes will generate effluents and require electricity for operation. In the case where solid waste will be combusted, waste transformation will generate solid wastes in the form of bottom ashes. Further, there will be stack emissions that can pollute the air.</p>	<p>Substantial</p>	<p><u>Constantine</u></p> <p>The ESIA and ESMP that SOPTE will produce for the Constantine sorting and processing units (Outputs 1.3.2, 1.4.3 and 2.1.3) will assess all potential sources of pollution, and define proportional but sufficient mitigation measures to meet international standards and national laws and regulations. Energy consumption can eventually be offset by energy production from the 2MWe steam powered turbine. It is expected that the project will be generating 14,980 MWh (2 MWe installed capacity) of electricity annually at the end of the 5th year.</p> <p>Training and special equipment will be provided for the safe handling of hazardous substances recovered during the waste sorting process (capacity building provided under Outputs 2.6 and 2.8). In addition, the PPG stage will require that activities to reduce the consumption of household hazardous wastes in Constantine and S?tif are developed (Outputs 1.1 and 1.5). In addition, activity 1.2.2 will implement appropriate procedures for the collection of household hazardous waste in Constantine.</p> <p><u>S?tif</u></p> <p>The ESIA and ESMP that SOPTE will produce for the S?tif poultry waste processing unit (see above) will assess all potential sources of pollution, and define proportional but sufficient mitigation measures to meet international standards and national laws and regulations.</p>
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Socioeconomic risks:

This risk was revised to clarify the potential loss of economic activities by operators (mostly informal) in the treatment of channels of current solid waste. As explained in Annex I there is no risk of loss of employment or revenues related to access to the landfill and the transfer station. As explained in the context of social and environmental management, there is a high risk elsewhere in the waste management chain. These risks do not relate to the relocation of people but rather to compensation for the shortfall in revenues or loss of jobs.

Constantine: There are two dimensions of this socioeconomic risk: (i) there are informal operators upstream of the household waste chain that collect dry material (plastic, cardboard, glass, ferrous) for recycling. Upstream sorting will not have an adverse impact on these collectors if households continue to provide them with recyclable material. The negative impacts will follow if households decide to do otherwise, that is to deliver the recyclable part to the project; and (ii) development of 500 tonnes / day and 750 tonnes / day of solid waste implies that the EPIC managing the sanitary landfill will not have enough waste for its operational needs. The pressure for job and income loss is hence high, and will increase with the introduction to the potential expansion of the project.

High

There is a waste sorting centre adjacent to the transfer station (Constantine) where large sorting containers are installed. Some containers are compactor-like. The waste sorting centre also has a baler for cardboard and plastic. The bales of recovered materials, mainly from large waste producers, such as commercial and trade operators are sold to recyclers and this will always be the case with the UNDP-GEF project.

Under the activities of Output 2.4, informal groups will be encouraged to participate in recycling activities through the project, and this will be a measure to prevent the possible loss of jobs.

A framework for social and environmental management was developed for the project (Annex H) in order to manage the risks related to job losses in the baseline solid waste sector. Building on this framework, the project will finance social and environmental impact studies for all project sites (Activities 1.3.2, 1.4.3 and 2.1.3) and the formulation of social and environmental management plans. Social management plans will aim to find ways to mitigate the risk of loss of jobs and income.

<p><u>Health and safety risks</u></p> <p>The project has increased health risks for persons handling hazardous waste and organic waste. It is likely that workers handling poultry waste are affected. Poultry waste is a disease vector. In addition, the project may lead to the production of hazardous and non-hazardous; the project consumes significant resources (energy). The separation plant and waste processing will consume a significant amount of energy. There will be a risk of large volumes of household hazardous waste that must be handled and disposed. In addition, there is a risk of pollution by heavy metals resulting from the use of fertilizers to be produced from waste derived from electricity production. It may be difficult to sort and remove any heavy metals such as lead and mercury from solid waste. These metals can be found in waste from the power station, which could contaminate the fertilizer and agricultural land.</p> <p>The description of this risk has been updated at PPG to include a very important element concerning the treatment of waste water and its discharge by waste transformation plants. Another element is the air emissions from electricity production. The social and environmental management framework has shown that environmental impact assessment was made for the solid waste recovery and transformation plant in Constantine, and that</p>	<p>Substantial</p>	<p>These risks are covered under the ESMF of the project. This framework makes provision to carry out ESIA's in line with UNDP social and environmental safeguards (standards and principles). Subsequently, ESMPs will be formulated for the implementation by the project.</p> <p>Building on the ESMF, the UNDP-GEF project will finance social and environmental impact studies for all project sites (Activities 1.3.2, 1.4.3 and 2.1.3) and the formulation of social and environmental management plans in the first year of the project. The ESMPs will aim to find ways to mitigate the risks of jobs and income losses.</p> <p>Activities related to the handling of poultry waste and hazardous waste such as heavy metals include mitigation measures to ensure that if such events did occur then these are addressed in effective and efficient ways, and that affected people get the appropriate medical care and treatment.</p> <p>Training and special equipment will be provided for the safe handling of hazardous substances recovered during the waste sorting process (capacity building provided under Outputs 2.6 and 2.8). In addition, activities to reduce the consumption of household hazardous wastes in Constantine and S?tif have been developed (Outputs 1.1 and 1.5). Also, activity 1.2.2 will implement appropriate procedures for the collection of household hazardous waste in Constantine.</p>
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<u>Technical risk</u> Construction and operation of solid waste processing units.	High	As the project is categorized as 'High' risk, an ESMF (Annex H) was prepared, covering all risks identified in the SESP. As per the ESMF, an ESIA will be conducted and ESMP prepared during project implementation for the waste processing units in Constantine and Sétif. The ESIA's are fully incorporated in the project design under Output 1.3 for the setting up of a waste recovery and transformation plant for poultry waste in Sétif; Output 1.4 for the construction of a centralized municipal solid waste sorting plant in Constantine; and Output 2.1 concerning the construction of a solid waste transformation plant, including waste-to-energy unit in Constantine.
<u>Social risk</u> The conversion of the current informal poultry waste management site in Sétif, into a unit to transform poultry waste into fertilizer would require that current occupants leave the site.	High	A Resettlement Action Plan (RAP) might be necessary if the land acquisition by SOPTE involves involuntary resettlement. A RAP would not be necessary if the land is acquired commercially through a willing buyer/willing seller process. In that case, documentation of the process would suffice. The Project will in no instance support eviction, and if necessary, an alternative site will be considered as per the Output 1.3.

6. Institutional Arrangement and Coordination

Describe the institutional arrangement for project implementation. Elaborate on the planned coordination with other relevant GEF-financed projects and other initiatives.

66. The project will be implemented following UNDP's national implementation modality, according to the Standard Basic Assistance Agreement between UNDP and the Government of Algeria, and the Country Programme. The Implementing Partner for this project is the Ministry of Environment (ME). The Implementing Partner is responsible and accountable for managing this project, including the monitoring and evaluation of project interventions, achieving project outcomes, and for the effective use of UNDP resources. The proposed management arrangement structure is shown in Figure 4.

Description of Proposed Arrangements

67. The Project Board (PB), also called Project Steering Committee (PSC), is responsible for making by consensus, management decisions when guidance is required by the Project Manager, including recommendations for UNDP/Implementing Partner approval of project plans and revisions, and addressing any project level grievances. In order to ensure UNDP's ultimate accountability, Project Board decisions should be made in accordance with standards that shall ensure management for development results, best value money, fairness, integrity, transparency and effective international competition. In case a consensus cannot be reached within the Board, final decision shall rest with the UNDP Programme Manager. While the PB will provide political support and advocate for the project and will be responsible for technical quality assurance of the project deliverables ? i.e. work carried out through the Technical Working Groups. The PB will be chaired by a representative of ME. The PB will also be composed of senior beneficiaries and a representative of UNDP as indicated in Figure 4. The PB will meet one or twice a year. The roles and responsibilities of the PB are:

- ? Provide overall guidance and direction to the project, ensuring it remains within any specified constraints;
- ? Address project issues as raised by the project manager;
- ? Provide guidance on new project risks, and agree on possible mitigation and management actions to address specific risks;
- ? Agree on project manager's tolerances as required, within the parameters set by UNDP-GEF, and provide direction and advice for exceptional situations when the project manager's tolerances are exceeded;

- ? Advise on major and minor amendments to the project within the parameters set by UNDP-GEF;
- ? Ensure coordination between various donor and government-funded projects and programmes;
- ? Ensure coordination with various government agencies and their participation in project activities;
- ? Track and monitor co-financing for this project;
- ? Review the project progress, assess performance, and appraise the Annual Work Plan for the following year;
- ? Appraise the annual project implementation report, including the quality assessment rating report;
- ? Ensure commitment of human resources to support project implementation, arbitrating any issues within the project;
- ? Review combined delivery reports prior to certification by the implementing partner;
- ? Provide direction and recommendations to ensure that the agreed deliverables are produced satisfactorily according to plans;
- ? Address project-level grievances;
- ? Approve the project Inception Report, Mid-term Review and Terminal Evaluation reports and corresponding management responses;
- ? Review the final project report package during an end-of-project review meeting to discuss lesson learned and opportunities for scaling up;
- ? Ensure highest levels of transparency and take all measures to avoid any real or perceived conflicts of interest.

68. The composition of the Project Board must include the following roles:

- a) Project Executive: Is an individual who represents ownership of the project and chairs the Project Board. The Executive is normally the national counterpart for nationally implemented projects. The Project Executive will be a representative of the ME.
- b) Beneficiary Representative(s): Individuals or groups representing the interests of those who will ultimately benefit from the project. Their primary function within the board is to ensure the realization of project results from the perspective of project beneficiaries. Often civil society representative(s) can fulfil this role. The Beneficiary representative (s) is/are: representatives of AND, MI and MICLAT, representatives of the Wilayas (e.g. Department of Environment of the Wilaya), as well as NGOs and civil society organizations (CSOs).
- c) Development Partner(s): The Development Partner is the UNDP Resident Representative (RR). Baseline analysis has shown that there are no development partners other than UNDP that are active in the solid waste management sector. This situation will be re-evaluated during the inception phase of project implementation and any relevant development partner(s) will then be invited to be part of the PSC.
- d) Project Assurance: UNDP performs the quality assurance and supports the Project Board and Project Management Unit by carrying out objective and independent project oversight and monitoring functions. This role ensures appropriate project management milestones are managed and completed, and conflict of interest issues are monitored and addressed. The Project Board cannot delegate any of its quality assurance responsibilities to the Project Manager. UNDP provides a three ? tier oversight services involving the UNDP Country Offices and UNDP at regional and headquarters levels. Project assurance is totally independent of project execution.

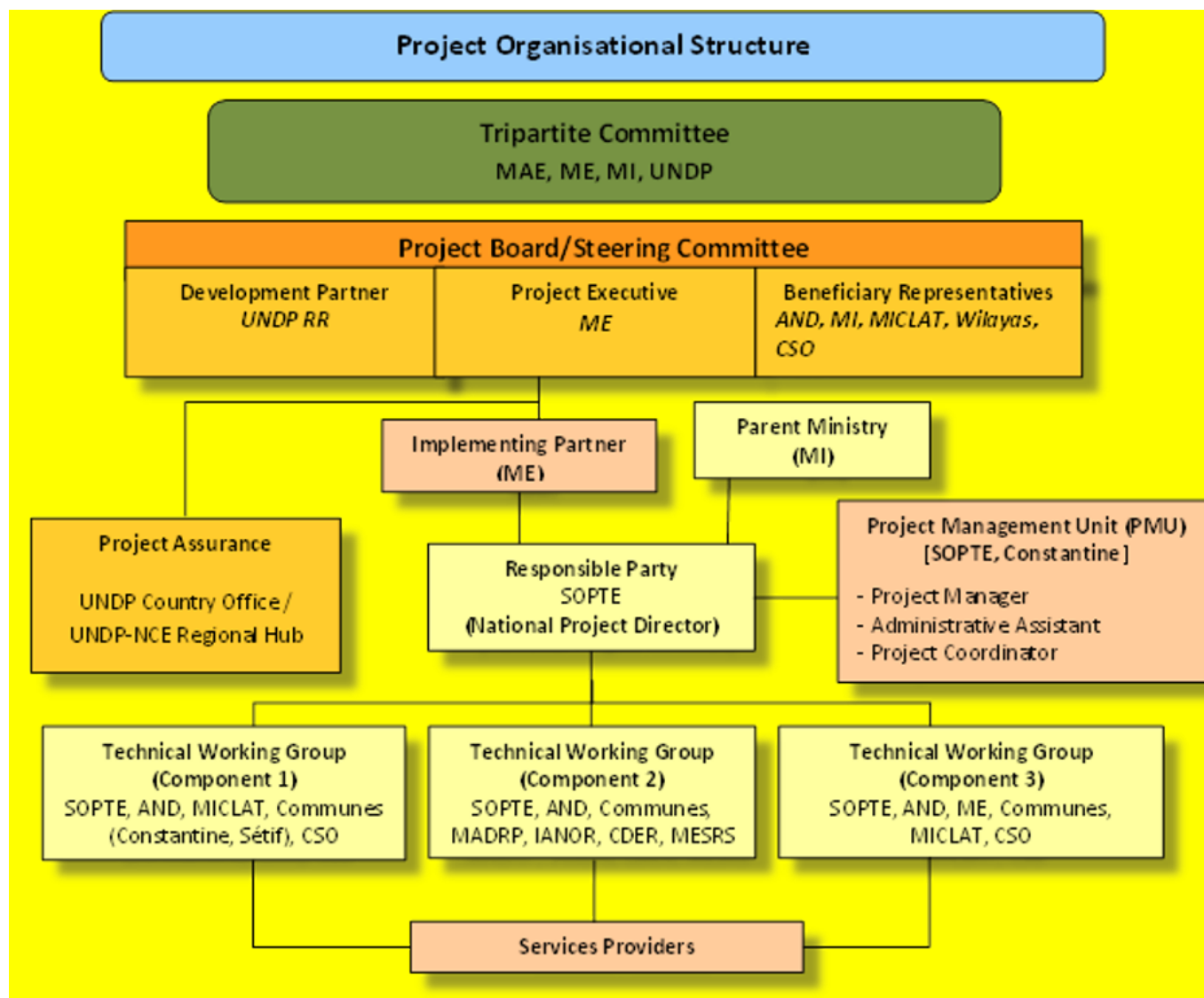


Figure 4. Organizational structure of the project

69. The composition of the PB has been determined so that all target groups are represented in the highest governance structure of the project. While recognising that not all interested target audience can be represented on the PB, the project makes space for a larger number of individuals from target groups to participate in the project implementation through three technical working groups (TWGs) that will be established for each component of the project. The TWGs will be set up to review the operational policies and progress on project outputs, and provide regular reports to the PB. In this capacity, the TWGs will support the PB in monitoring functions and delivery of project outputs, ensuring that the project is on-track towards achieving the overall outcomes. As shown in Figure 4, different target groups are represented in TWGs depending on their involvement in the project. Also, the TWGs (and PB) will be constituted from the cohort of stakeholders listed in Table 5. Additional specific responsibilities of the TWGs will include, but are not limited to, ensuring: beneficiary needs and expectations are being met or managed; risks are being controlled; the project remains viable; internal and external communications are working; quality management procedures are properly followed; and that the PB decisions are followed and revisions are managed to satisfaction.

70. The Responsible Party (RP) will be SOPTE, which operates under the aegis of the Ministry of Industry (MI). It was agreed between the main project partners (UNDP, MAE, ME, AND, MI and SOPTE) that the project will have a chief national project director (NPD) and a deputy. The Director of the project is proposed to be the Chief Executive Officer (CEO) of SOPTE in Constantine acting as the RP. The chief NPD will be from SOPTE, Constantine and the Deputy NPD from AND. The chief NPD

will be the principal person authorizing expenditures and responsible for the implementation of the project and will inform the Deputy DNP of all project activities. It was also agreed that the Project Management Unit (PMU) will be housed at SOPTE, Constantine. Defined responsibilities include the following:

- ? Provide guidance and direction to the team or project teams or responsible parties.
- ? Coordinate operations with members of the board responsible of the project to ensure global leadership and preserve the integrity of the project.
- ? Identify and get support and advice to the management, planning and control of the project.
- ? Ensuring project administration.
- ? Planning project activities and monitor progress against the results of the project and the approved annual work plan.
- ? Mobilize personnel, goods and services, training and micro-capital grants for the activities of the initiative, including the drafting of terms of reference and work specifications, and supervision of all the work of contractors.
- ? Monitor events determined in the plan and track project schedule, and update the plan as needed.
- ? Manage requests for the provision of financial resources by UNDP in granting cash advances, direct payments or refunds through certificate of expenditure and funding authority.
- ? Monitor financial resources and accounting to ensure accuracy and reliability of financial reporting.
- ? Ensure the preparation and presentation of financial reports to UNDP quarterly.
- ? Ensure the management and monitoring of project risks, including identification of emerging risks.
- ? Ensure that lessons learned are captured during the implementation of the project, and adaptive management use in response.
- ? Oversee the preparation of the annual work plan for the following year and update the Atlas Project Management module if external access is available.
- ? Oversee the preparation of the project implementation the Review Report (REMP) of the Global Environment Facility (GEF) and submit the final report to the Board responsible for the project.
- ? Ensure that annual work plans for the following year are formulated in a timely manner.
- ? Ensure that the mid-term review process is undertaken in accordance with the directives of UNDP and submit the final report of the mid-term to the Board responsible for the project.
- ? Ensure that the terminal review process is undertaken in accordance with the directives of UNDP and submit the final report of the review to the Board responsible for the project.

71. The Project Manager has the authority to run the project on a day-to-day basis on behalf of the Project Board within the constraints laid down by the Board, and under the guidance of the NPD. The Project Manager is responsible for day-to-day management and decision-making for the project. The Project Manager's prime responsibility is to ensure that the project produces the results specified in the project document, to the required standard of quality and within the specified constraints of time and cost. The Project Manager will be assisted by a Project Coordinator who will have technical expertise of integrated solid waste management, and who will be responsible for coordinating stakeholders in project sites. Specific responsibilities of the Project Manager include:

- ? Manage the overall conduct of the project.
- ? Plan the activities of the project and monitor progress against the approved workplan.
- ? Execute activities by managing personnel, goods and services, training and low-value grants, including drafting terms of reference and work specifications, and overseeing all contractors' work.
- ? Monitor events as determined in the project monitoring plan, and update the plan as required.
- ? Provide support for completion of assessments required by UNDP, spot checks and audits.
- ? Manage requests for the provision of UNDP financial resources through funding advances, direct payments or reimbursement using the FACE form.
- ? Monitor financial resources and accounting to ensure the accuracy and reliability of financial reports.
- ? Monitor progress, watch for plan deviations and make course corrections when needed within project board-agreed tolerances to achieve results.
- ? Ensure that changes are controlled and problems addressed.

- ? Perform regular progress reporting to the project board as agreed with the board, including measures to address challenges and opportunities.
- ? Prepare and submit financial reports to UNDP on a quarterly basis.
- ? Manage and monitor the project risks ? including social and environmental risks - initially identified and submit new risks to the Project Board for consideration and decision on possible actions if required; update the status of these risks by maintaining the project risks log;
- ? Capture lessons learned during project implementation.
- ? Prepare revisions to the multi-year workplan, as needed, as well as annual and quarterly plans if required.
- ? Prepare the inception report no later than one month after the inception workshop.
- ? Ensure that the indicators included in the project results framework are monitored annually in advance of the GEF PIR submission deadline so that progress can be reported in the GEF PIR.
- ? Prepare the GEF PIR;
- ? Assess major and minor amendments to the project within the parameters set by UNDP-GEF;
- ? Monitor implementation plans including the gender action plan, stakeholder engagement plan, and any environmental and social management plans;
- ? Monitor and track progress against the GEF Core indicators.
- ? Support the Mid-term review and Terminal Evaluation process.

72. Project Assistant (administrative and finance) : The Project Assistant is responsible for tasks such as administration, management and technical support of the project to the Project Manager and project Coordinator, based on the needs of their needs. The provision of formal project support services is optional. It is necessary to separate the roles of project support and project assurance to preserve the independence of Project Assurance Team. The tasks of the project assistant will be:

Administrative Service delivery:

- ? Establish and maintain project files.
- ? Collect data on the project.
- ? Update plans.
- ? Administer the quality control process.

Management of project documentation:

- ? Carry out verification of project revisions.
- ? Establish procedures for document control.
- ? Compile, copy and distribute all project reports

Financial management, monitoring and reporting:

- ? Assist in the financial management tasks under the responsibility of the project manager.
- ? Provide support for using the Atlas system for monitoring and reporting.

73. Project Coordinator (Technical): Given that the project will be implemented at different political (national and municipal) and geographical (Algiers, Constantine and Setif), the Project Coordinator will be responsible for providing technical support in project implementation, as well as carrying out coordination of all stakeholders for the efficient and effective use of resources to implement project activities in Constantine and Setif. So, the PC will provide technical support to the PM, but also have the responsibility to manage stakeholder engagement and ensure a gender-responsive project delivery. The Project Coordinator will have the following specific responsibilities:

- ? Coordinate all activities in project sites in Constantine and Setif by providing technical support
- ? Draft terms of reference for the recruitment of services providers (individuals and companies)
- ? Monitor the quality of the deliverables of consultants from technical perspective
- ? Provide technical support to the PSC when required
- ? Supporting SOPTE and AND in choice of waste transformation technologies to be in compliance with the ESMF and ESMP
- ? Provide direct assistance to the PM in relation to all project M&E activities, including among others the following:
- ? Monitor project progress and participate in the production of progress reports ensuring that they meet the necessary reporting requirements and standards;

- ? Ensure project's M&E meets the requirements of the Government, the UNDP Country Office, and UNDP-GEF; develop project-specific M&E tools as necessary;
- ? Oversee and ensure the implementation of the project's M&E plan, including periodic appraisal of the Project's Theory of Change and Results Framework with reference to actual and potential project progress and results;
- ? Oversee/develop/coordinate the implementation of the stakeholder engagement plan;
- ? Oversee and guide the design of surveys/ assessments commissioned for monitoring and evaluating project results;
- ? Facilitate mid-term and terminal evaluations of the project; including management responses;
- ? Facilitate annual reviews of the project and produce analytical reports from these annual reviews, including learning and other knowledge management products;
- ? Support project site M&E and learning missions;
- ? Visit project sites as and when required to appraise project progress on the ground and validate written progress reports.
- ? Support the PM with managing Social and Environmental Safeguards, including:
- ? Monitor progress in development/implementation of the project ESMP/ESMF ensuring that UNDPs SES policy is fully met and the reporting requirements are fulfilled;
- ? Oversee/develop/coordinate implementation of all safeguard related plans;
- ? Ensure social and environmental grievances are managed effectively and transparently;
- ? Review the SESP annually, and update and revise corresponding risk log;
- mitigation/management plans as necessary;
- ? Ensure full disclosure with concerned stakeholders;
- ? Ensure environmental and social risks are identified, avoided, mitigated and managed throughout project implementation;
- ? Monitor progress in implementation of the project Gender Action Plan ensuring that targets are fully met and the reporting requirements are fulfilled;
- ? Oversee/develop/coordinate implementation of all gender-related work;
- ? Review the Gender Action Plan annually, and update and revise corresponding management plans as necessary;
- ? Ensure reporting, monitoring and evaluation fully address the gender issues of the project;
- ? Review and update the Stakeholder Engagement Plan;
- ? Coordinate the implementation of knowledge management outputs of the project;
- ? Coordinate and oversee the implementation of public awareness activities across all project components;
- ? Facilitate the design and maintenance of the project website/webpages and ensure it is up-to-date and dynamic;
- ? Facilitate learning and sharing of knowledge and experiences relevant to the project;

74. Project extensions: The UNDP Resident Representative and the UNDP-GEF Executive Coordinator must approve all project extension requests. Note that all extensions incur costs and the GEF project budget cannot be increased. A single extension may be granted on an exceptional basis and only if the following conditions are met: one extension only for a project for a maximum of six months; the project management costs during the extension period must remain within the originally approved amount, and any increase in PMC costs will be covered by non-GEF resources; the UNDP Country Office oversight costs in excess of the CO's Agency fee specified in the DOA during the extension period must be covered by non-GEF resources.

75. South-South Cooperation is planned in the project activities through exchange of experience and lessons learned. In particular, the project will establish a partnership with the project UNDP-GEF "Ethiopia Urban NAMA: Creating Opportunities for Municipalities to Produce and Operationalise Solid Waste Transformation (COMPOST) (GEFID 9048)," which has strong similarities with the project in Algeria. Exchanges will take place regarding the following activities that play an important role in both projects:

- ? Incentive mechanisms to support micro-enterprises and SMEs
- ? market opportunities for the recycled fraction of nonorganic waste

- ? The sustainable production of compost (NPK-enriched organic-based fertilizers) to replace chemical fertilizers
- ? The construction of waste transformation facilities
- ? The development of a voluntary carbon market
- ? South-South Cooperation

76. The Japan International Cooperation Agency (JICA) has developed and hosts the Secretariat of the African Clean Cities Platform (ACCP) in collaboration with UNEP and UN-Habitat. The ACCP is a platform to share knowledge and promote the Sustainable Development Goals (SDGs) on waste management in order that African countries achieve clean and healthy cities. To date, there are 35 countries and 64 cities in Africa that are member of the ACCP but neither Algeria nor any Algerian city is a member. During the PPG phase discussions took place with the coordinator of the ACCP to understand the steps required for the registration of Algeria (through ME) and the cities of Constantine and Sétif (through the Wali's office) as members of the ACCP. Subsequently, contact was made with the head of JICA in Tunis that manages the Algeria portfolio to start membership procedures to APCC in the implementation phase.

7. Consistency with National Priorities

Describe the consistency of the project with national strategies and plans or reports and assessments under relevant conventions from below:

NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc.

- National Action Plan for Adaptation (NAPA) under LDCF/UNFCCC
- National Action Program (NAP) under UNCCD
- ASGM NAP (Artisanal and Small-scale Gold Mining) under Mercury
- Minamata Initial Assessment (MIA) under Minamata Convention
- National Biodiversity Strategies and Action Plan (NBSAP) under UNCBD
- National Communications (NC) under UNFCCC
- Technology Needs Assessment (TNA) under UNFCCC
- National Capacity Self-Assessment (NCSA) under UNCBD, UNFCCC, UNCCD
- National Implementation Plan (NIP) under POPs
- Poverty Reduction Strategy Paper (PRSP)
- National Portfolio Formulation Exercise (NPFE) under GEFSEC
- Biennial Update Report (BUR) under UNFCCC
- Others

77. The GEF Project is firmly rooted in the country's NDC. As articulated in its 2015 INDC, Algeria's mitigation strategy covers mainly energy, forests, housing, transport, industry and waste sectors. The paper also states that, by 2030, the country aspires to deploy biomass powered generators. Moreover, the government clearly states that it intends to give priority to the management of household solid waste. It is clear, therefore, that, at its core, this project covers a number of these objectives i.e. reduced transportation (including the of piloting, albeit at small scale, electric vehicles), biomass powered generators (from the organic fraction of the waste) and the management of household waste. The CO₂e emissions of Algeria has been estimated at 56,779 ktCO₂e. As part of its NDC, Algeria seeks to reduce its emissions by 22% by 2030. Based on these figures, the direct emissions reductions cited above represents approximately 7% of its climate change mitigation NDC. Importantly, the GEF-financed project will support the implementation of the National Strategy and Action Plan for Integrated Waste Management 2035 (SNGID 2035) that is expected to deliver the socioeconomic benefits given in Table 2. A main thrust of SNGID 2035 is to support commercially viable circular

solid waste economy value chains, and the GEF-financed project will be a first of its kind in this respect.

8. Knowledge Management

Elaborate the "Knowledge Management Approach" for the project, including a budget, key deliverables and a timeline, and explain how it will contribute to the project's overall impact.

- 78 Knowledge Management Approach: Knowledge management is given priority in the project design and is captured as a stand-alone component (i.e. Component 4). Knowledge management forms an integral part of the Theory of Change that is illustrated in the diagram shown in Annex H. It is as a means to an end for the final objective of capturing and sharing lessons learned with a view to scaling up mitigation action in the solid waste management sector in Algeria. An adaptive approach is required on the assumption that the change of social behaviour and any innovative initiative vary in scope and are characterised by uncertain and changing requirements. This is where the monitoring and evaluation of the project's strengths and weaknesses become relevant. The project will promote South-South and triangular cooperation through knowledge management.
79. There are multiple ways in which Knowledge Management is integrated in the project design, and Table 9 list the relevant activities, timelines and budget.

Table 9: Knowledge management deliverables and budget

Deliverable	Timeline	Budget (US\$)
Act. 3.1.1. Professional and graduate-level training in solid waste processing technologies	Annually	44,425
Act. 3.1.2: Develop a replication plan	Year 5 (Q2-Q4)	86,663
Act. 4.3.1. Mid-term review	by 31 October 2023	60,715
Act. 4.3.2. Terminal evaluation	by 30 November 2025	85,235
Act. 4.4.1: Develop improved transparency frameworks and impacts on sustainable development goals (SDGs)	Year 1 (Q3-Q4)	57,946
Act. 4.4.2: Surveys to capture and share lessons learned	Annually	62,256
Act 4.4.3: Develop a project website	Year 1 (Q1-Q2)	10,000
TOTAL		407,240

Consequently, Output 4 aims to capture and disseminate lessons learned and best practices in integrated solid waste management in Constantine and Sétif. It will also develop an investment plan accompanied by a replication strategy for scaling the integrated management of solid waste across 48 other cities (wilayas) in Algeria. Knowledge management will be used as adaptive management strategy of the project using best practices (Output 4.4). The development and application of the MRV mechanism for GHG emission reductions (Output 4.4) will be institutionalised by integrating the project MRV system within the broader MRV framework for carrying out national GHG inventories under the aegis of the Ministry of Environment. Under Output 2.3, the Algerian Institute for Standardization (IANOR) will be supported to develop national standards for fertilizers produced from the organic fractions of solid wastes. Further, the

results of the project will be integrated into the curriculum of vocational and tertiary institutions (Output 3.1) that will have the responsibility to train technicians on innovative waste treatment technologies and the development of a circular economy centred on the solid waste value chain. The most effective communications and outreach strategy will be developed based on detailed gender-differentiated assessments of the information needs of target communities (Output 1.1). Besides applying standard procedures for monitoring (Output 4.2) and evaluation (Output 4.3), the project will also put in place a SDG Impact Framework for measuring its impacts across all SDGs at the local level, and supporting country reporting. Together, these features of the project design will work in synergy to contribute towards the project's impact.

9. Monitoring and Evaluation

Describe the budgeted M and E plan

80. The monitoring and evaluation plan of the project is presented below in Table 10.

Table 10: Project M&E Plan.

Monitoring and Evaluation Plan and Budget:		
GEF M&E requirements	Indicative costs (US\$)	Time frame
Inception Workshop and Report	US \$ 5,000	Inception Workshop within 2 months of the First Disbursement
M&E of GEF core indicators and project results framework	None Prorating the fees of the project manager	Annually and at mid-point and closure.
GEF Project Implementation Report (PIR)	None	Annually typically between June-August
Monitoring all risks (Atlas risk register)	None	On-going.
Monitoring of environmental and Social safeguards	None	On-going.
Monitoring of stakeholder engagement plan	None	On-going.
Monitoring of gender action plan	None	On-going.
Supervision missions	None	Annually

Monitoring and Evaluation Plan and Budget:		
Independent Mid-term Review (MTR)	US \$ 60,715	30 September 2025
Independent Terminal Evaluation (TE)	US \$ 85,235	31 December 2027
TOTAL indicative COST	US \$ 150,950	

10. Benefits

Describe the socioeconomic benefits to be delivered by the project at the national and local levels, as appropriate. How do these benefits translate in supporting the achievement of global environment benefits (GEF Trust Fund) or adaptation benefits (LDCE/SCCF)?

81. Information received from SOPTE shows that the project will have a payback period of between 30 and 36 months depending on the sensitivity of input parameters. One of the significant parameters is the price of NPK-enriched organic-based fertilizers that will be produced by the UNDP-GEF project. The financial model proposes to sell these fertilizers between 10% and 30% less than the unit price of chemical fertilizers. The investments made by the PPP will create approximately 140 new jobs and around 410 indirect jobs in the integrated solid waste value chain. The investments and human capital, supported with technical assistance from GEF financing, will result in the integrated solid waste management scheme shown in Figure 2 above. This scheme delivers global environmental benefits through the five levers that are discussed in Annex I. Further, by delivering a circular waste economy using environmentally-friendly solid waste management technologies the GEF-financed project will reduce the volume of solid waste disposed in open dumps that have detrimental impacts on air quality and result in ground and water pollution. Similarly, by providing a better means of treating poultry waste, the project will reduce the negative health and environmental impacts of poultry waste management in the baseline (Annex K).

82. It is worth noting that the UNDP-GEF project is regarded as a pilot project for the implementation of the SNGID 2035 ? the national strategy for the integrated management of waste ? and the scaling up of activities proposed under Outcome 3 to replicate the integrated management of municipal solid waste in all 48 Wilayas in Algeria will squarely support the realization of the socioeconomic and GHG emission reductions listed in Table 2 above.

11. Environmental and Social Safeguard (ESS) Risks

Provide information on the identified environmental and social risks and potential impacts associated with the project/program based on your organization's ESS systems and procedures

Overall Project/Program Risk Classification*

PIF	CEO Endorsement/Approval	MTR	TE
High or Substantial			

Measures to address identified risks and impacts

Elaborate on the types and risk classifications/ratings of any identified environmental and social risks and impacts (considering the GEF ESS Minimum Standards) and any measures undertaken as well as planned management measures to address these risks during implementation.

Social and Environmental Screening Procedure

Project Information

<i>Project Information</i>	
1. Project Title	AIM-WELL: Algeria Integrated Management of Waste Energy at the Local Level
2. Project Number	6163
3. Location (Global/Region/Country)	Algeria

Part A. Integrating Overarching Principles to Strengthen Social and Environmental Sustainability

QUESTION 1: How Does the Project Integrate the Overarching Principles in order to Strengthen Social and Environmental Sustainability?
<i>Briefly describe in the space below how the Project mainstreams the human-rights based approach</i>

This project mainstreams the human rights-based approach through interventions that address poverty, social equity and equality. It works to uphold human rights and improve the living conditions and general well-being of some 750,000 people currently living in the 2 municipalities covered by the project: Constantine and Setif. The project contributes to improve waste management system and by doing such, provide better living environment to beneficiaries. The project will adopt a participative approach, to guarantee maximum coverage of impact: the inclusion of all social groups, with particular attention to the participation and inclusion of women and youth.

Being 'high risk', the project is accompanied by an Environmental and Social Management Framework (ESMF) to provide for a rights-based approach rooted in equity and fairness to addressing issues related to losses of jobs in the existing solid waste management chain (Annex H). Besides detailing the environmental impacts of the proposed technological innovation that the UNDP-GEF project proposes, detailed social impacts studies will be carried out (Outcome 1 and 2) in order to develop Environmental and Social Management Plans (ESMP) in Constantine and Setif. The ESMPs will be accompanied by appropriate action plans for the rehabilitation of persons who might lose income and livelihoods due to the project.

There are two more instances in which the rights-based approach is addressed in the ESMF. The first relates to adherence to international Standards on occupational health and safety during the construction of solid waste recovery and transformation plants and facilities. The second relates to the appropriate measures being put in place for handling of solid waste, especially at the centralised solid waste sorting facility that will be constructed in Constantine. While the facility will be automated, it is expected that there will still be mechanical handling of some fraction of solid wastes, of which some may be household hazardous waste.

Briefly describe in the space below how the Project is likely to improve gender equality and women's empowerment

UNDP prioritizes gender mainstreaming as its main strategy to achieve gender equality and women's empowerment. Gender mainstreaming is the process of assessing any planned action in all areas and levels to determine the implication for women and men. It is a strategy for making women's, as well as men's, concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of projects so that women benefit equally. The Global Gender Gap Index shows that Algeria generally performs weakest in two categories, namely (i) participation and economic opportunity, and (ii) political empowerment. Slow progress in closing the gender gap revealing that Algeria must increase its efforts and ambition to close the gender gap. Gender analysis carried out during the PPG phase revealed that women are already involved across the entire solid waste chain thereby providing various entry points for mainstreaming Gender in the project design. For instance, the household surveys (Annex SA3) have shown that sorting of waste in households rose from 33% to 46% in the recent past. With the implementation of the project, the observed progress and the incentives that will be provided to households, the rate of women involved in selective waste sorting is expected to reach the 80% target. Outcome 2 seeks to put in place an enabling environment with incentive mechanisms for promoting micro and small enterprises to participate in the integrated solid waste value chain. It also endeavours to develop a voluntary carbon market and to strengthening women's technical skills in solid waste transformation technologies. The stated goal of women who are active in the field and master the technology is 25%.

In summary, Gender has been considered through each step of the project. Emphasis will be placed on the inclusion of women in capacity building exercises to ensure they receive adequate training and equal opportunities to benefit from the project. Furthermore, the project will also work with women's associations to help create micro enterprises; these in turn will form part of the supply chain, providing services related to waste management. A Gender Action Plan (Annex F) is integrated in the project design across all three project outcomes.

Briefly describe in the space below how the Project mainstreams environmental sustainability

The project works to mainstream environmental sustainability by combining environmental protection with economic benefit. This is achieved by reducing the amount of waste sent to landfills (and so reducing emissions as well as pollution) using an integrated waste management model which leverages the private sector. As revealed in the Project Results Framework, 750 tonnes of municipal solid waste will be treated per day in Constantine. The waste value creation will result in avoided solid waste dumped in open sites and the production of 25,326 tonne/year of organic-based fertilizers; the generation of 14,980 MWh/year of electricity (2 MWe installed capacity); and 21,565 tonnes/year of recovered plastic, among others. In Setif, raw poultry waste will be transformed into 26,400 tonnes of organic-based fertilizers annually. The development of a replication plan (and accompanied with investment plans) will be developed for all 48 Wilayas for scaling up the circular economy in Algeria.

Importantly, the project will reduce GHG emissions. During its lifetime, the project will help reduce greenhouse gases (GHGs), including methane avoided from landfill resulting from the organic fraction of solid waste that will be transformed; optimized transportation (the collection of household waste and transport in Constantine and poultry waste fertilizers in S?tif) and transportation avoided (the distance between the project site and landfill avoided in Constantine); plastic recycling; and substitution of chemical fertilizers with organic-base fertilizers. It is expected that GHGs will be avoided as from the second year of project implementation. At the end of the 5-year project, the cumulative avoided emissions will be about 357,279 tCO_{2e}. The results are summarized in Table 4 (ProDoc), and the GHG emission reduction calculations, including the methodologies used, are found in Annex J. Modelling over a 15-year economic life gives a total reduction of direct GHG emissions of 4,301,757 tCO_{2e}. Indirect GHG emission reductions are expected to be between 12.91 MtCO_{2e} (bottom-up) and 15.40 MtCO_{2e} (top down).

Part B. Identifying and Managing Social and Environmental Risks

<p>QUESTION 2: What are the Potential Social and Environmental Risks?</p> <p><i>Note: Describe briefly potential social and environmental risks identified in Attachment 1 ? Risk Screening Checklist (based on any ?Yes? responses). If no risks have been identified in Attachment 1 then note ?No Risks Identified? and skip to Question 4 and Select ?Low Risk?. Questions 5 and 6 not required for Low Risk Projects.</i></p>	<p>QUESTION 3: What is the level of significance of the potential social and environmental risks?</p> <p><i>Note: Respond to Questions 4 and 5 below before proceeding to Question 6</i></p>			<p>QUESTION 6: What social and environmental assessment and management measures have been conducted and/or are required to address potential risks (for Risks with Moderate and High Significance)?</p>
<p>Risk Description</p>	<p>Impact and Probability (1-5)</p>	<p>Significance (Low, Moderate, High)</p>	<p>Comments</p>	<p>Description of assessment and management measures as reflected in the Project design. If ESIA or SESA is required note that the assessment should consider all potential impacts and risks.</p>

<p>Risk 1. Support to a fundamental transformation of the household waste management supply chain and practices in Constantine brings issues of labour management, occupational health and safety, construction site management, emergency preparedness and response (among others)</p>	<p>I = 4 P = 5</p>	<p>High</p>	<p>The Project includes the construction and operation of a solid waste sorting and processing units by SOPTE (a parastatal) inside an 8-hectare property fully owned by SOPTE that is fenced, constantly guarded, and is free of any encumbrances.</p>	<p>An ESMF (Annex H) was prepared to address the social and environmental risks and impacts of the entire Project. The ESMF includes the following measures that are specific to the Constantine solid waste activities of the Project:</p>
<p><i>SESP Principle 1. Human Rights, Question 1. Could the Project lead to adverse impacts on enjoyment of the human rights (civil, political, economic, social or cultural) of the affected population and particularly of marginalized groups?</i></p>			<p>The construction and operation of the units brings issues of labour management, occupational health and safety, construction site management, sexual exploitation and abuse, emergency preparedness and response, environmental and social monitoring of contractors, and the need for a worker grievance mechanism.</p>	<p>SOPTE has already commissioned an Environmental Impact Study (EIS) that was prepared by SARL Traitech to meet national requirements for classified facilities (Etablissement Public) as defined in Executive Decree No. 2006-198 of 31 May 2006. The document is dated February 2019, and has been submitted to the Ministry of Environment for approval. The EIS focuses on the engineering and technical issues associated with the units. A detailed review of the EIS is joined in Appendix A of the ESMF, including proposed changes needed to meet the requirements of UNDP's SES.</p>
<p><i>SESP Principle 1. Human Rights, Question 2. Is there a likelihood that the Project would have inequitable or discriminatory adverse impacts on affected populations, particularly people living in poverty or marginalized or excluded individuals or groups?</i></p>			<p>SOPTE will initially reroute 500 tons of waste daily from the Constantine and El Khroub communes, eventually to be upscaled to 100 tonnes/day.</p>	<p>The Project will ensure that SOPTE upgrades its EIS on the basis of the review to a full ESIA and ESMP that: (i) meet UNDP's SES principles and standards, including the EHS Guidelines; (ii) covers the environmental and social risks and impacts of the entire household waste management value chain in Constantine; (iii) are reviewed and cleared by Project, as well as UNDP, before any activity with a physical footprint is initiated in Constantine (i.e.)</p>
<p><i>SESP Principle 1. Human Rights, Question 3. Could the Project potentially restrict availability, quality of and access to resources or basic services, in particular to marginalized individuals or groups?</i></p>			<p>The units will produce residual waste that will need to be managed, particularly the extracted liquid waste (in excess of 40%), waste that cannot be reused (up to 30% of dried waste), bottom ashes from incinerated waste (over 25% of incinerated material) and fine particles from the incineration process</p>	

<p>Risk 2. Support to Poultry Waste Management in S'tif brings a wide range of environmental issues such as odours, nitrate contamination of ground and surface water, flies and mosquitoes; and social issues including potential physical and/or economic displacement, and impacts on cultural heritage.</p> <p><i>SESP Principle 1. Human Rights, Question 1. Could the Project lead to adverse impacts on enjoyment of the human rights (civil, political, economic, social or cultural) of the affected population and particularly of marginalized groups?</i></p> <p><i>SESP Principle 1. Human Rights, Question 2. Is there a likelihood that the Project would have inequitable or discriminatory adverse impacts on affected populations, particularly people living in poverty or marginalized or excluded individuals or groups?</i></p> <p><i>SESP Principle 1. Human Rights, Question 3. Could the Project potentially restrict availability, quality of and access to resources or basic services, in particular to marginalized individuals or groups?</i></p> <p><i>SESP Principle 1. Human Rights</i></p>	<p>I = 4 P = 5</p>	<p>High</p>	<p>The Ksar el Abtal was selected for the poultry waste transformation unit because it is currently the main site used for the informal drying of poultry waste.</p> <p>The new unit would very significantly reduce the negative environmental impacts currently associated with the site, such as odours, nitrate contamination of ground and surface water, flies and mosquitoes.</p> <p>The processing of poultry waste might produce residual waste, most particularly liquid waste, and will require a yet undetermined source of energy to transform the waste.</p> <p>The conversion of the existing poultry waste drying site in Guelal into an industrial unit to produce fertilizer would physically displace the persons currently using the site for drying poultry waste.</p> <p>More broadly, SOPTE's entry into the poultry waste value chain at Setif could at first economically displace approximately 28% of the storage and partial drying activities, as well as the transport to southern Algeria, and sales activities. In due course, the whole supply chain</p>	<p>SOPTE has not yet prepared an ESIA or ESMP for its involvement in the processing of poultry waste and the commercialization of fertilizer derived from the poultry waste.</p> <p>The ESIA and ESMP that SOPTE will produce for the S'tif poultry waste processing unit (see above) will assess all potential sources of pollution, and define proportional but sufficient mitigation measures to meet international standards and national laws and regulations.</p> <p>The ESMF provides for the preparation an Environmental and Social Impact Assessment (ESIA) and an Environmental and Social Management Plan (ESMP) for the poultry waste processing unit in S'tif that: (i) meet UNDP's SES principles and standards, including the EHS Guidelines; (ii) cover the entire poultry waste management value chain in S'tif; (iii) are reviewed and cleared by UNDP before any activity with a physical footprint is initiated in S'tif; (iv) are applied and monitored throughout implementation of the activities concerned. The ESMP will incorporate the minimum environmental and social criteria for contractors.</p> <p>Output 1.3 for the setting up of a waste recovery and transformation plant for poultry waste in S'tif;</p> <p>The ESIA's are fully</p>
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<p>Risks 3. The promotion of a New Solid Waste Management Model could affect the livelihoods of wastepickers in Algeria</p> <p><i>SESP Principle 1. Human Rights, Question 1. Could the Project lead to adverse impacts on enjoyment of the human rights (civil, political, economic, social or cultural) of the affected population and particularly of marginalized groups?</i></p> <p><i>SESP Principle 1. Human Rights, Question 2. Is there a likelihood that the Project would have inequitable or discriminatory adverse impacts on affected populations, particularly people living in poverty or marginalized or excluded individuals or groups?</i></p> <p><i>SESP Principle 1. Human Rights, Question 3. Could the Project potentially restrict availability, quality of and access to resources or basic services, in particular to marginalized individuals or groups?</i></p> <p><i>SESP Principle 1. Human Rights, Question 4. Is there a likelihood that the Project would exclude any potentially affected stakeholders, in particular marginalized groups, from fully participating in</i></p>	<p>I = 2</p> <p>P = 5</p>	<p>Moderate</p>	<p>The two pilots in Constantine and Setif seek to implement a paradigm shift from engineered solid waste to the 3 Rs (reduce, reutilize, recycle), as suggested in the recent National Strategy and Action Plan for the Integrated Management and Recovery of Waste by 2035.</p> <p>The Strategy did not consider the social and environmental implications of the proposed paradigm shift. In particular, such a shift will directly affect tens of thousands of individuals whose livelihoods depend on current waste management practices, particularly since the new players will tend to be better organized and will in large part be private sector actors that will capture most of the added value. Already vulnerable persons could become even more vulnerable.</p>	<p>The Project will help fill the policy gap by supporting the preparation Strategic Environmental and Social Assessment (SESA) that addresses the potential social and environmental effects of the Strategy. As discussed above, this is fully integrated in the project design under Output 3.1 with due reference to the SESP (Annex E).</p> <p>The SESA will consider the social and environmental implications of the solid waste management model proposed by the Project, as implemented through two pilots in Constantine and Setif. More specifically, it must:</p> <ul style="list-style-type: none"> ? Concisely describe the Strategy ? Take into account UNDP's SES, as well as the standards of other donors/development partners, and identify potential policy gaps that will need to be addressed. ? Identify potential adverse social and environmental impacts associated with the Strategy's implementation, most particularly the loss of formal and informal livelihoods associated with the current management model. ? Formulate policy and institutional measures needed to avoid, mitigate or compensate for adverse social and environmental impacts arising from the Strategy's implementation. In particular, the SESA will identify policy measures to avoid capture of the most
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<p>Risk 4. Vulnerability of the project (and its outcomes) to the effects of climate change</p> <p><i>Standard 2, Climate Change Mitigation and Adaptation, Question 2. Would the potential outcomes of the Project be sensitive or vulnerable to potential impacts of climate change?</i></p>	<p>I = 1 P = 5</p>	<p>Low</p>	<p>Assessing the Project's vulnerability to climate change has two layers of uncertainties. The first layer is that there is uncertainty in the nature and scope of potential changes, as indicated in the baseline. Furthermore, tipping points could be reached that affect GCMs and make potential changes non-linear.</p> <p>The second layer is that it is difficult to predict how the various value chains associated with the Project will evolve or adapt: (i) household waste to energy, (ii) household waste to fertilizer, (iii) household waste to recyclables, (iv) poultry waste to fertilizer, poultry fertilizer to potatoes or vegetables.</p> <p>Thus, the following is highly speculative:</p> <p>? Climate change will not directly affect the production of household waste in Constantine and of poultry waste in Setif. Given changing lifestyles, the per capita production of waste should continue to increase, as will per capita consumption of poultry. Ironically, less rainfall will facilitate the handling and transformation of</p>	<p>No separate assessment or management measures required for low risks, though as the project's overall categorization is 'High?' this risk will be considered during the development of the project's holistic ESIA/ESMPs (per the ESMF).</p>
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<p>Risk 5. Technical Assistance could create outcomes or situations that harm people or the environment.</p> <p>SES, all principles and standards triggered above</p>	<p>I = 2</p> <p>P = 3</p>	<p>Moderate</p>	<p>The nature and substance of technical assistance regarding policy or regulatory issues could create outcomes or situations contrary to UNDP's SES principles and standards, and could diverge from the expectations of certain stakeholders.</p> <p>Consultants that are embedded within an institution to strengthen the institutions capacity can be problematic. If they, unbeknownst to the Project or UNDP, work or provide advice on activities unrelated to the Project that do not meet the UNDP's SES principles and standards.</p>	<p>Per the ESMF, the Project Coordinator will systematically review the terms of reference for technical assistance funded by the Project, to ensure that they take into account UNDP's Social and Environmental Standards, including gender issues, before they are approved. The Project will also monitor the outputs of these consultancies and ensure that they are disclosed and consulted on in accordance to the Project's Stakeholder Engagement Plan and UNDP requirements. This implies that the Project must have or employ the necessary technical expertise.</p> <p>The terms of reference for embedded consultants should clearly ring-fence the activities that they can work on under a UNDP/GEF funded contract, by specifying permissible tasks on or including a list of excluded tasks.</p>
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Risk 5. Gender discriminations could be reproduced by the project. <i>SESP Principle 2, Question 2. Would the Project potentially reproduce discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits?</i>	I=2 P=5	Moderate	Although women are well represented in the management of solid waste in Constantine (SOPTE, EPIC, Government), they are not well represented in the construction sector.	A gender analysis was undertaken and a Gender Action Plan (Annex G) was prepared during the PPG to manage this risk. The ESIA and ESMP terms of reference for the waste processing units require that contractors include procedures for the equitable gender selection of labour. These are included in Outputs 1.3, 1.4 and 2.1, which will develop the technical specifications for construction the waste collection, recovery and transformation infrastructure.
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	QUESTION 4: What is the overall Project risk categorization?		
	Select one (see SESP for guidance)		Comments
	<i>Low Risk</i>	<input type="checkbox"/>	
	<i>Moderate Risk</i>	<input type="checkbox"/>	
	<i>High Risk</i>	<input checked="" type="checkbox"/>	<p>The environmental and social risks and impacts associated with the transformation of solid waste value chains proposed by SOPTE in Constantine and Setif are overall high.</p> <p>An ESMF was developed to guide Project implementation, including the preparation of ESIA's and ESMPs for the solid waste processing units that are part of the Project. SOPTE has committed to the construction and operation of the units according to the ESMPs.</p>
	QUESTION 5: Based on the identified risks and risk categorization, what requirements of the SES are relevant?		
	Check all that apply		Comments

<i>Principle 1: Human Rights</i>	X	The Project might affect some wastepickers.
<i>Principle 2: Gender Equality and Women's Empowerment</i>	X	Gender was mainstreamed throughout each of the project's components.
<i>1. Biodiversity Conservation and Natural Resource Management</i>	?	Standard 1 is not triggered because the Project will only be within existing industrial footprints and not within any habitats or agricultural landscape, will not consume any water, and will not release any effluents into a natural habitat.
<i>2. Climate Change Mitigation and Adaptation</i>	X	The Project will not increase emissions and will not significantly be affected by expected climate changes
<i>3. Community Health, Safety and Working Conditions</i>	X	The Minimum Environmental and Social Criteria for ESMPs attached to the ToRs for the ESIA and ESMPs of the proposed solid waste processing units in Constantine and Setif include clauses related to Community Health, Safety, and Working Condition clauses that will apply to all contractors during the construction and operation of the units.
<i>4. Cultural Heritage</i>	X	<p>There is no known cultural heritage in the sites selected for the solid waste processing units in Constantine and Setif. Nonetheless, the ToRs for the ESIA and ESMPs of these sites include a chance find procedure that will apply to all contractors.</p> <p>Cultural heritage in potential future replication sites will be taken into account during the preparation of the Environmental and Social Strategic Assessment that the Project will prepare.</p>
<i>5. Displacement and Resettlement</i>	X	<p>The Project will affect the livelihoods of persons that currently depend on the solid waste value chain.</p> <p>The proposed ESMF includes the preparation of ESIA and ESMPs that will cover the social impacts and risks of the entire solid waste management value chain in Constantine, and of the poultry waste value chain in Setif.</p> <p>The project will only go forward if it does not lead to the eviction of people currently occupying the poultry waste management site in Setif.</p>

6. <i>Indigenous Peoples</i>	?	During the PPG, based on stakeholders' consultation and field visits in Constantine and Setif from June to October 2019, it was determined that no groups satisfying the more commonly accepted definitions of indigenous peoples are located in the project's area or area of influence, and that no such groups could be impacted by the project's activities. This will be reassessed and updated as needed during the site-specific assessment to be undertaken during project implementation.
7. <i>Pollution Prevention and Resource Efficiency</i>	X	The processing of solid waste might produce residual waste, most particularly liquid waste and ash. The management of these residual wastes will be addressed in ESIA's and ESMPs that the Project will prepare for both Constantine and Setif.

Final Sign Off

<i>Signature</i>	<i>Date</i>	<i>Description</i>
QA Assessor		UNDP staff member responsible for the Project, typically a UNDP Programme Officer. Final signature confirms they have 'checked' to ensure that the SESP is adequately conducted.
QA Approver		UNDP senior manager, typically the UNDP Deputy Country Director (DCD), Country Director (CD), Deputy Resident Representative (DRR), or Resident Representative (RR). The QA Approver cannot also be the QA Assessor. Final signature confirms they have 'cleared' the SESP prior to submittal to the PAC.
PAC Chair		UNDP chair of the PAC. In some cases, PAC Chair may also be the QA Approver. Final signature confirms that the SESP was considered as part of the project appraisal and considered in recommendations of the PAC.

SESP Attachment 1. Social and Environmental Risk Screening Checklist

Checklist Potential Social and Environmental Risks	
Principles 1: Human Rights	Answer (Yes/No)
1. Could the Project lead to adverse impacts on enjoyment of the human rights (civil, political, economic, social or cultural) of the affected population and particularly of marginalized groups?	Yes
2. Is there a likelihood that the Project would have inequitable or discriminatory adverse impacts on affected populations, particularly people living in poverty or marginalized or excluded individuals or groups?	Yes
3. Could the Project potentially restrict availability, quality of and access to resources or basic services, in particular to marginalized individuals or groups?	Yes
4. Is there a likelihood that the Project would exclude any potentially affected stakeholders, in particular marginalized groups, from fully participating in decisions that may affect them?	Yes

5. Is there a risk that duty-bearers do not have the capacity to meet their obligations in the Project?	No
6. Is there a risk that rights-holders do not have the capacity to claim their rights?	No
7. Have local communities or individuals, given the opportunity, raised human rights concerns regarding the Project during the stakeholder engagement process?	No
8. Is there a risk that the Project would exacerbate conflicts among and/or the risk of violence to project-affected communities and individuals?	Yes
Principle 2: Gender Equality and Women's Empowerment	
1. Is there a likelihood that the proposed Project would have adverse impacts on gender equality and/or the situation of women and girls?	No
2. Would the Project potentially reproduce discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits?	Yes
3. Have women's groups/leaders raised gender equality concerns regarding the Project during the stakeholder engagement process and has this been included in the overall Project proposal and in the risk assessment?	No
4. Would the Project potentially limit women's ability to use, develop and protect natural resources, taking into account different roles and positions of women and men in accessing environmental goods and services? <i>For example, activities that could lead to natural resources degradation or depletion in communities who depend on these resources for their livelihoods and well being</i>	No
Principle 3: Environmental Sustainability: Screening questions regarding environmental risks are encompassed by the specific Standard-related questions below	
Standard 1: Biodiversity Conservation and Sustainable Natural Resource Management	
1.1 Would the Project potentially cause adverse impacts to habitats (e.g. modified, natural, and critical habitats) and/or ecosystems and ecosystem services? <i>For example, through habitat loss, conversion or degradation, fragmentation, hydrological changes</i>	No
1.2 Are any Project activities proposed within or adjacent to critical habitats and/or environmentally sensitive areas, including legally protected areas (e.g. nature reserve, national park), areas proposed for protection, or recognized as such by authoritative sources and/or indigenous peoples or local communities?	No
1.3 Does the Project involve changes to the use of lands and resources that may have adverse impacts on habitats, ecosystems, and/or livelihoods? (Note: if restrictions and/or limitations of access to lands would apply, refer to Standard 5)	No
1.4 Would Project activities pose risks to endangered species?	No
1.5 Would the Project pose a risk of introducing invasive alien species?	No

1.6	Does the Project involve harvesting of natural forests, plantation development, or reforestation?	No
1.7	Does the Project involve the production and/or harvesting of fish populations or other aquatic species?	No
1.8	Does the Project involve significant extraction, diversion or containment of surface or ground water? <i>For example, construction of dams, reservoirs, river basin developments, groundwater extraction</i>	No
1.9	Does the Project involve utilization of genetic resources? (e.g. collection and/or harvesting, commercial development)	No
1.10	Would the Project generate potential adverse transboundary or global environmental concerns?	No
1.11	Would the Project result in secondary or consequential development activities which could lead to adverse social and environmental effects, or would it generate cumulative impacts with other known existing or planned activities in the area? <i>For example, a new road through forested lands will generate direct environmental and social impacts (e.g. felling of trees, earthworks, potential relocation of inhabitants). The new road may also facilitate encroachment on lands by illegal settlers or generate unplanned commercial development along the route, potentially in sensitive areas. These are indirect, secondary, or induced impacts that need to be considered. Also, if similar developments in the same forested area are planned, then cumulative impacts of multiple activities (even if not part of the same Project) need to be considered.</i>	No
Standard 2: Climate Change Mitigation and Adaptation		I
2.1	Will the proposed Project result in significant greenhouse gas emissions or may exacerbate climate change?	No
2.2	Would the potential outcomes of the Project be sensitive or vulnerable to potential impacts of climate change?	Yes
2.3	Is the proposed Project likely to directly or indirectly increase social and environmental vulnerability to climate change now or in the future (also known as maladaptive practices)? <i>For example, changes to land use planning may encourage further development of floodplains, potentially increasing the population's vulnerability to climate change, specifically flooding</i>	No
Standard 3: Community Health, Safety and Working Conditions		I
3.1	Would elements of Project construction, operation, or decommissioning pose potential safety risks to local communities?	Yes
3.2	Would the Project pose potential risks to community health and safety due to the transport, storage, and use and/or disposal of hazardous or dangerous materials (e.g. explosives, fuel and other chemicals during construction and operation)?	Yes
3.3	Does the Project involve large-scale infrastructure development (e.g. dams, roads, buildings)?	No
3.4	Would failure of structural elements of the Project pose risks to communities? (e.g. collapse of buildings or infrastructure)	No

3.5	Would the proposed Project be susceptible to or lead to increased vulnerability to earthquakes, subsidence, landslides, erosion, flooding or extreme climatic conditions?	No
3.6	Would the Project result in potential increased health risks (e.g. from water-borne or other vector-borne diseases or communicable infections such as HIV/AIDS)?	No
3.7	Does the Project pose potential risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during Project construction, operation, or decommissioning?	Yes
3.8	Does the Project involve support for employment or livelihoods that may fail to comply with national and international labour standards (i.e. principles and standards of ILO fundamental conventions)?	Yes
3.9	Does the Project engage security personnel that may pose a potential risk to health and safety of communities and/or individuals (e.g. due to a lack of adequate training or accountability)?	No
Standard 4: Cultural Heritage		I
4.1	Will the proposed Project result in interventions that would potentially adversely impact sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture (e.g. knowledge, innovations, practices)? (Note: Projects intended to protect and conserve Cultural Heritage may also have inadvertent adverse impacts)	Yes
4.2	Does the Project propose utilizing tangible and/or intangible forms of cultural heritage for commercial or other purposes?	No
Standard 5: Displacement and Resettlement		I
5.1	Would the Project potentially involve temporary or permanent and full or partial physical displacement?	Yes
5.2	Would the Project possibly result in economic displacement (e.g. loss of assets or access to resources due to land acquisition or access restrictions ? even in the absence of physical relocation)?	Yes
5.3	Is there a risk that the Project would lead to forced evictions?	Yes
5.4	Would the proposed Project possibly affect land tenure arrangements and/or community-based property rights/customary rights to land, territories and/or resources?	No
Standard 6: Indigenous Peoples		I
6.1	Are indigenous peoples present in the Project area (including Project area of influence)?	No
6.2	Is it likely that the Project or portions of the Project will be located on lands and territories claimed by indigenous peoples?	No

<p>6.3 Would the proposed Project potentially affect the human rights, lands, natural resources, territories, and traditional livelihoods of indigenous peoples (regardless of whether indigenous peoples possess the legal titles to such areas, whether the Project is located within or outside of the lands and territories inhabited by the affected peoples, or whether the indigenous peoples are recognized as indigenous peoples by the country in question)?</p> <p><i>If the answer to the screening question 6.3 is ?yes? the potential risk impacts are considered potentially severe and/or critical and the Project would be categorized as either Moderate or High Risk.</i></p>	No
<p>6.4 Has there been an absence of culturally appropriate consultations carried out with the objective of achieving FPIC on matters that may affect the rights and interests, lands, resources, territories and traditional livelihoods of the indigenous peoples concerned?</p>	No
<p>6.5 Does the proposed Project involve the utilization and/or commercial development of natural resources on lands and territories claimed by indigenous peoples?</p>	No
<p>6.6 Is there a potential for forced eviction or the whole or partial physical or economic displacement of indigenous peoples, including through access restrictions to lands, territories, and resources?</p>	No
<p>6.7 Would the Project adversely affect the development priorities of indigenous peoples as defined by them?</p>	No
<p>6.8 Would the Project potentially affect the physical and cultural survival of indigenous peoples?</p>	No
<p>6.9 Would the Project potentially affect the Cultural Heritage of indigenous peoples, including through the commercialization or use of their traditional knowledge and practices?</p>	No
<p>Standard 7: Pollution Prevention and Resource Efficiency</p>	
<p>7.1 Would the Project potentially result in the release of pollutants to the environment due to routine or non-routine circumstances with the potential for adverse local, regional, and/or transboundary impacts?</p>	No
<p>7.2 Would the proposed Project potentially result in the generation of waste (both hazardous and non-hazardous)?</p>	Yes
<p>7.3 Will the proposed Project potentially involve the manufacture, trade, release, and/or use of hazardous chemicals and/or materials? Does the Project propose use of chemicals or materials subject to international bans or phase-outs?</p> <p><i>For example, DDT, PCBs and other chemicals listed in international conventions such as the Stockholm Conventions on Persistent Organic Pollutants or the Montreal Protocol</i></p>	No
<p>7.4 Will the proposed Project involve the application of pesticides that may have a negative effect on the environment or human health?</p>	No
<p>7.5 Does the Project include activities that require significant consumption of raw materials, energy, and/or water?</p>	No

Supporting Documents

Upload available ESS supporting documents.

Title	Module	Submitted
10080 - Algeria AIM WELL (6163) - Environmental and Social Management Framework (ESMF) - Annex P	CEO Endorsement ESS	
PIMS 6163 Algeria AIM WELL - SESP - Annex E_25Nov2020 final	CEO Endorsement ESS	

ANNEX A: PROJECT RESULTS FRAMEWORK (either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).

This project will contribute to the following Sustainable Development Goal (s): <i>objective 1- End Poverty; Goal 8 Decent work and economic growth; Objective 12 - Sustainable production and consumption; Target 13 - Measures relating to the fight against climate change.</i>				
This project will contribute to the following country outcome (UNDAF/CPD, RPD, GPD): UNDAF: Outcome 1: By 2021 the productive sectors implement growth strategies to enhance economic diversification and strengthen the capacity for economic integration and job creation. CPD (2016-2020): Result 1: growth and development are inclusive and sustainable, generating productive capacity to create jobs and livelihoods for the poor and marginalized communities. (Output 1: Sectoral strategies and implementation plans, particularly targeting the most vulnerable populations, are developed and implemented at the local level and upgraded strategies are developed and adopted; Indicator 1.1: Number of new jobs and income-generating activities created in targeted municipalities; 1.1 Reference: 0; Target 1.1: 100)				
	Objective and Outcome Indicators	Baseline	Mid-term Target	End of Project Target
Project Objective: <i>To promote an integrated and comprehensive solid waste management by fostering technology deployment, dissemination, and transfer in collaboration with private sector.</i>	Mandatory Indicator 1: # direct project beneficiaries disaggregated by gender (individual people)	0	500,000 (49.5% are women)	750,000 (49.5% are women)
	Mandatory Indicator 2: # indirect project beneficiaries disaggregated by gender (individual people)	0	750,000 (49.5% are women)	1,125,000 (49.5% are women)
	Mandatory GEF Core Indicators (Lifetime direct project GHG emissions mitigated, tCO_{2e}) 3:	0	55,568	357,279
Project component 1	Integrated management of household waste at source; minimization of final waste; and reduced transport distance			
Project Outcome 1 Progressive upstream sorting by households of	Indicator 4: Number of households sensitized on integrated management of household waste.	200	1,300	5,600

fermentable (organic fraction) and dry waste (inorganic fraction) with separate collection, and communal sorting planned and established in Constantine and Sétif municipalities, so as to reduce the volume of landfilled waste	Indicator 5: Number of municipal Master Plans for the Wilayas of Constantine et de Sétif that propose innovative solutions, backed by sound technical and socio-economic studies, for the integrated solid waste management	0	2	2
	Indicator 6: Quantity of poultry waste (tonne) secured by project through long-term contractual agreements	0	600	600
	Indicator 7: Total CAPEX (US\$ million)) in the centralized waste sorting center in Constantine	0	4.5	4.5
Outputs to achieve Outcome 1	<ul style="list-style-type: none"> - <i>Output 1.1: Source sorting of waste at household level is supported by education and awareness campaign</i> - <i>Output 1.2: The municipal solid waste collection in Constantine and Sétif is designed, planned and implemented</i> - <i>Output 1.3: A supply chain for poultry waste from nearby farms is established and operational</i> - <i>Output 1.4: The waste sorting centre is planned and designed</i> - <i>Output 1.5: Eight waste collection points are operational</i> - <i>Output 1.6: Acquisition of two electric vehicles for municipal waste collection</i> - <i>Output 1.7: A waste sorting centre capable of processing 750 tonnes per day of MSW is installed, equipped and operational</i> 			
Project component 2	Value creation through the transformation of solid waste and poultry waste into fertilizer and energy			
Outcome 2 Managing value creation resulting from the conversion of the organic fraction of household solid waste and poultry waste into fertilizer and renewable energy, and the management of the recycling of the inorganic fraction of solid waste is planned and operational	Indicator 8: <i>Quantity of transformed products for each Wilaya in the form of fertilizers (tonnes/yr), recycled plastic (tonnes/yr) and electricity generated (MWh/yr)</i>	0 (for all products and in both locations)	Fertilizers: 26,400 (Setif) and 16,884 (Constantine) tonnes/yr Plastic: 14,377 tonnes/yr Electricity: 0 MWh/yr (0 MWe installed)	Fertilizers: 26,400 (Setif) and 25,326 (Constantine) tonnes/yr Plastic: 21,565 tonnes/yr Electricity: 14,980 MWh/yr (2 MWe installed)
	Indicator 9: <i>Number of persons trained in the operation and maintenance of waste transformation facilities</i>	0	30 (10 women)	55 (25 women)

Outputs to achieve Outcome 2	<ul style="list-style-type: none"> - Output 2.1: A waste processing plant that will convert the organic fraction of the waste into fertilizer and renewable energy is designed - Output 2.2: Capacity building for analysis and monitoring of the quality of outputs from transformation plant is planned and designed - Output 2.3: A legal and regulatory framework for the standardization of organic fertilizer is developed and implemented - Output 2.4: An enabling environment for the recycling companies is established, including the introduction of financial mechanisms and incentives for communities and individual participants involved - Output 2.5: Explore the possibilities of developing a waste management project for the voluntary carbon market - Output 2.6: An organic waste transformation plant for the production of fertilizers and renewable energy is equipped and operational - Output 2.7: An analysis, research and development centre for the monitoring and optimisation of the quality of outputs from transformation plant is equipped and operational - Output 2.8: Collection point and poultry waste processing plant in S?tif 			
Project component 3	Promotion of municipal model of integrated waste management at regional and national levels			
Outcome 3 Replicability of the municipal waste management model	Indicator 10: Number of Wilayas with replication and investment plans for scaling up project results	0	2	48
	Indicator 11: Number of persons with professional technical training on the integrated solid waste management approaches and technologies	55 (predominantly men)	150 (15% women)	350 (40% women)
	Indicator 12: Number of upgraded factory for manufacturing mechanical and spare parts	0	0	1
Outputs to achieve Outcome 3	<ul style="list-style-type: none"> - Output 3.1: A mechanism for the replication of the project in 48 Wilayas is designed and implemented - Output 3.2: One factory for the production of spare parts is installed and equipped 			
Project component 4	Knowledge management and monitoring and evaluation			
Outcome 4 Lessons learned are captured and disseminated widely, and project monitoring and	Indicator 13: Number of ETF, including MRV for solid waste management	0	0	1
	Indicator 14: Number of frameworks to measure the impacts of project on SDGs	0	0	1

evaluation is carried out in order to ensure adaptive management and achievement of project objectives.	Indicator 15: Number of knowledge products (technical documents, scientific publications, videos, webinars, etc.) on best practices and lessons learned made available to key stakeholders for replication in other Wilayas	0	1	At least five (5)
Outputs to achieve Outcome 4	<ul style="list-style-type: none"> - <i>Output 4.1: Inception workshop</i> - <i>Output 4.2: Project monitoring</i> - <i>Output 4.3: Project evaluations</i> - <i>Output 4.4: Knowledge management</i> 			

ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).

All GEFSec comments and suggestions were addressed at PIF stage by 23 October 2018, and there were no outstanding issues to be addressed at CEO ER stage. STAP Scientific and Technical screening was carried out on 28 November 2018, and it proposed minor corrections to be carried out at ProDoc design. The propositions were addressed for enhancing the quality of the project design at PPG stage as discussed below. Further, project design enhancements were also suggested by the GEF Council Member for the USA and Japan. Several of the comments from the Member for the USA were addressed at PIF stage, and only the ones deferred to PPG stage are addressed below.

STAP Review Comments at PIF Stage	Response
Please correct project duration: it is 60 rather than 5 months. In Part I B. Indicative project description summary, component and output numbering is confusing and inconsistent (page 3: Component 3 has output 1.5) It would be useful to rearrange components in their numerical sequence that represents the logical flow.	<p>These minor changes have been carried out in the ProDoc design:</p> <ul style="list-style-type: none"> - The project duration is 60 months (i.e. 5 years) - The numerical sequencing of the outputs of Component 3 have been revised - A new Component 4 has been included on ?Knowledge management and monitoring & evaluation? as per UNDP guidelines

<p>Under Component 2, it was stated that poultry manure would be used to modify the N-P-K concentrations of the fertilizer produced from organic waste so that this new product replaces the imported fertilizers, and ensures a sustainable, and reliable revenue source for farmers. This is a very ambitious goal. However, no detailed analysis was provided on how the volume of poultry manure compares with the volume of imported fertilizers and the volume of manure consumed currently, what technology will be employed, what quality control measures will be put in place to ensure that manure is comparable with imported fertilizers?</p>	<p>First, a clarification is brought regarding the substitution of imported chemical fertilizers using organic-based fertilizers produced by the project. There are two ways in which the UNDP-GEF project will produce organic-based fertilizers, namely (i) from poultry waste, and (ii) using the organic fraction of municipal solid waste (of which most is household waste). The N-P-K-balanced fertilizer that will emanate from poultry waste will amount to 26,400 tonnes/year (please see Results Framework in Annex A of the CEO ER above), while that derived from the organic fraction of municipal solid waste will be 25,326 tonnes/year. Since the raw poultry waste is already used as fertilizers for agricultural purposes in the baseline, a conservative approach has been used (please see conservative approach used in GHG accounting given in Annex J of the ProDoc) in the absence of field data that the poultry waste-based fertilizer will not bring any incremental substitution relative to the baseline. Consequently, only the fertilizer generated from the organic fraction of municipal solid waste is expected to displace chemical fertilizers. The substitution ratio is assumed to be 1:1 using N-P-K balancing of the organic-based fertilizer.</p> <p>Algeria is now a net exporter of chemical fertilizers, mainly DAP and urea, because of its extensive natural gas sector and indigenous reserves of mineral fertilizer products. Hence, chemical fertilizer consumption was only 8.21% of fertilizer production, and, in 2016, represented about 921,770 tonnes according to World Bank Indicators. Based on the assumptions used above, the municipal organic waste-derived fertilizers would represent approximately 2.7% of total consumption of chemical fertilizers. When this fraction is displaced, it will result in GHG emission reductions and create a surplus for exportation.</p> <p>Regarding the issue of quality assurance: Several outputs and activities of the GEF-financed project have been designed to address this issue. Output 2.3 is dedicated to the formulation of policies and regulatory framework for the standardization of NPK-enriched fertilizers produced from the organic fraction of MSW and poultry waste. In addition to developing national Standards for the products, the Ministry of Agriculture will also carry out homologation of the organic-derived fertilizers through field tests. Further, a centre for laboratory analysis and research and development, whose main purpose will be to monitor and optimize the quality of fertilizer and combustible material produced by the waste processing plant will be designed and operational under Outputs 2.2 and 2.7.</p>
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<p>For this component to be successful, these factors and other economic parameters are needed. STAP recommends that a detailed analysis should be carried out when the project is fully developed. Further to this, a waste transformation plant is expected to convert organic waste and poultry manure to fertilizer and renewable energy. But no information was provided on the technology involved. What exactly is a waste transformation plant? Has this technology been proven? What is its track record? What type of renewable energy will be generated, liquid fuel or burning of waste; what will the generated electricity be used for, for charging the electric trucks for waste collection or transmission into the national grid? This pertinent information is currently missing in the current PIF and should be provided.</p>	<p><u>Technology transfer</u> - Details of the processes and technologies that will be used for solid waste transformation ? i.e. production of fertilizers and generation of electricity - are given in Annex SA6 accompanying the ProDoc, including technical specifications and credentials of the manufacturer that forms part of the Joint Venture that will invest in the project.</p> <p><u>Electric trucks</u> ? The generation of electricity is expected to take place in the second phase of the project ? i.e. in 2023/2024. Consequently, the electric vehicles will be charged using grid electricity. The GHG emission calculations given in Annex J to the ProDoc accounts for the project emissions.</p>
<p>3) the proposed alternative scenario with a brief description of expected outcomes and components of the project.</p> <ul style="list-style-type: none"> - What is the theory of change? - What is the set of linked activities, outputs, and outcomes to address the project's objectives? - Are the mechanisms of change plausible, and is there a well-informed identification of the underlying assumptions? 	<p>The Theory of Change (ToC) is detailed in Section III. Strategy in the ProDoc. The linkages between activities, outputs and outcomes are made explicit in the Theory of Change Diagram. Further, the assumptions under which the intermediate and overall outcomes and objective of the project will be achieved are also discussed, as well as internal and external levers that affect change. It is noted that the assumptions and risks underlying the ToC are also captured on Annex I to the ProDoc.</p>
<p>6) global environmental benefits (GEF trust fund)</p> <ul style="list-style-type: none"> - The expected GHG emissions reductions resulting from the project are presented but the methodology is unclear. STAP recommends that the project team explain the methodology by which the numbers in the GHG emissions reductions table were arrived at two decimal places - Climate change is included in the risk table but no substantive discussion is provided. STAP recommends that the project team prepare a climate impact and adaptation assessment for components of the integrated waste management system that might be affected by a changing climate, especially extreme weather events. 	<ul style="list-style-type: none"> - Detailed calculations of GHG emission reductions accruing from the various levers shown in Figure 2 in the CEO ER have been carried out to make methodologies, data and assumptions transparent. A dedicated Annex J accompanying the ProDoc provides all these details. - These have been carried out at PPG Stage as revealed by updates to the Risk register given in Annex I to the ProDoc, and the ESMF (Annex H) to the ProDoc. It is pointed out that the detailed impacts of extreme weather events at the project sites will be carried out as part of the ESIA's and ESMPs that GEF financing will support under Activities 1.3.2, 1.4.3 and 2.1.3. For more details, please see response to the first comment from the Council Member for the USA given in the next table.

<p>Risks. Indicate risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the project design</p> <ul style="list-style-type: none"> - Is the potential unwillingness of the population to separate and separately collect waste considered? Are there any incentives or penalties to entice people to separate waste? In the new system, private (fertilizer), club (repositories) and public (climate benefits) goods will be generated but people do not seem to be compensated for the inconvenience of having to separate waste. 	<p>During PPG Stage, a detailed household survey was carried out in Constantine and the baseline situation regarding value addition to poultry waste was carried out in Setif. The results of these analyses and surveys are given in Annex SA3 and SA4, respectively. In summary, the results of analyses reveals the willingness of the population to participate in upstream waste sorting. This is because such activities are already performed in the prevailing practice.</p> <p>Importantly, under Output 1.1, incentive mechanisms (mainly non-financial) will be developed for increasing the participation of households in upstream sorting of waste. Further, Output 2.4 will develop an enabling environment for the recycling companies is established, including the introduction of financial mechanisms and incentives for communities and individual participants involved in the project.</p>
<p>Coordination. Outline the coordination with other relevant GEF-financed and other related initiatives</p> <ul style="list-style-type: none"> - Is there an adequate mechanism to feed the lessons learned from earlier projects into this project, and to share lessons learned from it into future projects? - What plans are proposed for sharing, disseminating and scaling-up results, lessons and experience? 	<ul style="list-style-type: none"> - Paragraph 30 in the CEO ER elaborates the Knowledge Management Approach that will be adopted and put in place by the project to capture and share lessons learned. Knowledge management is captured under a dedicated 4th component in the ProDoc design - Output 3.1 of the UNDP-GEF project is dedicated to developing Replication Plan, with Wilaya-specific investments plan, in order to scale up the project results to all 48 Wilayas in Algeria. The Project Results Framework given in Annex A above provides for a dedicated indicator to measure this output - The capitalization of lessons learned from earlier projects is the focus of South-South Cooperation as discussed at paragraphs 64 and 65 in the ProDoc. In summary, linkages have been established with the GEF6 project entitled COMPOST (GEFID 9048) in Ethiopia that is also implemented by UNDP. The COMPOST project has many similarities with the proposed AIM-WELL UNDP-GEF project. Further, as proposed by the Council Member for Japan (see table below), the AIM-WELL project will support ME and the Wilayas of Constantine and Setif to become members of the African Clean Cities Platform (ACCP) that regroups some 35 African countries working on integrated solid waste management.
<p>Council Member for the USA Review Comments</p>	<p>Response</p>

<p>Does the GEF expect that the project might receive a Category A rating?</p>	<p>Based on the SESP, and as per Table 8 and Annex N, the project has been rated as high risk ? i.e. Category A rating. In order to address the high risk rating, a detailed Environmental and Social Management Framework (ESMF) was developed at PPG stage and it is given as Annex M to the CEO ER. Based on the ESMF, a value chain approach will be used to carry out detailed ESIA's during implementation at the two project sites that will inform the formulation of Environmental and Social Management Plans (ESMPs). The ESMPs will integrate Livelihood Action Plans (LAPs), some elements of which are already discussed in the ESMF for Constantine. Activity 1.3.2 (Setif), and Activity 1.4.3 (centralized waste sorting facility at Constantine) and Activity 2.1.3 (waste transformation plant at Constantine) cover the implementation of ESIA's, ESMPs and LAPs.</p>
<p>The private sector investment in waste infrastructure are key components to this project's success. Have all of the private sector entities who will be participating in this project been chosen?</p>	<p>Since July 2016, the Ministry of Environment and Renewable Energies has been promoting this pilot project to potential investors, particularly regarding the business model of waste to energy and production of fertilizers. This led to a partnership with Divindus, a parastatal company that serves the Ministry of Industry and Mines (MI). <i>Divindus</i>, exercising various industrial activities, has recently entered in the waste management sector through its subsidiary <i>SOPTE</i>; it is already active in the collection and disposal of waste, but it also mandated to participate in the waste sector at all levels, including value added activities through waste recovery and transformation.</p> <p>In December 2016, MI (the then Ministry of Industry and Mines) announced its commitment to this project, including GHG emission reduction targets and its components related to the production of fertilizers and electricity. In April 2017, the MI followed with a financial commitment of about 9 billion Algerian Dinars (USD 81.77 million), while the Ministry of Environment and Renewable Energies has also committed \$ 4 billion Algerian dinars (USD 36.36 million). A memorandum of understanding was signed on April 18, 2018 between Divindus, the National Waste Agency (AND) and a consortium of three Canadian companies, namely: Global Green Links Inc., Sherbooke OEM Ltd and Lakson International Development Incorporated.</p>

Page 32/44 ? what does ?roles specific to women will be created,? mean? It seems to imply certain work is more suited to women, is that what it is meant to imply? What does this mean in concrete terms?	The issue regarding ?roles specific to women? was clarified at PIF stage. In fact, the wording used at PIF stage was misleading in the sense that it may have implied that there were certain work in the solid waste value chain that was more suited to women. This is not the case and corrections have been brought in the CEO ER to avoid such confusion. Rather, what is meant is that the project will (has) adopt(ed) a gender-responsive approach by finding gaps and opportunities for women participation in the project. The gender-responsive approach is based on detailed Gender Analysis and Gender Action Plan given in Annex M. Details about the gender-responsive approach are given at paragraphs 61 to 63, and the Gender Action Plan showing how the approach is integrated in the project design is given in Table 7. Also, the Results Framework provides gender-disaggregated indicators and targets.
Is there more detail provided about how the budget will be spent?	Detail budget and work plan were developed at PPG Stage. The detailed budget is given in Section IX (Total Budget and Work Plan) of the ProDoc. Annex A provides the multi year work plan. It is pointed out that detailed annual work plans based on the above will be detailed at project inception and implementation. These detailed annual work plans will be approved by the Project Steering Committee.

Council Member for Japan Review Comments	Response
To tackle the problems on waste management in Africa, the Ministry of the Environment, Japan, cooperating with Japan International Cooperation Agency (JICA), the United Nations Environment Programme (UNEP), the United Nations Human Settlements Programme (UN-HABITAT) and cities inaugurated?African Clean Cities Platform (ACCP)?in April 2017. This Platform, as a basis for the support for implementing measures for achieving sound waste management and SDGs in Africa, is functioning to share the knowledge and experience of African countries on municipal waste management and improve the capacity of people and organizations. Currently 35 African countries are participating in the Platform. GEF, the Government of the People's Democratic Republic of Algeria, and stakeholders are highly expected to make the most of the Platform and share the knowledge of the project.	<p>The UNDP thanks Japan for the comments. The suggestion is well noted. During the PPG phase discussions took place with the coordinator of the ACCP to understand the steps required for the registration of Algeria (through ME) and the cities of Constantine and S?tif (through the Wali?s office) as members of the ACCP. Subsequently, contact was made with the head of JICA in Tunis that manages the Algeria portfolio to start membership procedures to ACCP in the implementation phase.</p> <p>Based on the above consultations, Activity 1.2.3 of the project integrates the adhesion of ME and the Wilayas of S?tif and Constantine to the African Clean Cities Platform (ACCP). These exchanges will enrich the ability of wilayas to better define their strategies and action plans for integrated solid waste management. In addition, these exchanges serve to bring innovative elements to the project activities.</p> <p>Joining the ACCP will also strengthen South-South Cooperation as discussed at paragraph 60 in the ProDoc.</p>

[1] <https://oxfordbusinessgroup.com/analysis/feeding-growth-algeria-expands-fertiliser-production-new-plant> - accessed 5 January 2020.

[2] <https://www.indexmundi.com/facts/algeria/indicator/AG.CON.FERT.PT.ZS> - accessed 5 January 2020.

[3] This is based on the statistics that Algeria had 41.335 million ha of agricultural land (<http://www.fao.org/faostat/en/#country/4>), and a use of 22.3 kg/ha of chemical fertilizers (<https://data.worldbank.org/indicator/AG.CON.FERT.ZS>).

[4] Using an exchange rate of 1 US\$ = 110 DA prevailing at that time.

[5] Discussion with Mr. Sei Kondo, Director, Environmental Management Team II, Environmental Management Group, Department of Global Environment, JICA between October 28 and November 19, 2019.

[6] Mr. Tsujii RYO (External Relations) Tel. +216 71786386 and +216 71 787 831. Information obtained from Mrs Stambouli logistics partner of JICA in Algiers.

**ANNEX C: Status of Utilization of Project Preparation Grant (PPG).
(Provide detailed funding amount of the PPG activities financing
status in the table below:**

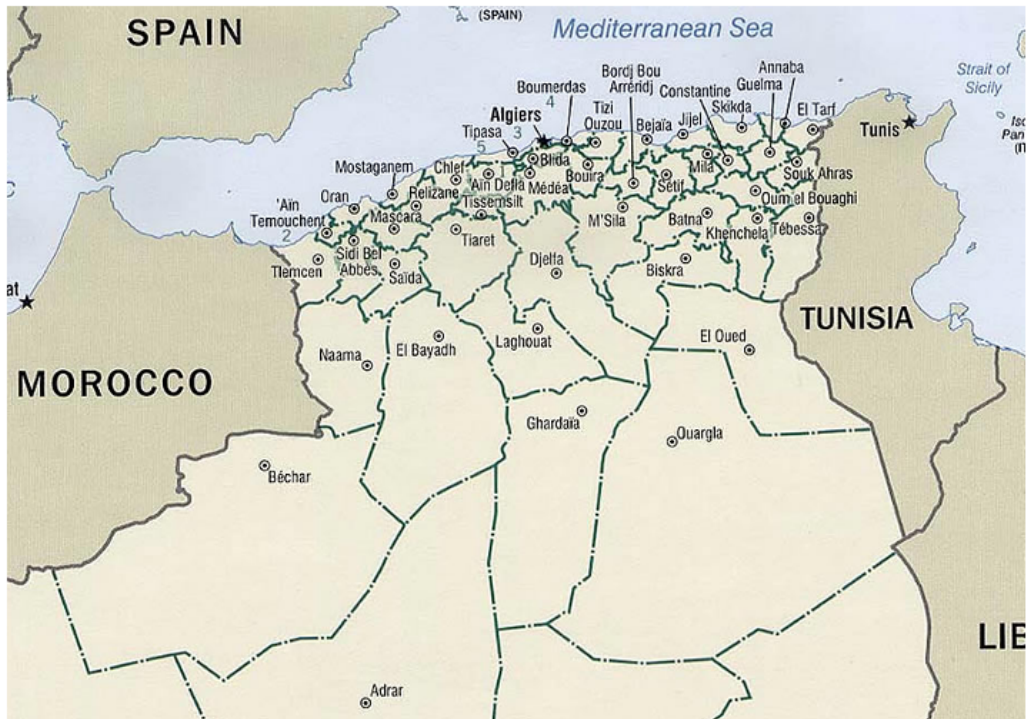
PPG Grant Approved at PIF: US\$ 150,000			
<i>Project Preparation Activities Implemented</i>	<i>GETF/LDCF/SCCF Amount (\$)</i>		
	<i>Budgeted Amount</i>	<i>Amount Spent To date</i>	<i>Amount Committed</i>
Component A: Preparatory Technical Studies and Reviews	105,000	106,029.90	0.00
Component B: Formulation of the UNDP-GEF Project Document, CEO Endorsement Request, and Mandatory and Project Specific Annexes	20,000	18,711.10	0.00
Component C: Validation Workshop and Report	25,000	23,894.23	0.00
Total	150,000	148,635.23	0.00

If at CEO Endorsement, the PPG activities have not been completed and there is a balance of unspent fund, Agencies can continue to undertake exclusively preparation activities up to one year of CEO Endorsement/approval date. No later than one year from CEO endorsement/approval date. Agencies should report closing of PPG to Trustee in its Quarterly Report.

ANNEX D: Project Map(s) and Coordinates

Please attach the geographical location of the project area, if possible.

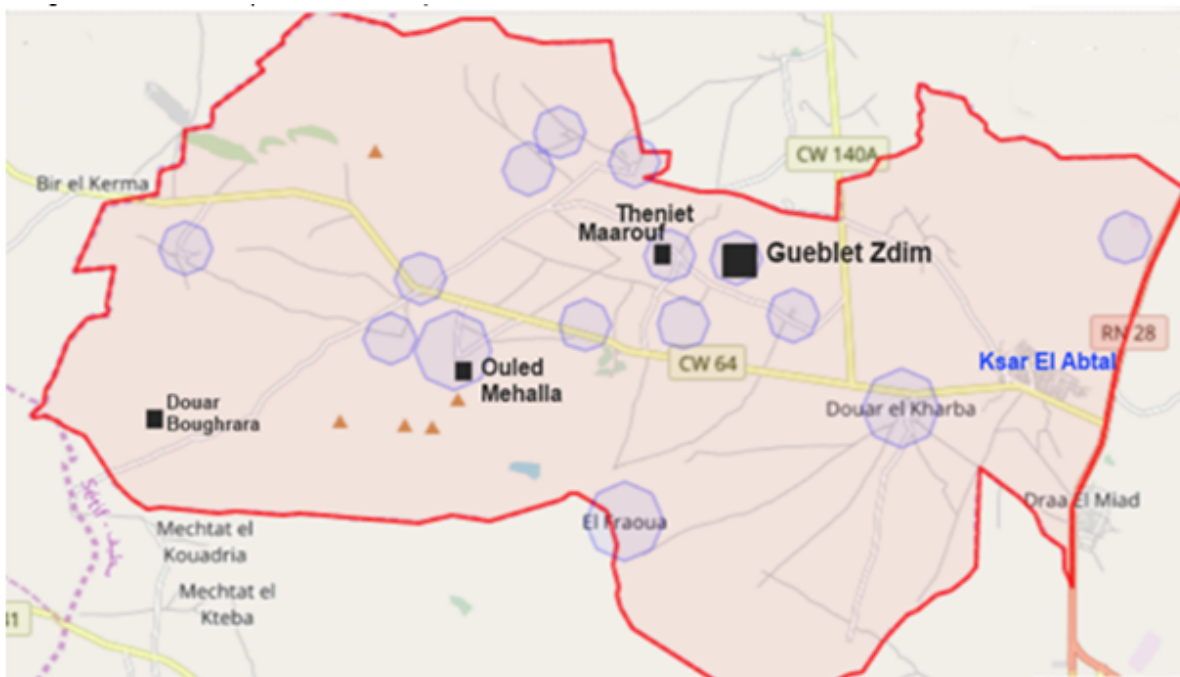
The project targets 2 Wilayas (municipalities) in Algeria: Constantine : N 36°21'54" E 6°36'53" and Sétif : N 36°11'28" E 5°24'49".



Project site in Constantine (Industrial Zone)



Project site in Setif (Ksar El Abtal)



ANNEX E: Project Budget Table

Please attach a project budget table.

Expenditure Category	Detailed Description	Component (USDeq.)							Total (USD eq.)	Responsible Entity
		Component 1	Component 2	Component 3	Component 4	Sub-Total	M&E	PMC		
		Sub-component 1.1	Sub-component 2.1	Sub-component 3.1	Sub-component 4.1					

Equipm ent	The Project Managem ent Unit comprises three staff. For project manageme nt, each staff will be provided with a computer costing USD 1,500 each (i.e. total of USD 4,500). Also, the PMU will be provided with a printer costing USD 1,000. Hence, the total is USD 5,500 in Year 1.						-		5,500	5,500	
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Vehicle	<p>In the second year, USD 968,627 is budgeted for the purchase of two electric trucks under output 1.6 of the project. 1.6: USD 968,627 Total: USD 968,627 This item is not an ordinary vehicle, nor equipment . It is the purchase of 2 Motiv electric garbage trucks. The use of these trucks will lead to 16.6tCO2/ per. For more details, please refer to the description of output 1.6 in the ProDoc.</p>	968,627				968,627			968,627	
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Vehicle	<p>The project will equip the laboratory unit of SOPTE in Oued Smar, (Algiers) to ensure control of the quality and composition of fertilizers to be produced by the project. For that a phased approach will be used to acquire the necessary equipment as follows: USD 217.026 (1 year); USD 542.566 (year 2) and USD 325.540 (year 3). During the implementation of the project, a decision will be taken during the second year of implementation it will be necessary to purchase all of the equipment at the end of Year 2, and budget adjustments made accordingly.</p>	1,085,132			1,085,132			1,085,132
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Contractual services-Individual	Outcome 1 covers USD 48,750 and USD 21,690 of the salaries of the project manager and coordinator, respectively. On an annual basis, this amounts to USD 14,088 for these two positions. USD 48,750 + USD 21,690 = USD 70,440	70,440				70,440			70,440	
Contractual services-Individual	Outcome 2 covers USD 50,250 and USD 15,000 of the salaries of the project manager and coordinator. On an annual basis, this amounts to USD 13,050 for both positions. USD 50,250 + USD 15,000 = USD 65,250/5 = USD 13,050		65,250			65,250			65,250	

Contractual services-Individual	Outcome 3 covers USD 23,030 salary of the project manager and USD 18,800 salary of the project coordinator. On an annual basis, this amounts to USD 8,206. Total: USD 41,030/5 = USD 8,206			41,030		41,030			41,030	
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Contractual services-Individual	Output 4.2 covers part of the salaries of the project manager (USD 38,500) and project coordinator (USD 40,500). The project manager will also follow up the annual lessons learned exercise (activity 4.4.2) to the tune of USD 3,210.50 per year (over 5 years). The combination brings total budget to: USD 95,050. In order to support the successful implementation of the activities of the outcome 4, the PMU will have an annual budget for the operating the project secretariat. In this case, annual estimates will be around USD 1,000; USD 2,300; USD									
					104,228	104,228			104,228	

Contractual services-Individual	UNDP will cover the costs of local consultants for (1) translating the MTR (USD 3,000 in year 3) and TE (USD 3,000 in year 5) in English/French. Total: USD 3000 + USD 3000 = USD 6000						6,000		6,000	
Contractual services-Individual	A sum of USD 37,900 is allocated annually for the salary of the Administrative Assistant (USD 24,832/yr) and the Project Coordinator (USD 13,068/yr). This represents the total salary for the former and about 40.7% for the latter.							189,500	189,500	

Contractual Services ? Company	It is expected under output 1.4 (i) to formulate a site develop plan and (ii) a data sheet for the sorting centre in Constantine. For these activities it is planned to hire the services of a company with all the industrial design and planning expertise. This service will be made at 50% in the first two years each; which amounts to USD 36,800 per year (USD 24,000 for the first activity and \$ 12,800 for the second). 1.4: YEAR 1 (USD 24,000 + USD 12,800 = USD 36,800 YEAR 2 USD 36,800 TOTAL: USD 36,800 + USD 36,800 = USD 73,600	73,600					73,600			73,600	
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Contractual Services ? Company	The justification for this item is similar to Note 9. In the project, it is intended (i) to develop a site development plan and (ii) a data sheet for a waste transformation unit in Constantine (which will be complementary to the centralized sorting centre - output 1.4). For these activities it is planned to hire the services of a company with all the industrial design and planning skills. This service will be split at 50% in the first two years each; which amounts to USD 94,400 per year (USD 67,200 for the first activity and \$ 27,200 for the second). For technical regulations on the conformity		272,800			272,800			272,800	
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International Consultants	International consultants will be used except when the expertise is not available in Algeria. For Outcome 1, international expertise will be required during the first 3 years of the project. For good operation and ensure proper maintenance of the centralized sorting centre (output 1.7), international expertise will be required for capacity building to the tune of USD 8,000 per year over the first 3 years; an international consultant is expected to model and optimize waste collection under activity 1.2.2 of the project (USD 12,800 in year 2); finally	77,600				77,600			77,600	
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<p>International Consultants</p>	<p>International expertise will be required for the strengthening of human and technical capacity to operate and do maintenance of poultry waste processing units in S?tif (2.6.2 activity) and solid waste transformation in Constantine (2.8.2 activity). The budgets are: USD 24,000 (year 1) and \$ 19,200 (year 2). To strengthen human and technical capacity to operate and carry out maintenance of laboratory equipment (2.7.2 activity), the budgets are: USD 6,400 (year 1) and \$ 8,000 (year 2 and year 5). For output 2.4 (business participation in</p>		<p>109,600</p>			<p>109,600</p>			<p>109,600</p>	
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International Consultants	International expertise will be required for activity 3.1.2 for the formulation of a scaling up plan. A budget of USD 27,200 is planned in year 5.			27,200		27,200			27,200	
International Consultants	For activity 4.4.1, an international consultant will develop the framework for measuring the SDG impacts of the project (1 year: USD 3,903; year 2: USD 7,100). Total: USD 11,003				11,003	11,003			11,003	

International Consultants	International expertise will be required for outputs 4.3 and 4.4. For output 4.3, international consultants will be required for MTR (USD 27,000 in year 3) and TE (USD 40,000 in year 5) of the project. Total: USD 67,000						67,000		67,000	
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Local Consultants	<p>The project will favour local expertise as its overall contribution to capacity building for the sustainability of the implementation of a circular economy arising from the integrated solid waste management in Algeria. A national consultant will be required for the activities of the output 1.1 as follows:</p> <p>USD 11,600 (1 year); USD 20,400 (year 2); USD 1,600 (year 3); USD 4,000 (year 4); USD 1,600 (year 5). For activities 1.3.2 and 1.4.3, expertise in impact studies and ESMP will be required as follows: USD 10,000 (year 1) and \$ 12,000</p>	142,400				142,400			142,400	
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Local Consultants	National expertise that will be used for activities 1.3.2 and 1.4.3, as well as for activity 2.1.3 (impact study and plan social and environmental management). The annual budget will be USD 2,000 for each of Year 1 and 2; To identify the laboratory equipment, identify expertise gaps (output 2.2) and do the technical capacity (output 2.7) on budget is USD 14,000 (1 year); USD 26,000 (year 2); USD 6,000 (year 4) and USD 6,000 (year 5); For output 2.3 (standards and regulation of fertilizers) budgets will be USD 6,000 (year 1) and USD									
		152,000				152,000			152,000	

Local Consultants	National expertise for the implementation of output 3.1 activities will be as follows: USD 4,800 (1 year); USD 16,000 (year 2); USD 10,000 (year 3); USD 7,600 (year 5). For the 3.2.1 activity, the budget for national expertise will be USD 8,000 (year 1) and \$ 16,000 (year 2).3.1: TOTAL: USD 38,400 3.2.1: TOTAL: USD 24,000			62,400		62,400 0			62,400 0	
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Local Consultants	For output 4.4 the national consultant support will be USD 8,000 (year 1); USD 10,800 (year 2); USD 7,200 (year 3); USD 7,200 (year 4); USD 7,200 (year 5). Total: USD 40,400				40,400	40,400			40,400	
Local Consultants	National expertise will be required to support the work of the international consultants at note 35. For the MTR and TE, the budgets for national consultants are USD 14,000 (year 3) and USD 20,000 (year 5), respectively. Total: USD 14,000 + USD 20,000 = USD 34,000						34,000		34,000	

<p>Trainings, Workshops, Meetings</p>	<p>To raise awareness (Note 7), sensitization workshops will be carried out for households (output 1.1) and the general public (output 1.5) which will cost USD 16,500 (1 year); USD 38,000 (year 2); USD 36,600 (year 3); USD 30,000 (year 4) and USD 20,000 (year 5). To strengthen technical and human capacity to operate the sorting centre, an annual budget of \$ 20,000 per year is expected over the first 3 years of the project. For the purpose of other outputs related to work meetings and workshops, the estimated budget will be as follows: USD</p>	<p>212,600</p>				<p>212,600</p>		<p>212,600</p>	
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<p>Trainings, Workshops, Meetings</p>	<p>It is expected to organise workshops and training workshops . The bulk of the budget is allocated to this second function especially for outputs 2.6 and 2.8. For the 2.6 output, annual budgets are: USD 50,000 (1 year); USD 50,000 (year 2); USD 5,000 per year (year 3-5). For the 2.8 output, annual budgets are: USD 15,000 (1 year); USD 15,000 (year 2); USD 5,000 per year (year 3-5). For other activities, the annual amounts will be: USD 3,000 (1 year); USD 9,000 (year 2); USD 6,500 (year 3); USD 6,000 (year 4); USD 4,000 (year 5).</p>		<p>188,500</p>			<p>188,500</p>			<p>188,500</p>	
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Training s, Worksh ops, Meeting s	Working meetings or workshops are planned during the first three years mainly to promote vocational training in approaches and integrated solid waste management technologies (3.1.1 activity). Allocations are as such: USD 1,000 (1 year); USD 2,500 (year 2); USD 2,000 (year 3).			5,500		5,500			5,500	
Training s, Worksh ops, Meeting s	Working meetings or workshops are planned in the first year for the Inception Workshop (USD 5,000) and for the development of a framework for measuring the SDG impacts of the project (USD 1,000). Total: USD 6000				6,000	6,000			6,000	

Travel	Annual budgets are to cover the costs of travel and accommodation of national and international consultants (in support to Notes 1 and 2). The largest amounts are in the first two years (year 1 USD 17.035; year 2: 31.394) because the majority of Outcome 1 activities are related to waste sorting centre that will be operational during the second year of implementation. The budgets for the following three years were USD 14.183 (year 3); USD 1,375 (year 4) and USD 1,125 (year 5). Outcome 1: USD 17,035 + USD 31,394 + USD 14,183 + USD 1,375 +	65,112				65,112			65,112	
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Travel	Annual budgets are to cover the costs of travel and accommodation of national and international consultants (in line with notes 13 and 14). As for Outcome 1, the largest amounts are in the first two years (year 1 USD 40.698; year 2: USD 56.619) because the majority of activities is related to the construction of waste transformation units that will be operational during the second year of implementation. The budgets for the following three years are USD 12,410 (year 3); USD 7,700 (year 4) and USD 8,806 (year 5). USD 40,698 + USD 56,619 +		126,233			126,233			126,233	
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Travel	Annual budgets are to cover the costs of travel and accommodation of national and international consultants (in support to notes 25 and 26). The largest amounts are in the first two years and year five (1 year: USD 4,375; year 2: USD 5,750; 5 years: USD 10,833), which corresponds with the budgets for international consultants. The remaining budget is USD 2,500 (year 3). Total: USD 23,458			23,458		23,458			23,458	
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Travel	Additional travel budget is allocated for activities 4.4.1 and 4.4.2 as follows: USD 3,936 (year 1); USD 2,250 (year 2); USD 1,900 (each of year 3, year 4 and year 5). Total = USD 11,886				11,886	11,886			11,886	
Travel	Travel expenses are related to conducting the MTR (USD 18,715 - year 3)) and TE (USD 25,235 - year 5). Total: USD 18,715 + USD 25,235 = USD 43,950						43,950		43,950	

Office Supplies	In order to provide for the proper implementation of the results of Outcome 1, the PMU will have an annual budget for the operation of the project secretariat. In this case, annual estimates are in the range of USD 1,700; USD 1,800; USD 1,800; USD 1,661; USD 1,600 over the 5 years of the project. USD 1,700 + USD 1,800 + USD 1,800 + USD 1,661 + USD 1,600 = USD 8,561	8,561				8,561			8,561	
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Office Supplies	In order to support the successful implementation of the result 2 activities, the PMU will have an annual budget for operating the project secretariat. In this case, annual estimates will be around USD 2,500 (year 1) and \$ 3,000 per year (year 2 to 5). USD 2,500 + USD 3,000 * 4 = USD 14,500		14,500			14,500			14,500	
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Other Operati ng Costs	The bulk of the budget for the implementation of activities 1.1.2 and 1.5.1 which aim to educate households and the public in sorting through audio-visual materials and pamphlets. The corresponding budgets will be USD 13,000 (year 1) and \$ 17,000 per year for the last 4 years of the project. For the printing needs of other outputs, the budgets will be as follows: USD 2,500 (1 year); \$ 500 (year 2) and USD 1,700 (year 3). 1.1.2: USD 13,000 (year 1) + USD 2,500 = USD 15,500 1.5.1: USD 17,000 (year 2) + USD 500 = USD	85,700				85,700			85,700	
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Other Operating Costs	A budget of USD 1,000 is expected in each of year 1 and 2 of implementation to cover costs related to developments printing standards (activity 2.3.1) for fertilizers to be produced by the project.		2,000			2,000			2,000	
Other Operating Costs	The printing costs are budgeted as follows: \$ 200 (year 1); \$ 800 (year 2); USD500 (year 3).			1,500		1,500			1,500	
Other Operating Costs	An independent financial audit of the project will take place for USD 3,000 per year.							15,000	15,000	
Grand Total		1,704,640	2,016,015	161,088	173,517	4,055,260	150,950	210,000	4,416,210	

ANNEX F: (For NGI only) Termsheet

Instructions. Please submit an finalized termsheet in this section. The NGI Program Call for Proposals provided a template in Annex A of the Call for Proposals that can be used by the Agency. Agencies can use their own termsheets but must add sections on Currency Risk, Co-financing Ratio and Financial Additionality as defined in the template provided in Annex A of the Call for proposals. Termsheets submitted at CEO endorsement stage should include final terms and conditions of the financing.

ANNEX G: (For NGI only) Reflows

Instructions. Please submit a reflows table as provided in Annex B of the NGI Program Call for Proposals and the Trustee excel sheet for reflows (as provided by the Secretariat or the Trustee) in the Document Section of the CEO endorsement. The Agency is required to quantify any expected financial return/gains/interests earned on non-grant instruments that will be transferred to the GEF Trust Fund as noted in the Guidelines on the Project and Program Cycle Policy. Partner Agencies will be required to comply with the reflows procedures established in their respective Financial Procedures Agreement with the GEF Trustee. Agencies are welcomed to provide assumptions that explain expected financial reflow schedules.

ANNEX H: (For NGI only) Agency Capacity to generate reflows

Instructions. The GEF Agency submitting the CEO endorsement request is required to respond to any questions raised as part of the PIF review process that required clarifications on the Agency Capacity to manage reflows. This Annex seeks to demonstrate Agencies' capacity and eligibility to administer NGI resources as established in the Guidelines on the Project and Program Cycle Policy, GEF/C.52/Inf.06/Rev.01, June 9, 2017 (Annex 5).