

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

*GEF Secretariat Review for Full Sized Project*

## Basic Information

**GEF ID**

10080

**Countries**

Algeria

**Project Title**

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

**GEF Agency(ies)**

UNDP

**Agency ID**

UNDP: 6163

**GEF Focal Area(s)**

Climate Change

**Program Manager**

Ming Yang

## Part I – Project Information

### Focal area elements

**1. Is the project/program aligned with the relevant GEF focal area elements in Table A, as defined by the GEF 7 Programming Directions?**

Secretariat Comment at PIF/Work Program Inclusion

MY 10/4/2018

Yes, it is aligned with CCM1-3 Clean-tech innovation.

Agency Response

## **Indicative project/program description summary**

**2. Are the components in Table B and as described in the PIF sound, appropriate, and sufficiently clear to achieve the project/program objectives and the core indicators?**

Secretariat Comment at PIF/Work Program Inclusion

MY 10/4/2018

Yes, they are.

Agency Response

## **Co-financing**

**3. Are the indicative expected amounts, sources and types of co-financing adequately documented and consistent with the requirements of the Co-Financing Policy and Guidelines, with a description on how the breakdown of co-financing was identified and meets the definition of investment mobilized?**

Secretariat Comment at PIF/Work Program Inclusion

MY 10/4/2018

Not at this time.

It seems to the PM that cash financing for the project is not sufficient to start with the project. The PM has noted that the private sector will likely put \$38.5 million equity co-financing. Please elaborate the components of the equity and convince the PM that the project will have enough cash to start.

MY 10/17/2018

Yes. Comments were addressed.

Agency Response

The overall objective of the Government to tackle solid waste management in Algeria started few years ago. In that regard, the GIZ did a diagnostic of the sector and published a useful report in 2014 “Solid Waste Management in Algeria”. That report emphasized the need to carry out four incinerators with a capacity of about 1,000 tons/day for the biggest cities namely: Algiers, Oran, Constantine and Annaba. Business opportunities and incentives were provided by Government. The Ministry of Environment demonstrated that the recycling market is estimated at 23 billion Algerian dinars (about 260 million USD). It should encourage more operators to embark on the

promising field of waste management, which is still a virgin area that companies can easily exploit at their scale and in accordance with their technical capabilities. In this vision, policy makers aspire to establish a real industry for recovery and recycling of waste through the development of several sectors such as plastics, paper and cardboard, metals, glass, wood, used tires, batteries, oils, etc. A National Program of Municipal Waste Management (PROGDEM) were put in place to attract the private sector.

Up to date, 6 private industrial groups are in place to investment in the waste management sector in Algeria. Beside Divindus, the others are namely: GICA, IMETAL, AGRODIV, ACS and SNTA. Divendus is the one who is investing in the 2 cities in Constantine and Setif where the GEF funded project will be focused. Therefore, their commitment in co-financing of USD 38.5 million. This investment is only for the waste to energy incineration plant (1,000 tons/day).

According to Waste to Energy International, basing on construction experience and contacts with world top producers, it is considered that price of incineration plant can be estimated with the following empiric formula:  $I = 2.3507 \times C^{0.7753}$ , where I is the investment cost in million dollars and C is the plant capacity. For 1,000 tons of waste, the investment needed is then around USD 40 million USD.

The Divindus Group (private sector) came with a slightly reduced investment amount at USD 38.5 million, dedicated for the incineration plant. The private sector indicated, through an agreement signed with the Government of Algeria, that it will start with a first phase of 500 tons/day, to be extended further to 750tons/day, then in the future towards the max capacity of 1,000 tons of waste per day.

This shows that the project will have enough cash to start with and to cover the biggest investment need (the incineration pant). The upstream activities (sorting, awareness, etc.), and the other downstream activities (fertilizers, linkage with agriculture) are covered by GEF and other co-financers.

The above text is added in the PIF.

## **GEF Resource Availability**

**4. Is the proposed GEF financing in Table D (including the Agency fee) in line with GEF policies and guidelines? Are they within the resources available from (mark all that apply)?**

Secretariat Comment at PIF/Work Program Inclusion

MY 10/4/2018

Yes. This is the first project from Algeria in GEF7. The country has \$4.18 million CCM STAR fund in GEF7, and the country has an amount of \$2 million in its marginal adjustment. The total budget for this project is \$5 million including GEF project financing, PPG budget and Agency fees for both project implementation and the PPG operation.

Agency Response

**The STAR allocation?**

Secretariat Comment at PIF/Work Program Inclusion

MY 10/4/2018

Yes. See the comments in the previous box.

Agency Response

**The focal area allocation?**

Secretariat Comment at PIF/Work Program Inclusion

MY 10/4/2018

Yes. See the comments in the previous box.

Agency Response

**The LDCF under the principle of equitable access**

Secretariat Comment at PIF/Work Program Inclusion

MY 10/4/2018

N/A

Agency Response

**The SCCF (Adaptation or Technology Transfer)?**

Secretariat Comment at PIF/Work Program Inclusion

MY 10/4/2018

N/A

Agency Response

**Focal area set-aside?**

Secretariat Comment at PIF/Work Program Inclusion

MY 10/4/2018

N/A

Agency Response

### **Impact Program Incentive?**

Secretariat Comment at PIF/Work Program Inclusion

MY 10/4/2018

N/A

Agency Response

### **Project Preparation Grant**

**5. Is PPG requested in Table E within the allowable cap? Has an exception (e.g. for regional projects) been sufficiently substantiated? (not applicable to PFD)**

Secretariat Comment at PIF/Work Program Inclusion

MY 10/4/2018

Yes, it is \$150,000.

Agency Response

### **Core indicators**

**6. Are the identified core indicators in Table F calculated using the methodology included in the correspondent Guidelines? (GEF/C.54/11/Rev.01)**

Secretariat Comment at PIF/Work Program Inclusion

MY 10/4/2018

Yes, it is shown on page 22, Annex B.

Agency Response

## **Project/Program taxonomy**

### **7. Is the project/ program properly tagged with the appropriate keywords as requested in Table G?**

Secretariat Comment at PIF/Work Program Inclusion

MY 10/4/2018

Yes, it is shown on page 23, Annex C.

Agency Response

## **Part II – Project Justification**

### **1. Has the project/program described the global environmental / adaptation problems, including the root causes and barriers that need to be addressed?**

Secretariat Comment at PIF/Work Program Inclusion

MY 10/4/2018

Yes, they are addressed on pages 5, 6, and 7.

Agency Response

### **2. Is the baseline scenario or any associated baseline projects appropriately described?**

Secretariat Comment at PIF/Work Program Inclusion

MY 10/4/2018

Not completed at this time. Please elaborate if there are any other bilateral or multilateral agencies that have expressed interest in financing waste to power generation projects in the country. If so, please put it in the baseline scenario.

MY 10/17/2018

Yes. Comments were addressed.

Agency Response

There are several bilateral and multilateral agencies supporting the country in waste management, including waste to energy (power generation).

GIZ:

Through a regional program for the Maghreb region, GIZ is supporting Algeria for the management of urban solid waste as part of the National Environmental Action Plan and Sustainable

Development (PNAE-DD) through the adoption of a National Program for Integrated Management of household and similar waste (PROGDEM). It aims for an integrated, phased and progressive management approach of household waste. This program has defined the main directions for the implementation of this management through:

- The reorganization of the municipal administration responsible for waste management;
- Building capacity for the collection and transportation services of the municipality;
- Opening the public service waste management to private investment;
- The implementation of a program of training and technical assistance;
- The implementation of facilities for the collection.

EU:

The European Union supported Algeria through a regional program for seven countries with a “Regional Solid Waste Management” project. Participating countries are Syria, Jordan, Lebanon, Tunisia, Morocco, Egypt and Algeria. The overall budget is USD 7 million.

The project ended (thus not listed as co-financing) but the outcomes of the project are still valid and useful for this newly developed GEF funded. The proposed GEF funded project will build on the results and lessons learned and provide an emphasis on the environmental sustainability angle.

Both GIZ and EU initiatives are added in the baseline description of the PIF.

### **3. Does the proposed alternative scenario describe the expected outcomes and components of the project/program?**

Secretariat Comment at PIF/Work Program Inclusion

MY 10/4/2018

Not completed at this time. In PART II: PROJECT JUSTIFICATION, please write a paragraph to describe expected outcomes and components of the project/program (more detail than in Table B).

MY 10/17/2018

Yes. Comments were addressed.

Agency Response

A detailed “proposed alternative scenario” of 5 pages was provided in the PIF. Specifically, the project components and outcomes are described in detail from page 9 to page 11 of the PIF.

**4. Is the project/program aligned with focal area and/or Impact Program strategies?**

Secretariat Comment at PIF/Work Program Inclusion

MY 10/4/2018

Yes, it is aligned with CCM Focal Area.

Agency Response

**5. Is the incremental / additional cost reasoning properly described as per the Guidelines provided in GEF/C.31/12?**

Secretariat Comment at PIF/Work Program Inclusion

MY 10/4/2018

Yes, it is on page 11.

Agency Response

**6. Are the project's/program's indicative targeted contributions to global environmental benefits (measured through core indicators) reasonable and achievable? Or for adaptation benefits?**

Secretariat Comment at PIF/Work Program Inclusion

MY 10/4/2018

Yes, on pages 11 -12.

Agency Response

**7. Is there potential for innovation, sustainability and scaling up in this project?**

Secretariat Comment at PIF/Work Program Inclusion

MY 10/4/2018

Yes, on pages 12 -13.

Agency Response

## **Project/Program Map and Coordinates**

**Is there a preliminary geo-reference to the project's/program's intended location?**

Secretariat Comment at PIF/Work Program Inclusion

MY 10/4/2018

Not at this time. For the investment components, please elaborate which Algerian provinces will have the tangible investments via this project.

MY 10/17/2018

Yes. Comments were addressed.

Agency Response

The project focuses on the cities of Constantine and Setif, both of which are within the Wilaya of Constantine (North-East) and are 15 km apart. This will allow for the proposed project to be piloted in two different cities, each with different characteristics; not only will this better inform the replicability process, but the additional volume of waste captured will also yield better economies of scale across the project's components, not least recycling and transformation activities.

## **Stakeholders**

**Does the PIF/PFD include indicative information on Stakeholders engagement to date? If not, is the justification provided appropriate? Does the PIF/PFD include information about the proposed means of future engagement?**

Secretariat Comment at PIF/Work Program Inclusion

MY 10/4/2018

Not at this time.

Please indicate stakeholders engagement details. If not yet, please justify why not yet. Also please include information on future engagement.

MY 10/17/2018

Yes. Comments were addressed.

Agency Response

Stakeholders engagement are detailed. The table from page 15 to 17 indicates in detail all the stakeholders to be engaged in the project preparation, and their respective roles.

The table is updated by adding bilateral and multi-lateral agencies such as GIZ and EU.

## **Gender Equality and Women's Empowerment**

**Is the articulation of gender context and indicative information on the importance and need to promote gender equality and the empowerment of women, adequate?**

Secretariat Comment at PIF/Work Program Inclusion

MY 10/4/2018

Yes. on page 16.

Agency Response

## **Private Sector Engagement**

**Is the case made for private sector engagement consistent with the proposed approach?**

Secretariat Comment at PIF/Work Program Inclusion

MY 10/4/2018

Yes.

The project will be engaging the private sector. 80% of co-financing of this project comes from private sector. But, please justify enough cash co-financing from the private sector.

Agency Response

## **Risks**

**Does the project/program consider potential major risks, including the consequences of climate change, that might prevent the project objectives from being achieved or may be resulting from project/program implementation, and propose measures that address these risks to be further developed during the project design?**

Secretariat Comment at PIF/Work Program Inclusion

MY 10/4/2018

Not completed at this time.

On pages 16-18, please identify any risk of heavy metal pollution from the use of fertilizer that is to be produced from the waste to power generation plant. It is very difficult to sort out and remove all heavy metals such as lead and mercury from solid wastes. These metals will get into the waste of the waste to power generation plant, which will likely contaminate the fertilizer and agricultural land.

MY 10/17/2018

Yes. Comments were addressed.

Agency Response

Indeed, the risk of handling hazardous waste were identified and included in the risk table, but mainly on the health angle. This is why the risk was labeled "Health risk". It is now clearly labeled hazardous risk and the heavy metal pollution from the use of fertilizer is *added*.

## **Coordination**

**Is the institutional arrangement for project/program coordination including management, monitoring and evaluation outlined? Is there a description of possible coordination with relevant GEF-financed projects/programs and other bilateral/multilateral initiatives in the project/program area?**

Secretariat Comment at PIF/Work Program Inclusion

MY 10/4/2018

Yes, it is stated on page 19.

Agency Response

## **Consistency with National Priorities**

**Has the project/program cited alignment with any of the recipient country's national strategies and plans or reports and assessments under relevant conventions?**

Secretariat Comment at PIF/Work Program Inclusion

MY 10/4/2018

Yes, the project is well aligned with the NDCs of the country to the UNFCCC.

Agency Response

## **Knowledge Management**

**Is the proposed “knowledge management (KM) approach” in line with GEF requirements to foster learning and sharing from relevant projects/programs, initiatives and evaluations; and contribute to the project’s/program’s overall impact and sustainability?**

Secretariat Comment at PIF/Work Program Inclusion

MY 10/4/2018

Yes, it is sated on page 20.

Agency Response

## **Part III – Country Endorsements**

**Has the project/program been endorsed by the country’s GEF Operational Focal Point and has the name and position been checked against the GEF data base?**

Secretariat Comment at PIF/Work Program Inclusion

MY 10/4/2018

Yes. Ms. Samira Hamidi started her work of Operational Focal Point on 2018-07-26.

Is the PIF/PFD recommended for technical clearance? Is the PPG (if requested) being recommended for clearance?

MY 10/29/2018:

Dear UNDP colleague, with an attached MS-Word document to the GEF Portal, I received your responses to my following comments. But for some unknown reason, my comments and your responses are not shown in the Portal. So, I put my comments again below. Please kindly put your responses in the GEF Portal. Thank you.

Ming Yang

MY 10/17/2018

Not yet, but close to completion. All projects need to apply the Rio Markers for Climate Change Adaptation and Climate Change Mitigation. Please address the following issues where applicable.

“Please apply, in the Taxonomy, Rio Markers for Climate Change Adaptation and Climate Change Mitigation. Each project needs to select one marker (0,1 or 2) for adaptation AND one marker (0,1 or 2) for mitigation. For further details, please refer to the hover tip that links to the complete Taxonomy, including definitions of the Rio Markers.”

“For each amount of indicative co-financing, please indicate whether the co-financing represents ‘Investment Mobilized’ or ‘Recurrent Expenditures’. For details, please refer to Paragraph 9 of the Co-Financing Policy ([http://www.thegef.org/sites/default/files/documents/Cofinancing\\_Policy.pdf](http://www.thegef.org/sites/default/files/documents/Cofinancing_Policy.pdf)) and the Co-Financing Guidelines ([http://www.thegef.org/sites/default/files/documents/Cofinancing\\_Guidelines.pdf](http://www.thegef.org/sites/default/files/documents/Cofinancing_Guidelines.pdf)).

“For any ‘Investment Mobilized’ indicated in Section C, please complete the relevant text box to describe how such ‘Investment Mobilized’ was identified. For further details, please refer to Paragraph 17 of the Co-Financing Guidelines ([http://www.thegef.org/sites/default/files/documents/Cofinancing\\_Guidelines.pdf](http://www.thegef.org/sites/default/files/documents/Cofinancing_Guidelines.pdf)).”

MY 10/29/2018, 3:45pm

Yes, all comments were addressed. The project has been technically cleared and the PM recommends PIF/PPG clearance.

Agency Response

The taxonomy table is now fully updated as per the GEF template. The Rio market are indicated (marker 1 for Mitigation and marker 0 for Adaptation).

Table C already indicated the type of co-financing Investment Mobilized or Recurrent Expenditures. At the bottom of the Table, it is indicated that “All “investment mobilized” were identified in consultation with the government, the municipalities (wilayas), the CSO and private sector. Related co-financing letters will be provided during the PPG phase ”

## **GEFSEC DECISION**

### **RECOMMENDATION**

**Is the PIF/PFD recommended for technical clearance? Is the PPG (if requested) being recommended for clearance?**

Secretariat Comment at PIF/Work Program Inclusion

11/20/2018 MY:

Yes. The project has been technically cleared and the PM recommends PIF/PPG clearance.

The following is the information on the CEO cover memo:

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

**Rationale:** Populations of Algeria's major cities have grown rapidly over the past decades. Local authorities have struggled to provide satisfactory services, particularly in waste management.

According to Ferhi (2013), "approximately 45% of waste i.e. 6.1 million tons, is recyclable". The market value of recyclable waste has been estimated at US\$ 213 million per annum. As of today, only 6% of the recyclable waste is reused and recycled. The current circumstance has led to the oversaturation of existing landfills and the proliferation of illegal dump sites. As such, there are significant areas of concern, such as hygiene and public health issues, as well as the pollution of ground water and GHG emissions engendered by a deficient waste management system. In its Second National Communication to the UNFCCC (2010), the government indicated that the waste sector accounted for 10% of Algeria's greenhouse gas emissions (excluding LUCF). This GEF project will help identify the barriers and root causes of unsustainability of waste management in the country and enlarge the share of reuse and recycle of wastes for the country, and therefore reduce GHG emissions.

**Alignment with CCM Cleantech Innovation.** Promote innovation and technology transfer for sustainable energy breakthroughs

**Four Components:** (1) Integrated management of household waste at source; minimization of ultimate waste; reduced transport distance; (2) Value creation through transformation of waste and poultry manure into fertilizer and energy; (3) Promotion of the municipal model of integrated waste management at the regional and national levels.

**Innovation:** The innovativeness of this project rests largely on the notion of truly new option in the context of Algeria: a commercially viable strategy that aims to connect the abundant supply of waste with a strong demand for affordable fertilizers. 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.

**Sustainability:** The introduction of integrated waste management at university level will not only encourage research in this field, but also provide a fresh pool of technically qualified recruits to facilitate sustainability and replication of similar waste management projects. The inclusion of a research and analysis lab in Component 2, which will be connected to local universities, will contribute towards the refinement of processes in waste management, especially with respect to the transformation process and manufacture of fertilizers; this will help the economic performance of future waste management projects, improving their economic feasibility and catalyzing replicability. An awareness campaign and communications strategy will engage civil society actors so that job opportunities and the benefits associated with the supply and demand sides of waste management can be effectively publicized. Such an approach will reinforce public buy-in and increase participation in integrated waste management opportunities.

**Potential for scaling up:** Through the Ministry of Industry and Mines and the Ministry of Environment and Renewable Energy, the government has mandated parastatals (including SOPTE) to make investments of approximately \$81.5M to tackle waste related issues. This project is part of the SOPTE’s contribution to this mandate, but it must be noted that it is also operational in several other cities, namely El Oued, Biskra and Algiers, each of which was vying for ownership of this project during the PIF stage. If this project is successful, it is highly likely that it will be replicated in these four cities, either in part or entirely. Furthermore, the performance of this project relies on a PPP – if successful, this sets a strong precedence for other potential private sector partners to adopt this business model throughout the country.

**Co-financing amounts and sources:** The co-financing (\$47.75 million) comes from: (1) national government, with \$2.70 million grant and \$6.35 million in-kind; (2) the private sector with \$38.50 million equity; and (3) the Agency with \$0.2 million grant.

**GHG emission reduction:** The global environmental benefit target is to directly reduce 3 million tonnes of CO<sub>2</sub> equivalent. The amount of indirect GHG emission reduction will be estimated at the CEO Endorsement Request stage.

**Additional Comments**

**Additional recommendations to be considered by Agency at the time of CEO endorsement/approval**

Secretariat Comment at PIF/Work Program Inclusion

MY 10/17/2018

To be added.

**Review Dates**

	PIF Review	Agency Response
First Review	<input type="text"/>	<input type="text"/>
Additional Review (as necessary)	<input type="text"/>	<input type="text"/>
Additional Review (as necessary)	<input type="text"/>	<input type="text"/>
Additional Review (as necessary)	<input type="text"/>	<input type="text"/>
Additional Review (as necessary)	<input type="text"/>	<input type="text"/>