



MoE



National Solid Waste Management Program

Lot B: Governorate of Kafr El-Sheikh and Governorate of Gharbia

Immediate Priority Measures Report (Final) Governorate of Kafr El-Sheikh August 2017

Lot B implemented by:

COWI A/S

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in association with
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KFW

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Solid Waste Management Unit in the Governorate of Kafr El-Sheikh

Officials at markaz and local unit levels across the Governorate of Kafr El--Sheikh.

1.0 Introduction

1.1 Background

The overall goal of the National Solid Waste Management Program (NSWMP) is that the national solid waste management system contributes significantly to the sustainable protection of the environment and climate, the conservation of resources and the reduction of health-related hazards for the population in Egypt. The achievement of this goal is planned within the following broad actions:

- The identification and subsequent implementation of Immediate Priority Measures (IPM's) to address urgent solid waste management priorities.
- The preparation and subsequent implementation of a Master Plan to guide investments and related accompanying measures that will secure a high quality of solid waste management over the long term.

Initially, the NSWMP focuses on the following Governorates:

- Assiut
- Qena
- Kafr El-Sheikh
- Gharbia

1.2 Purpose

This purpose of this document is to set out the proposed IPM's that are proposed for implementation in the Governorate of Kafr El-Sheikh, including the methodology that has been used to develop the proposed IPM's and the scope/scale of their design and implementation.

1.3 Context of Immediate Priority Measures

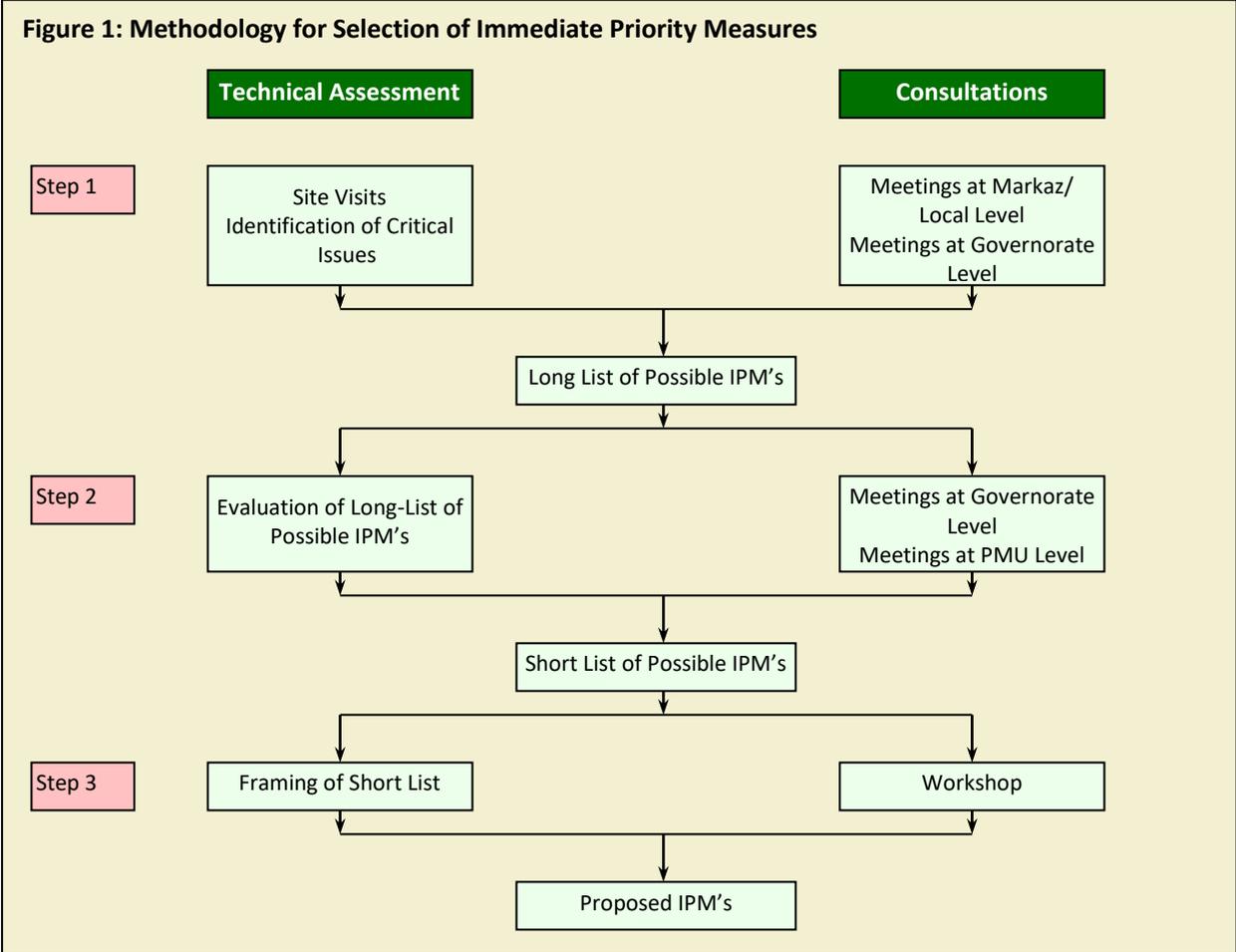
Waste management in the Governorate of Kafr El-Sheikh includes waste collection, treatment, transfer and disposal activities. Main issues associated with these activities include:

- Waste collection is undertaken at the local level. A key issue throughout the Governorate is a lack of spare parts to perform maintenance, with the result that equipment failure may mean that equipment is not operational for extended periods of time.
- Land use regulations place strict requirements on the location of waste disposal sites. These have resulted in the location of a landfill site to serve Kafr El-Sheikh Governorate in Metobus, in the northwest corner of the Governorate. The landfill has significant remaining capacity and will therefore be a part of the Master Plan for the Governorate. The landfill is poorly operated, however, and does not adequately protect human health or the environment.
- The distance from communities in Governorate of Kafr El-Sheikh to the landfill ranges to 80 km. Therefore treatment facilities that recover materials, transfer stations and long distance transport are all strategies that reduce the costs of transporting waste to the landfill. Where they exist, however, treatment facilities and transfer stations are not properly equipped and are inefficient; the quantity of waste they receive may greatly exceed the quantity they process or that is transported to the landfill, with the result that large accumulations of waste have occurred at both treatment facilities and the transfer stations. The accumulations pose a direct threat to human health and the environment; in some cases, the accumulations are on fire.

2.0 Methodology

2.1 Overview

The identification of the proposed IPM’s has included technical assessment in parallel with stakeholder consultations. Figure 1 illustrates the methodology.



As shown in Figure 1, the methodology for selecting IPM’s has been and iterative, 3-step process that has included technical assessment and consultation at each step. The methodology is further elaborated below.

2.2 Description of Step-By-Step Methodology

Step 1: Preparation of Long List of Possible IPM’s

Site Visits At the outset, site visits have been made to all waste management facilities in the Governorate in order to collect data and identify waste management priorities “on the ground”. This has provided the initial baseline from which to select Immediate Priority Measures.

Identification of Critical Issues Critical issues have been identified based on the data and information that has been gathered from site visits. Often, these issues were evident from the waste management situations that exist at the local level.

Meetings at Markaz/Local Level Meetings with markaz/local officials have been important in learning the reasons that problems have arisen, and how these can be avoided in the future. These meetings have also been an important source of information for the project team regarding where problems occur, and the assessment by the project team with local officials on the significance of problems that have been identified.

Meetings at Governorate Level The SWMU has accompanied the CPI on its site visits and at meetings with markaz/local officials throughout the Governorate. This has been of high importance in ensuring that the CPI understands issues in not only local unit terms, but also from the perspective of issues that must be addressed across the Governorate. Meetings have also been held with the Governor in order to share information and to gain perspective at this level.

Long List of Possible Immediate Priority Measures The “long list” of possible IPM’s has been developed based on the work described above. The “long list” describes the situations that exist that should be considered for “immediate” action through the IPM mechanism. As described below, the selection of specific IPM’s has been subject to the application of selection criteria. Thus, the identification of a situation on the long list does not mean that it will necessarily be addressed through the IPM mechanism, but all situations that are not addressed by the IPM mechanism will be addressed by the Master Plan.

The long list of possible IPM’s is identified in Table 1.

Table 1: Long List of Possible Immediate Priority Measures

| No. | Name of City/ Markaz | Short Description of Possible IPM |
|-----|----------------------|---|
| 1 | Biala | Removal of accumulations waste at Biala treatment plant |
| 2 | Sidi Salem | Removal of accumulations waste at Sidi Salem treatment plant |
| 3 | Kafr El-Sheikh | Removal of accumulation waste in Kafr El-Sheikh City dumpsite |
| 4 | Motobus | Removal of accumulation of waste in Tal Matiur dumpsite |
| 5 | Beila | Transfer Beiala treatment plant to the new proposed site and raising its capacity to receive the waste of two Markaz. |
| 6 | Sidi Salem | Rehabilitation and developing of Sidi Salem treatment plan and raising its capacity to receive the waste of two Markaz. |
| 7 | Metobus | Develop and design Metobus dumpsite to establish recycling plant, well designed landfill and RDF unit in addition to storage area for the waste collection until this process will finished |
| 8 | Kafr El-Sheikh | Establish a new recycling plant and RDF unit in the proposed site in Kafr El-Sheikh city |
| 9 | EL-Burulus | Establish a new recycling plant in the proposed site in Baltim |
| 10 | Desouq | Establish transfer station in Desouq City and provide necessary on-site and transportation equipment, |
| 11 | Fewah | Establish transfer station in Fewah City and provide necessary on-site and transportation requirements |
| 12 | Qeleen | Establish transfer station in Qeleen City and establish necessary on-site and transportation requirements |
| 13 | EL-Reyadh | Establish transfer Station El Reyadh City and provide necessary on-site and transportation requirements |
| 14 | El-Hamoul | Establish transfer Station in El Hamoul City and provide necessary on-site and transportation requirements |
| 15 | Desouq | Establish Central maintenance workshop branch in Desouq City |
| 16 | El-Hamoul | Establish Central maintenance workshop branch in El Hamoul City |
| 17 | All markaz, cities | Provide 23 trucks (capacity 20 or 18 m ³) 40 trucks (5 tons) 10 Loaders (2.5 M) and 5 loaders (1.5 m) for 10 Markaz and 3 cities |
| 18 | All markaz, cities | Provide spare parts and maintenance tools to properly maintain equipment |

Step 2: Preparation of Short List of Possible Immediate Priority Measures

Evaluation of Possible IPM's Technical evaluation of the long list of possible IPM's has included the application of selection criteria to the situations identified on the long list. The following criteria have been applied:

- IPM's must be "no regret" measures that address a serious waste management problem. Thus, the IPM investments should be measures that will be consistent with the recommendations of the Master Plan, and the wider investments that will be made to implement the Master Plan.
- IPM's should be capable of being implemented within 12 months of approval to proceed with the identified measures.
- IPM's should address, as necessary, the underlying issues that caused the creation of the situation so that the situation will not recur following the completion of the IPM.
- IPM's should be feasible in terms of the operation and maintenance of equipment that may be implemented.
- Land should be available for the IPM, and should be under the ownership of the relevant entity.
- Implementation of the IPM should not be delayed because of an absence of environmental permits that may be required.
- IPM's should be agreed with relevant stakeholders.

A preliminary budget of 30 million EGP (approx. 1.5 million Euro) was assigned to the IPM's in total, although it was understood that flexibility in this regard might be applied by PMU based on further consultations with stakeholders. As far as possible, it is also desirable that IPM's should create employment.

Meetings at Governorate Level The development of the proposed short-list of measures that have been proposed as IPM's has been undertaken in close collaboration with the SWMU. Upon request, the development of the proposed short-list has included discussion with, and advice from, the Governor.

Meetings at PMU Level Meetings have been held with PMU as part of the development of the short-list of measures that have been proposed as IPM's. Where appropriate, proposed measures have been adjusted and clarified in consultation with PMU.

Short-List of Measures Proposed as Immediate Priority Measures A short-list of measures that have been proposed as Immediate Priority Measures was developed as the outcome of the above actions. As indicated above, the proposed measures identified on the short list were included on the earlier "long list"; however, it was decided that:

- Spare parts and improved maintenance are required across the Governorate, as reflected in the "long list". Accordingly, the short-list included a provision for spare parts and maintenance at the Governorate level. The distribution of the provision will be determined based on further detailed survey as part of the implementation of the immediate priority measures.
- Accumulations of waste have arisen in many cases because transfer stations have not been properly equipped or operated. Accordingly, the short-list includes a provision for mobile

transfer stations that have the flexibility to address immediate problems while also providing flexible long term solutions for transportation of waste.

The short-list of proposed Immediate Priority Measures is presented in Table 2.

Table 2: Proposed Short-List of Immediate Priority Measures

| Name of City/ Markaz | Short Description of Possible IPM |
|--|---|
| Kafr El-Sheikh, Qaleen, El-Riyadh, Sidi Ghazi city | Establishment of waste treatment plant in Kafr El-Sheikh city, serving Kafr El-Sheikh Center, Qaleen Center, Riyadh Center, Sidi Ghazi City with 683 tons / day |
| All markaz | Development and design of the Metobus disposal site and the establishment of a treatment plant at the sit to serve Metobus centre, Desouq Center, Al-Riyadh centre |
| Sidi Salem, Desouq, Fewah | Development and upgrading of the Sidi Salem treatment plant (currently closed) to serve the Sidi Salem Center, Desouq Center, Fawa Center |
| Desouq, El-Hamoul, Qaleen | Mobile sorting/transfer stations in Desouq, El Hamoul, Qaleen |
| Beiala, Sidi Salem | The removal of accumulations from the treatment plants in the centers of Beiala and Sidi Salem, the establishment of alternative energy production units (RDF) at processing equipment at the plants and transfer of residual materials to the Metobus disposal site. |
| All markaz | Planning and design of the Metobus disposal site and provision of operating equipment |

Step 3: Recommendation of Immediate Priority Measures

Framing of Short List The measures included in the Short List of proposed IPM's were framed to allow further discussion of their scope and cost. This included preliminary identification of, as appropriate: (i) the quantities of waste that would require management, (ii) equipment/facility requirements and (iii) cost.

Workshop A "Progress Workshop" was held on 27 April 2017 at which the proposed IPM's were presented and discussed. Agreement was reached on the measures that should be implemented as IPM's.

A further meeting was held on 11 May 2017 to further clarify and specify the recommended IPM's.

Proposed Immediate Priority Measures Table 3 identifies the immediate priority measures that were agreed at the workshop and the subsequent meeting on 11 May 2017. The identified measures are further elaborated in Section 3. As shown in the table, a main consideration is that mobile equipment will be used to implement several measures so that flexibility is maintained to accommodate investments that may be proposed in the Master Plan.

Table 3: Agreed Immediate Priority Measures

| Name of City/ Markaz | Short Description of Possible IPM |
|--|--|
| Kafr El-Sheikh, Qeleen, El-Riyadh, Sidi Ghazi city | Implementation of treatment plant in Kafr El-Sheikh City (with mobile equipment) at the available site in KES |
| Desouq, Fewah | Implementation of treatment plant in Desouq City (with mobile equipment) at the available site to treat waste generated in Desouq and Fewah |
| All markaz | Provide spare parts and maintenance of broken equipment |
| Beiala, Sidi Salem | Treat the accumulations at the Beiala and Sidi Salem plants |
| Metobus, Baltim, El-Burullus city,, El- Hamoul | Implementation of treatment plant in Metobus City (with mobile equipment) at the available site to treat waste generated in Metobus, Baltim, El-Burullus city, El-Hamoul |

The Master Plan that will be developed will address the problems/issues identified by possible measures (long-list) that have not been selected as IPM's.

3.0 Recommended Immediate Priority Measures

3.1 Overview

The agreed Immediate Priority Measures are presented in this section using a standardized template for each measure. The following points are noted:

- All measures have been agreed between national-level (PMU) and Governorate stakeholders.
- Where required, the national-level (PMU) and Governorate stakeholders have indicated that they will provide strong support to facilitate the issuance of necessary permits.
- The time period estimated to be required for implementation is identified for each measure; the implementation period will begin when approval to proceed is received.

The estimated budget for the recommended immediate priority measures is identified in Table 4.

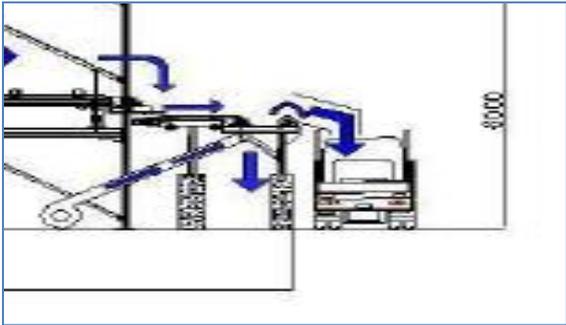
Table 4: Preliminary Estimated Budget for Immediate Priority Measures

| No | Name of City/ Markaz | Short Description of Recommended IPM | Preliminary Estimated Budget (Egyptian Pounds, EGP) |
|--------------|--|---|---|
| 1 | Kafr El-Sheikh, Qeelen, El-Riyadh, Sidi Ghazi city | Implementation of temporary treatment plant in Kafr El-Sheikh City (with mobile equipment) at the available site in KES | 15,000,000 |
| 2 | Desouq, Fewah | Implementation of temporary treatment plant in Desouq City (with mobile equipment) at the available site to treat waste generated in Desouq and Fewah | 15,000,000 |
| 3 | All markaz | Provide spare parts and maintenance of broken equipment | 3,000,000 |
| 4 | Beiala, Sidi Salem | Treat the accumulations at the Beiala and Sidi Salem plants | 6,000,000 |
| 5 | Metobus, El-Burullus, El-Hamoul | Implementation of temporary treatment plant in Metobus City (with mobile equipment) at the available site to treat waste generated in Metobus, El-Burullus, El-Hamoul | 15,000,000 |
| Total | | | 54,000,000 |

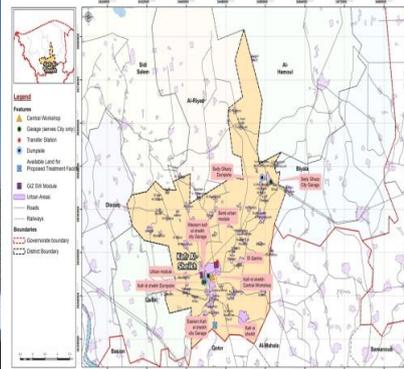
Precise budgets for all measures will be established following agreement to proceed with the recommended IPM's, and based on detailed specification for the equipment and facilities (where needed).

3.2 Profiles of Recommended Immediate Priority Measures

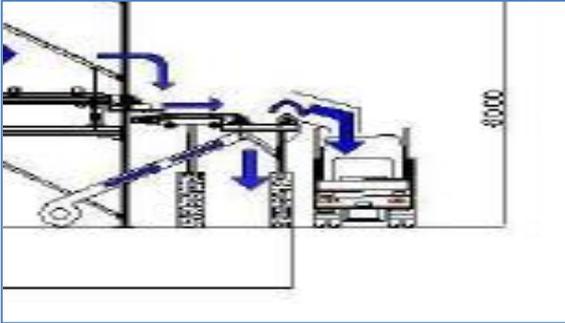
Profiles of each of the recommended Immediate Priority Measures are presented below.

| | | | |
|---|----------------|--------------------|---------------------|
| Immediate Priority Measure 1 | | | IPM code |
| Implement a new treatment plant (mobile equipment) in Kafr El-Sheikh City | | | KES - 01 |
| Markaz/City | Village | Governorate | Project type |
| KES | | KES | Recycling Plant |
| <p>Problem to be addressed:</p> <p>Prevention of accumulations by creating a treatment facility for materials generated in the project zone. Reduction of 80 percent (estimated) in quantity of waste requiring disposal in Metobus (60 - 75 km one way), and reduction in cost of disposal</p> | | | |
| <p>Project description:</p> <ul style="list-style-type: none"> Implement a new temporary treatment (materials recovery, recycling, RDF) plant with mobile equipment in the proposed site in Kafr El Sheikh City to receive the daily generated waste from Kafr El Sheikh, Qeleen, and El Reyadh Markazs and Sidi Ghazi City. An estimated 683 tons of waste are generated daily in the communities that will be served by the immediate priority measure. Establish alternative drive fuel unit (RDF unit). Use of mobile equipment provides operational flexibility to meet future needs | | | |
| <p>Project Objectives:</p> <ul style="list-style-type: none"> Prevent the waste accumulation in the future. Increase waste segregation efficiency and the quantity of recycling materials. Minimize the quantity of waste goes to landfill. Creating new jobs. Protect the human health and environment from the pollution coming from the burned waste. | | | |
| <p>Economic Profile:</p> <ul style="list-style-type: none"> Creating new jobs. Private sectors participation in the operation. Local manufactures of recycling plants. Save the diseases and drugs expenses resulting from the pollution prevention and environmental protections. | | | |
| <p>Project Maturity:</p> <p><i>Availability of Existing Designs, Concepts, Studies or Other Documents to Justify or Facilitate Project Implementation</i></p> <p>Wind-shifter</p>  | | | |

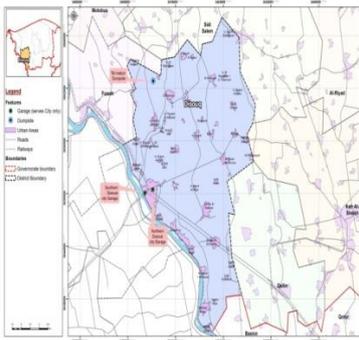
IPM Project site:



| Project Main Tasks | | Responsibly | | | | | | |
|-------------------------------|--|---------------------|------------|------------|----------|----------|----------|----------|
| Task 1 | Roadbed or road paving | Governorate | | | | | | |
| Task 2 | EIA | Governorate | | | | | | |
| Task 3 | Geological and other studies | Project | | | | | | |
| Task 4 | Tender, Procurement documents | Project | | | | | | |
| Task 5 | Purchasing process | MoE or Governorate | | | | | | |
| Task 6 | Storage of equipment and guards | Governorate | | | | | | |
| Task 7 | Implementations | Governorate | | | | | | |
| Task 8 | Training | Governorate | | | | | | |
| Required Approvals/Permits | | Competent Authority | | | | | | |
| Task 1 | Roadbed or road paving | Governorate | | | | | | |
| Tasks 2, 3, 4 and 5 | EIA, Geological and other studies, Tender, Procurement documents, and Purchasing process | MoE | | | | | | |
| Tasks 6 and 7 | Storage of equipment and guards and Implementations | Governorate | | | | | | |
| Tentative Project Budget, EGP | | | | | | | | |
| Temporary Recycling plant | 12, 500,000 | | | | | | | |
| Truck 20 tons | 2, 500,000 | | | | | | | |
| Total | 15,000,000 | | | | | | | |
| Project timeline | | | | | | | | |
| Time \ Activities | Month 2 | Month 4 | Month 6 | Month 8 | Month 10 | Month 12 | Month 14 | Month 16 |
| Task 1 | Yellow | Yellow | Yellow | | | | | |
| Task 2 | Yellow | Yellow | Yellow | | | | | |
| Task 3 | | | Light Blue | Light Blue | | | | |
| Task 4 | | | Light Blue | Light Blue | | | | |
| Task 5 | | | | Blue | Blue | | | |
| Task 6 | | | | | Green | Green | | |
| Task 7 | | | | | Green | Green | | |
| Task 8 | Orange | Orange | Orange | Orange | Orange | Orange | | |

| | | | |
|---|--|--------------------|---------------------|
| Immediate Priority Measure 2 | | | IPM code |
| Implement a new treatment plant in Desouq City | | | KES - 02 |
| Markaz/City | Village | Governorate | Project type |
| Desouq and Fewah | | KES | TS |
| <p>Problem to be addressed:</p> <p>Prevention of accumulations by creating a treatment facility for materials generated in the project zone. Reduction of 80 percent (estimated) in quantity of waste requiring disposal in Metobus (28-40 km one way), and reduction in cost of disposal.</p> | | | |
| <p>Project description:</p> <ul style="list-style-type: none"> • Implement a new treatment plant with mobile equipment in Desouq dumpsite (Tal Matiur) to receive the daily generated waste from Desouq and Fewah Markaz. An estimated 630 tons of waste are generated daily in the communities that will be served by the immediate priority measure. • Residual waste (estimated to be approx. 20 percent of input waste) will be transferred to Metobus dumpsite. • Use of mobile equipment provides operational flexibility to meet future needs. | | | |
| <p>Project Objectives:</p> <ul style="list-style-type: none"> • Prevent the waste accumulation in the future. • Increase waste segregation efficiency and the quantity of recycling materials. • Minimize the quantity of waste goes to landfill. • Creating new jobs. • Improve the primary and secondary transportation of waste. • Prevent the burning of waste and protect the environment and human health. | | | |
| <p>Economic Profile:</p> <ul style="list-style-type: none"> • Creating new jobs. • Private sectors participation in the operation. • Save the diseases and drugs expenses resulting from the pollution prevention and environmental protections. | | | |
| <p>Project Maturity:</p> <p><i>Availability of Existing Designs, Concepts, Studies or Other Documents to Justify or Facilitate Project Implementation</i></p> | | | |
| Wind-Shifter |  | | |

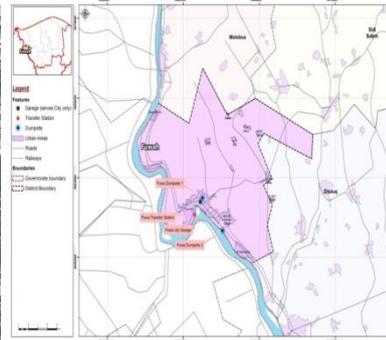
IPM Project site:



Markaz Desouq Map



Tal Matuor dumpsite



Markaz Fewah Map

Project Main Tasks

Responsibly Authority

| | | |
|--------|--|-------------------------|
| Task 1 | Site availability in two cities | Governorate |
| Task 2 | Site preparation | Governorate |
| Task 3 | Designing, Tender, Procurement documents | Project |
| Task 4 | Purchasing process | MoE or Governorate |
| Task 5 | Storage of equipment & guards | Governorate |
| Task 6 | Implementations | Project and Governorate |
| Task 7 | Training | Governorate |

Required Approvals/Permits

Approvals/Permits Authority

| | | |
|---------------------|---|-------------|
| Task 1 | Site preparation | Governorate |
| Tasks 2, 3, 4 and 5 | Design, Tender, Procurement documents, and Purchasing process | MoE |
| Tasks 6 and 7 | Storage of equipment & guards and Implementations | Governorate |

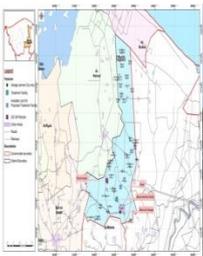
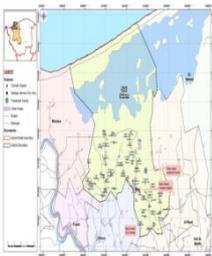
Tentative Project Budget, EGP

| | |
|---------------|-------------------|
| TS of Desouq | 12, 500,000 |
| Truck 20 tons | 2,500,000 |
| Total | 15,000,000 |

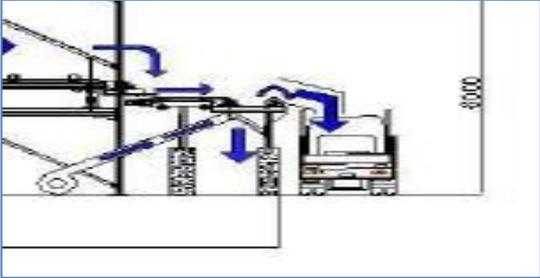
Project timeline

| Time \ Activities | Month 2 | Month 4 | Month 6 | Month 8 | Month 10 | Month 12 | Month 14 | Month 16 |
|-------------------|---------|---------|---------|---------|----------|----------|----------|----------|
| Task 1 | Yellow | Yellow | Yellow | | | | | |
| Task 2 | Yellow | Yellow | Yellow | | | | | |
| Task 3 | | | Green | Green | | | | |
| Task 4 | | | Green | Green | | | | |
| Task 5 | | | | | Blue | Blue | | |
| Task 6 | | | | | Blue | Blue | | |
| Task 7 | Orange | Orange | Orange | Orange | Orange | Orange | | |

| Project Main Tasks | | Responsibly Authority | | | | | | |
|-----------------------------------|---|-----------------------------|---------|---------|----------|----------|----------|----------|
| Task 1 | List of Spare parts and broken equipment | Governorate | | | | | | |
| Task 2 | Tender, Procurement documents | Project | | | | | | |
| Task 3 | Purchasing process | MoE or Governorate | | | | | | |
| Task 4 | Waste transfer | Governorate | | | | | | |
| Task 5 | Training | Governorate | | | | | | |
| Required Approvals/Permits | | Approvals/Permits Authority | | | | | | |
| Task 1 | Site preparation | Governorate | | | | | | |
| Tasks 2 and 3 | Tender, Procurement documents, and Purchasing process | MoE | | | | | | |
| Tasks 4 | Waste transfer | Governorate | | | | | | |
| Tentative Project Budget, EGP | | | | | | | | |
| Spare parts and maintenance needs | | 3,000,000 | | | | | | |
| Total | | 3,000,000 | | | | | | |
| Project timeline | | | | | | | | |
| Time \ Activities | Month 2 | Month 4 | Month 6 | Month 8 | Month 10 | Month 12 | Month 14 | Month 16 |
| Task 1 | | | | | | | | |
| Task 2 | | | | | | | | |
| Task 3 | | | | | | | | |
| Task 4 | | | | | | | | |
| Task 5 | | | | | | | | |

| Immediate Priority Measure 4 | | | IPM code |
|---|---------|-------------|----------------------|
| Treat the accumulation waste in Beiala and Sedi Salem treatment plants | | | KES - 04 |
| Markaz/City | Village | Governorate | Project type |
| Beiala and Sidi Salem | | KES | Accumulation Removal |
| <p>Problems to be addressed:</p> <p>Inadequate operations result in the current accumulation of approximately 20 ton/day of untreated waste at Beiala, in addition to the old accumulation of waste about 200,000 tons in both plants.</p> <p>Waste in the two plants burns continuously, causing environmental pollution and impacting public health.</p> | | | |
| <p>Project description:</p> <p>Mobile equipment (loader, trammel screen) will be used to screen accumulated waste to recover fine materials that can be utilized</p> | | | |
| <p>Project Objectives:</p> <ul style="list-style-type: none"> • Remove the accumulation for good operation. • Find a free space for establishing new recycling line especially in Sedi Salem site. • Prevent the waste accumulation in the future. • Minimize the quantity of waste goes to landfill. • Creating new jobs. • Prevent the burning of waste and protect the environment and human health. | | | |
| <p>Economic Profile:</p> <ul style="list-style-type: none"> • Creating new jobs. • Private sectors participation in the operation. • Save space of land for a new line of segregation and recycling • Save the diseases and drugs expenses resulting from the pollution prevention and environmental protections. | | | |
| <p>Project Maturity:</p> <p><i>Availability of Existing Designs, Concepts, Studies or Other Documents to Justify or Facilitate Project Implementation</i> Facilities exist, and require investment to optimize performance.</p> | | | |
| <p>IPM Project site:</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">    </div> <div style="text-align: center;">   </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="border: 1px solid black; padding: 5px; width: 45%;">Beiala treatment Plant</div> <div style="border: 1px solid black; padding: 5px; width: 45%;">Sedi Salem Treatment Plant</div> </div> | | | |

| Project Main Tasks | | Responsibly Authority | | | | | | | |
|--|---|-----------------------------|---------|---------|---------|----------|----------|----------|----------|
| Task 1 | Site preparation | Governorate | | | | | | | |
| Task 2 | Tender, Procurement documents | Project | | | | | | | |
| Task 3 | Purchasing process | MoE or Governorate | | | | | | | |
| Task 4 | Waste transfer | Governorate | | | | | | | |
| Task 5 | Training | Governorate | | | | | | | |
| Required Approvals/Permits | | Approvals/Permits Authority | | | | | | | |
| Task 1 | Site preparation | Governorate | | | | | | | |
| Tasks 2 and 3 | Tender, Procurement documents, and Purchasing process | MoE | | | | | | | |
| Tasks 4 | Waste transfer | Governorate | | | | | | | |
| Tentative Project Budget, EGP | | | | | | | | | |
| Loader + Trommel in Beiala Treatment Plant | | 3 000,000 | | | | | | | |
| Loader + Trommel in Sidi Salem Treatment Plant | | 3,000,000 | | | | | | | |
| Total | | 6,000,000 | | | | | | | |
| Project timeline | | | | | | | | | |
| | Time | Month 2 | Month 4 | Month 6 | Month 8 | Month 10 | Month 12 | Month 14 | Month 16 |
| Activities | | | | | | | | | |
| Task 1 | | | | | | | | | |
| Task 2 | | | | | | | | | |
| Task 3 | | | | | | | | | |
| Task 4 | | | | | | | | | |
| Task 5 | | | | | | | | | |

| | | | |
|--|--|--------------------|-------------------------|
| Immediate Priority Measure 5 | | | IPM code |
| Implement a new recycling plant in Metobus dumpsite | | | KES - 05 |
| Markaz/City | Village | Governorate | Project type |
| Metobus | | KES | Dumpsite Rehabilitation |
| Problems to be addressed: | | | |
| Reduction of 80 percent (estimated) in quantity of waste requiring disposal in Metobus from Metobus, El Hamoul, and Baltim Markazs and Borg El Borolos City. | | | |
| Project description: | | | |
| <ul style="list-style-type: none"> Implement a new temporary recycling plant with mobile equipment in the proposed site in Metobus City to receive the daily generated waste from Metobus, El Hamoul, and Baltim Markazs and Borg El Borolos City. Waste generated in these areas is estimated at 620 tons per day. Outputs will include recyclable materials, compost and RDF. Use of mobile equipment provides operational flexibility to meet future needs. | | | |
| Project Objectives: | | | |
| <ul style="list-style-type: none"> Prevent the waste accumulation in the future. Manage the site operation in the right way. Increase waste segregation efficiency and the quantity of recycling materials. Creating new jobs. Protect the human health and environment from the pollution coming from the burned waste. | | | |
| Economic Profile: | | | |
| <ul style="list-style-type: none"> Creating new jobs. Organize the operation in the dumpsite. Save the diseases and drugs expenses resulting from the pollution prevention and environmental protections. | | | |
| Project Maturity: | | | |
| <i>Availability of Existing Designs, Concepts, Studies or Other Documents to Justify or Facilitate Project Implementation</i> | | | |
| Wind-shifter |  | | |

IPM Project site:



| Project Main Tasks | | Responsibility | | | | | | |
|---|--|---------------------|---------|---------|----------|----------|----------|----------|
| Task 1 | Internal roadbed or road paving | Governorate | | | | | | |
| Task 2 | Geological & survey studies and planning and designing | Project | | | | | | |
| Task 3 | Tender, Procurement documents | Project | | | | | | |
| Task 4 | Purchasing process | MoE or Governorate | | | | | | |
| Task 5 | Storage of equipment and guards | Governorate | | | | | | |
| Task 6 | Implementations | Governorate | | | | | | |
| Task 7 | Training | Governorate | | | | | | |
| Required Approvals/Permits | | Competent Authority | | | | | | |
| Task 1 | Internal roadbed or road paving | Governorate | | | | | | |
| Tasks 2, 3, 4 and 5 | EIA, Geological and other studies, Tender, Procurement documents, and Purchasing process | MoE | | | | | | |
| Tasks 6 and 7 | Storage of equipment and guards and Implementation | Governorate | | | | | | |
| Tentative Project Budget, EGP | | | | | | | | |
| Temporary recycling plant | 12,500,000 | | | | | | | |
| Rehabilitation, planning, designing, Investigation and site fence | 2,500,000 | | | | | | | |
| Total | 15,000,000 | | | | | | | |
| Project Timeline | | | | | | | | |
| Time \ Activities | Month 2 | Month 4 | Month 6 | Month 8 | Month 10 | Month 12 | Month 14 | Month 16 |
| Task 1 | Yellow | Yellow | Yellow | | | | | |
| Task 2 | Yellow | Yellow | Yellow | | | | | |
| Task 3 | | | Blue | Blue | | | | |
| Task 4 | | | Blue | Blue | | | | |
| Task 5 | | | | | Green | Green | | |
| Task 6 | | | | | Green | Green | | |
| Task 7 | Orange | Orange | Orange | Orange | Orange | Orange | | |

4.0 Implementation of Proposed Immediate Priority Measures

Implementation of the proposed Immediate Priority Measures will begin immediately following approval of the proposed measures.

Annex A:

List of Equipment (Preliminary) for Immediate Priority Measures

Preliminary estimated equipment requirements

| IPMs | Code | Loader 0.3 m3 | Tractor with Trailer | Truck 20 ton | Conveyor | Trommel | Wind Shifter | Fine Line | Hydraulic Press | Compost turner | Weight bridge | Caravans |
|---|----------|---------------|----------------------------------|--------------|----------|----------|--------------|-----------|-----------------|----------------|---------------|----------|
| Implementation of temporary treatment plant in KES City | KES - 01 | 2 | 2 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 2 |
| Implementation of temporary treatment plant in Desouq City | KES - 02 | 2 | 2 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 2 |
| Treat the accumulations for Beiala and Sedi Salem | KES - 04 | 2 | | | | 2 | | | | | | |
| Implementation of temporary treatment plant in Metobus City | KES - 05 | 2 | 2 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 2 |
| Total | | 8 | 6 | 3 | 3 | 8 | 6 | 6 | 3 | 3 | 3 | 6 |
| Procurement: (Foreign) or (Local) | | F | Tractor: F Trailer: L | F | L | L | L | L | L | F | L | L |

Notes:

1. Equipment requirements will be finally specified and budgeted following approval to proceed with the recommended immediate priority measures
2. Procurement will be finally specified based on final equipment specifications
3. Spare parts for maintenance (KES-03), together with their procurement, will be specified following approval of the Immediate Priority Measures